

A JUSTIFIED SYSTEM OF INTELLECTUAL  
PROPERTY RIGHTS

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by  
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For Mom and Dad

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## Chapter 1: Introduction

In April of 2003 the Record Industry Association of America (RIAA) sued four college students for 98 billion dollars. These college students had put together a service on their respective college's networks which made it very easy to download and share music. Though the RIAA settled for amounts in the thousands, the message was clear—the RIAA will aggressively pursue whoever violates their copyrights.

How are we to react to this kind of threat? Setting aside the sheer magnitude of the lawsuit (which helps dramatize the event), did the RIAA have the right to sue? They certainly had the legal right, as they owned copyrights that the college students infringed. But are these legal rights morally justified?

Also, consider the AIDS situation in Africa. In eight African countries 15-30% of the people have AIDS or HIV; 24.7 million people have AIDS or HIV in sub-Saharan Africa. Now, scientists have produced drugs capable of diminishing the disease's effects so significantly that in many cases people with AIDS or HIV can live "normal" lives. But, because of patents and the high prices they afford, these drugs are not available to those millions. In 1997, South Africa passed a law that would:

“allow the importation of patented medicines that had been produced or sold in another nation's market with the consent of the patent owner. For example, if the drug was sold in India, it would be imported into Africa from India. This is called “parallel importation,” and it is generally permitted under international trade law and is specifically permitted within the European Union. However the United States government opposed the bill. Indeed, more than opposed. As the International Intellectual Property Association characterized it, “The U.S. government pressured South Africa...not to permit compulsory licensing or parallel imports.” Through the Office of the United States Trade Representative, the government asked South Africa to change the law—and to add pressure to that request, in 1998, the USTR listed South Africa for possible trade sanctions. That same year, more than forty pharmaceutical

companies began proceedings in the South African courts to challenge the government's actions. The United States was then joined by other governments from the EU.”<sup>1</sup>

Now, it is well known that the AIDS problem in Africa is due to many factors. Bad governments, extreme poverty, and atrocious health-care infrastructure are some of the primary causes. But the suffering and death of 15 to 30 million seems like something that ethicists should at least consider more carefully. So, is their suffering and death justifiable? Is this a necessary evil, consequent upon any system of property rights which, in the end, is better for everyone? Or, are those who own these patents simply justified in demanding whatever they like for them, as the objects patented are simply *their property*?

Philosophical attention, it seems, is necessary for questions about intellectual property to be dealt with adequately. There is in society, generally, expanding interest in intellectual property. It is a rapidly growing field of legal and economic research. Businesses spend exorbitant amounts of money procuring and protecting their intellectual property. Everyday people use someone else's intellectual property, sometimes legally and sometimes not (and they don't always know which). Corporations routinely sue each other and smaller businesses and individuals for reparations for real or perceived intellectual property violations. The “violations” that are cited by intellectual property owners are sometimes decried by critics as being groundless; other times, the institution of intellectual property as a whole is itself rejected (or at least questioned).

But philosophers have stayed largely silent on this issue. This is, of course, partially because the prevalence of issues regarding intellectual property is a very recent

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<sup>1</sup> Cf. Lawrence Lessig's *Free Culture*. The Penguin Press; New York: 2004; 258-259. I should note that Lessig (a well-known lawyer who teaches law at Stanford) is clear that he is not against patents, per se.

phenomenon. Though concerns for intellectual property rights have been present for some time, the pervasiveness of those concerns for everyday people is only more recently increased. The advent of computer technology wasn't enough to bring intellectual property issues to the forefront like they are now. The internet, as well as high-speed computer and copying technology, might be the catalyst for all the attention. Now, it is becoming abundantly clear that philosophers are needed to parse out the difficult and complex issues surrounding intellectual property rights.

This is not to insinuate that philosophers have said nothing about intellectual property rights. Indeed, Kant and Hegel both defended such rights. Locke seems to have been both critical and supportive of such rights. Nozick supports them, as well, though very briefly and with some heavy qualifications. Most of these particular philosophers do not give a complete analysis of intellectual property rights; Hegel's is by far the most explicit and complete, but it might still strike the reader as lacking in various ways. Part of this is surely because the issues regarding intellectual property rights are complex—property rights alone are complicated and difficult. If we add to this the fact that it is products of the intellect that we are considering ownership over, we may despair of answers. More philosophers today investigate the issue; but it is by no means a mainstream issue.

So, even though the issue of intellectual property rights is still largely set aside in contemporary ethical and political work (even amongst those who study property rights in general), the plausibility of intellectual property rights may strike the philosophical reader in one of three ways: 1) they are obviously justified, just like any property right (or perhaps for other reasons); 2) they are obviously unjustified, since, amongst other



reasons, ideas aren't like apples, cars, and land—they're not the kind of thing that one should be able to own; or 3) it is totally unclear whether such rights are justified, because the reasons behind 1 and 2 are not immediately obvious (or are perhaps both compelling to some degree).

I endeavor, then, to explore the justification of these rights. I will argue over the course of this dissertation that a particular regime of intellectual property (IP) rights is justified—that form I shall call weak type-protection (WTP). I am generally concerned with the justice of state-sanctioned IP laws; I am arguing that WTP should be the form for the legal institution of IP rights. I am not, that is, arguing anything about particular acts of intellectual property protection and ownership. I will be asking what our legal system should look like; the answer is that our laws should provide WTP.

WTP view stands in contrast to—and as a balance between—strong type-protection (STP) and a situation of no intellectual property rights (the no-IP position). I will argue that, according to all plausible ethical theories, WTP is justified, while STP and the no-IP position are unjustified. Currently, at least with regard to some IP rights in America (specifically, our patent system), STP is the form of IP protection. Just what this amounts to would take some time to explain carefully (which I do in chapter two), but, essentially, STP allows one to own a general type of the instantiation of an idea, and, therefore, all tokens of that type. Also, STP allows this type-ownership regardless as to the causal history of the various tokens that exist. WTP will take issue with precisely this; while WTP still allows one to own a class of objects (that is, to own a set of tokens of a type), it regards causal history of the various tokens as crucial in determining whether that particular token is owned.

I should be clear that, when I argue that STP and the no-IP position are both unjustified, and thus that WTP is justified, I am simplifying somewhat. Though it is true that STP and the no-IP position occupy the ends of the plausible IP protection spectrum, WTP—as I will describe it in detail in chapter 2—is not the only possible middle ground between these extremes. We might make modifications to WTP as I have presented it, such that what is suggested is not strictly WTP (as it may include or reject some of WTP’s claims). In this kind of case, of course, we still have something like WTP, since it is a form of IP protection, and since it will still reject aspects of STP. For simplicity, however, I will limit my discussion to WTP vs. STP and the no-IP position, since the kinds of modifications considered in this paragraph more properly belong in an extended discussion of WTP; my aim here is only to show that WTP—or something like it—is justified where STP and the no-IP position are not. (There is also, I should mention, the possibility of even stronger IP protection; one person, for example, might own all the objects of IP. I will set aside these wildly implausible views.)

Specifically, then, I will argue that WTP is justified according to many plausible ethical theories. I am quite sure we can imagine coherent ethical theories which would embrace either the no-IP position or STP. But these will all be implausible for various reasons. (One example here may be an ethical theory which rejects ownership of all things entirely; on this view, the no-IP position would be justified, and WTP unjustified. This view, however, is not really taken seriously, since some things are ownable.<sup>2</sup>) But I will not simply enumerate each and every plausible ethical theory and show how it regards WTP as justified. Instead, I will show how the two most common

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<sup>2</sup> It is not, for instance, the view of Marxists (who seem to hold to some sort of self-ownership, else alienation of one from one’s labor would be a difficult concept to comprehend). Nor is it the view of socialists, who view items as commonly owned.

considerations—namely, a concern for incentives and a concern for liberty—raised regarding IP rights both speak in favor of the justification of WTP, and then show that many other plausible ethical considerations (stemming from plausible ethical theories) do not favor either STP or the no-IP position, such that WTP remains the justified form for IP rights.

The theories I will consider span the gamut of those considered in the context of IP rights (utilitarianism, Hegelian personality theory, desert theory, labor theories of entitlement, and—as noted—concerns for liberty and incentives generally), as well as theories generally regarded by philosophers as plausible (contractarianism, prioritarianism, and egalitarianism). So, even though I do not argue that WTP is justified on all plausible ethical theories, the fact that it is justified on a wide range of plausible theories as well as on those usually considered in the context of IP rights means that there is a strong presumption that WTP will be justified on all plausible ethical theories.

In chapter two, I give necessary background information for the dissertation. I first briefly describe current IP rights, since that will be important for understanding the lay of the IP world. I also describe the type/token distinction both in general and for ideas in particular. IP rights are typically thought of as type-protecting rights, though it is not often recognized that this is. IP rights, then, are peculiar in that their form is different than that of paradigmatic property rights, which are token-protecting. It is important to understand exactly what this difference is. Following that, I introduce the possible positions. I first describe STP and the no-IP position, before moving on to explain WTP.

Chapters three and four discuss the two most commonly raised issues with regard to intellectual property rights; these are, respectively, the *incentives* and *liberty* issues. It

is often thought that IP rights are needed (or unjustified) because of issues of providing incentives for people or in order to respect their liberty. These two chapters, then, show that WTP is justified according to both a concern for incentives and a concern for liberty.

Chapter three describes the single most commonly raised concern usually offered in favor of IP rights—this is the incentives concern. It is thought that intellectual property rights are necessary to provide adequate incentive to people to go on innovating, and so we should have them. I will not claim that this argument is incorrect (even if the need for incentives is sometimes exaggerated); instead, I argue that it is too simple as phrased. We must ask what form of IP rights is being spoken of; if that form is STP, the argument is surprisingly unsound—STP does not, I will argue, provide adequate incentives. Amongst other reasons, STP actually causes a disincentive to innovate, and thus, on balance, does not provide the incentive-benefits that WTP does (since WTP does not have the disincentive effect that STP does, but still provides some incentive-benefit). And, since WTP does provide some incentives, it is also to be preferred (from a concern for incentives) to the no-IP position.

I should note two things about chapter three. First, the incentives argument is one which takes an expressly consequentialist form, and so, even though that chapter is aimed solely at the issue of incentives—the conclusions there are relevant for any view which has a consequentialist component. I am not presently able to think of a plausible deontological view which is concerned with incentives to innovate. Second, and more importantly, for some ethical theories, it will be necessary to provide exceptions to my conclusions for certain industries. The pharmaceutical industry, for example, might (on some ethical theories) require special protection in the interest of incentives, and so we

may not be satisfied with the protection WTP can provide. Here, I will claim that it is inconclusive what should be the case with regard to this industry and IP protection. But, it will still largely be the case that WTP is justified, as it is only in some cases where exceptional situations will make matters less clear. We may simply need to make provisions in working out the details of WTP, such that the necessary exceptions can be treated correctly.

Chapter four investigates the concern for liberty. I argue there that the “liberty view”—which is a view concerned solely with privileged empirical liberties—will regard WTP as justified. I will, of course, explain in that chapter what is meant by this, but, essentially, WTP is the only system which respects the liberties agents have to engage in activities which are crucial. Both STP and the no-IP position allow agents to perform actions which impede the crucial liberties of others. So, the liberty view will find these positions unjustified, while WTP is justified.

Chapter five will address other plausible ethical considerations which might have an effect on my thesis. I here investigate both consequence-based and deontological theories. In the former, I consider contractarianism, utilitarianism, and the distribution-sensitive welfarist views of prioritarianism, egalitarianism, and consequentialist desert theory. In the latter, I consider deontological desert theory, Hegelian personality arguments, and first-occupancy theories. Insofar as these views are plausible, they agree: WTP is justified, where STP and the no-IP position are not. The latter two forms fail for various reasons, of course, but the upshot is still that these other, plausible, ethical considerations will not swing the balance back in favor of either STP or the no-IP position. WTP is justified on many plausible ethical theories. And, as noted above, since

these theories span the gamut of views or issues raised in the context of IP rights, as well as those which philosophers tend to find plausible, there is a strong presumption that WTP is justified on all plausible theories.

In my concluding chapter, after summing up the conclusions from the three central argumentative chapters, I will briefly argue that a pluralist ethical theorist would also regard WTP as the justified form for IP rights. The upshot of the entire dissertation, then, will be that WTP should be the form for IP rights to take; justified state-sanctioned IP laws should be made in accordance with WTP. Again, some details will have to be worked out about WTP (including, but not limited to, important exceptions for particular industries according to whatever ethical theory is decided as the correct one); but it is clear that both STP and the no-IP position are both unjustified. WTP is regarded as the correct form for IP rights according to both liberty and incentives concerns, and the other plausible ethical considerations we have encountered do not modify this. There is, then, a strong presumption that WTP is justified on all plausible ethical theories.

## Chapter 2: Background

In this chapter I clarify some important concepts for the rest of the dissertation. I will very briefly describe the various types of intellectual property (IP) rights and note some interesting features about them. Following this, I will explain the distinction between idea types and idea tokens. I then describe the various forms of ownership regimes for the objects of IP, from the two extremes of strong type-protection (STP) and the no-IP position, to my favored view, weak type-protection (WTP). While I aim to be entirely descriptive in this chapter, in later chapters I will argue that STP and no-IP are both unjustifiable according to most theoretical standpoints, and that WTP should be the form that IP rights take.

In law, there are typically four basic types of IP rights: patents, copyrights, trademarks, and trade secrets. I describe trademarks and trade secrets first, since they are less relevant to my dissertation as a whole. After a brief description of these two types of IP right, I will describe patents and copyrights and then note some interesting details about each of these.

*Trademarks* are particular graphic designs which are intended to uniquely identify some creator and the creator's creations to the public. Coca-Cola, for example, has ownership over a particular design of the letters that constitute its name. Others cannot attach that same design to a different product (or even a product which was qualitatively identical to Coca-Cola's but which Coca-Cola did not create). Thus, a trademark is the protection of a mark of a particular kind which is meant to identify a certain product as associated with a certain creator.

*Trade secrets* are aptly named—they are simply secrets which are protected and traded as such for strategic advantage. The formula for Coca-Cola, for example, is a trade secret: if one person obtains possession of that formula through a trade with the Coca-Cola company, that person may not simply divulge that information to anyone they wish. The formula is a secret that the Coca-Cola company may discuss as they wish with others, since that company owns it. Others, however, can use the formula only if that formula is obtained under certain contractual circumstances, or if those others come to that same formula completely independently.<sup>3</sup>

*Copyrights* protect expressions of ideas; they generally cover the work of artists, including painters, musicians, and writers. If one has a copyright, one does not own an *idea itself*; instead (for a limited time) one owns a particular *expression* of that idea. Thus, Martin Luther King, Jr.'s estate does not own the idea of desegregation; but that estate does own, in having a copyright over it, King's particular expressions of that idea (which includes his voice, his performance, and his words, in some combination). So, when one has a copyright over an expression of an idea, one has control rights over recordings and reproductions of one's ideas (since they are particular expressions).

*Patents* protect inventions, methods and processes. The protection granted to a patent-holder gives that holder exclusive rights to the object patented (i.e., the invention, method, or process) for a limited time, in exchange for disclosure of the details of that object. Thus, the idea is to have inventors share their inventions with the public, so that

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<sup>3</sup> This is one of the main differences between trade secret and patent protection—under the former, one can independently invent the same item that someone else has protected; under the latter, this is not the case.



the object will become part of public knowledge, but only after a period of monopolistic control that the patent-holder will enjoy.<sup>4</sup>

Now, some of these are quite similar, such that objects falling under the general rubric of one category might seem quite appropriately to fit under another category. For example, is software appropriately the object of patent or copyright? It is creative and very similar in form to any kind of writing, and thus seems appropriate for copyright protection. Software is also, however, quite clearly a method or process for accomplishing some goal, and therefore might be construed as an object of patent. US law has made software susceptible to both kinds of protection. The important thing to note here is that some objects of IP rights are difficult to categorize precisely, such that it is not always clear how each item should (morally or legally) be protected.

In other cases, however, there are such radical differences that it might seem odd to construe them all as belonging to a general category (of IP rights). The reader may have noted above how different something like Coca-Cola's trademark is from, say, a particular Jimi Hendrix song (an object of copyright). Or, one might even note how different that same trademark is from the very item it is associated with—the formula for Coca-Cola (a trade secret). Does it really make sense to consider both of these under the general rubric of a particular type of property?

I will not try to answer this here, mainly because I am less concerned with trademarks and trade secrets than with patents (and copyrights as well, though to a lesser

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<sup>4</sup> There is another type of IP right sometimes (but not always) acknowledged called an “industrial design right”; it seems to blend some of the features of patents and copyrights (or trademarks). I give it less attention because precisely what it is not entirely clear, it is not recognized literally in US law, and because most of the issues surrounding it can be approached by focusing instead on the other types of IP right that it resembles.

extent). I only note these as interesting questions to be asked for how IP rights should be construed and what they should be construed as covering.

There are other interesting questions we could ask with regard to IP rights. For instance, with regard to copyright, how exactly are we to understand what constitutes an “expression” of an idea? Does someone’s simple word-choice and order count as an expression, or should it be more specific, to include perhaps one’s particular utterance of one’s words? Also, with regard to patents, we might ask how stringent the “non-obvious” requirement is. This requirement simply says that in order for a method to be patented, it must be considered by the patent office to be not obvious to one “ordinarily skilled in the art.”<sup>5</sup> We might wonder, however, if something can be considered non-obvious if an expert in the field finds it fairly non-surprising. Or, must an expert be entirely surprised in order for the non-obvious requirement to be fulfilled? Another, independent issue we may note is that the same kind of object is generally protected by patents and trade secrets, yet the way the protection works is quite different.

There are more interesting features to IP rights, and they are all important details for careful legal exploration. I, however, will not explore them here. The preceding was only meant to give the reader a sense of the details and scope of IP rights. I will thus continue with my general goal in this chapter, which is to set the stage for the rest of the dissertation; the first step is to describe the type/token distinction with respect to ideas.

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<sup>5</sup> See <http://www.bitlaw.com/patent/requirements.html#nonobvious> for more on the non-obvious requirement.

### *The Type/Token Distinction*

Whereas concrete property rights are those over *tokens*, IP rights are traditionally thought of as being over *types*, though I do not believe this is often noticed. Those who own an idea have generally been thought to own all (or close to all) material tokens of some type, rather than simply a specific token. So, if one owns a cure for cancer, for instance, one owns all the tokens of that type, as opposed to just one particular token. I shall now explain this difference.

A token is a specific object located in a particular spatiotemporal location. Tokens are distinguished from types. The distinction is made famous by Peirce; his notion was that types are categories, and tokens members of the categories.<sup>6</sup> Or, as Kent Bach puts it, ‘an individual or token is said to exemplify a type; it possesses the property that characterizes that type’.<sup>7</sup> I will consider the distinction, then, roughly to be this: tokens are members of categories, which are types; and tokens exemplify or instantiate types. The particular computer that I am typing on is a *token* of a *type*—specifically, the computer I am using is a token of the type *computer*, and perhaps *Gateway computer*, and perhaps *PC* (by contrast to Macintosh) *computer*. This tokened computer can instantiate an infinite number of types. That is, particular concrete objects are tokens, and they instantiate some abstract, general type in a singular spatio-temporal location. This is the basic type/token distinction. Types are multiply realizable—that is, they can be instantiated in more than one place at a time. Tokens are not like this—they exist in one

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<sup>6</sup> Cf. Peirce, Charles S. (1931-58) *Collected Papers of Charles Sanders Peirce*, Hartshorne and Weiss (eds.) Cambridge: Harvard University Press.

<sup>7</sup> In *The Cambridge Dictionary of Philosophy*, 2<sup>nd</sup> ed., Robert Audi, general ed. Cambridge University Press, 1999; 936-937: 937.

place for a certain span of time; when a token is destroyed, it is forever destroyed. Qualitatively identical tokens can be made, but the original token will never exist again. For example, this computer, once it's destroyed, will never exist again; this is the case even if another computer identical to this one is made.<sup>8</sup> The new computer is a new token of the same type. A token is thus one thing within time and space. A type is no such thing—it has as members a potentially infinite set of tokens.

The basic distinction, then, is simple enough. There are, of course, complications. Most of these are not relevant for my purposes here, but I will mention one in particular. This is that types come at varying levels of generality. For instance, I have a dozen or so male college students in the class I teach. Now, as we already know, we can point to any one of them, and we have picked out a token. If we were to say what type this token instantiates, we might answer, amongst others: 1) young males; 2) young American males; 3) young Midwestern American males; or 4) young Midwestern American male philosophy students. These four types come in different levels of generality, in descending order, from most general to least general. That is, 'young males' is a type instantiated by much more than the particular token we have selected; less and less so in descending order, down to 'young Midwestern American male philosophy students', which is instantiated by more than just our selected student, but not by nearly as many as at all the other levels of types. So, types can be instantiated by a great number, or a small number, of tokens. What is important, however, is that the distinction remains: a token is never instantiated in more than one place at one time. Copies of tokens can be, but these are new tokens (of the same type).

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<sup>8</sup> Suppose, after being destroyed, this computer is reassembled. Is this the same token, or is it a different token? I do not have the answer to this question; it is parallel, I believe, to the famously difficult "Ship of Theseus" problem, and will thus say no more of it here.

Before I proceed, I should clarify something about this distinction. Heretofore, one may have wondered if the type/token distinction simply be the distinction between intangible and tangible objects. As the last paragraph should show the reader, it is not. Types are necessarily intangible, but there is no reason to consider tokens as necessarily tangible, since, for example, philosophers of mind frequently consider ideas in the mind as tokens. Also consider again the idea of desegregation—this is not a tangible object (though a particular recording of the idea might be). It seems, then, that tokens can be intangible, since ideas are intangible and some ideas can be considered tokens.<sup>9</sup>

Also, the type/token distinction is not simply that between the general and the specific, although there are similarities. Types might actually be fairly specific (as in the above example of “young Midwestern American male philosophy students”), yet still admit of *multiple realizability*—the ability to be instantiated in more than one place at a time.

I do not pretend that this distinction is completely hard and fast, nor do I wish here to further any philosophical discussion regarding this distinction. Instead, I propose an application of this distinction to the question of intellectual property rights. Suppose we ask ourselves if intellectual property rights are relevantly akin to paradigmatic

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<sup>9</sup> One might also wonder what the relationship is between the type/token distinction and the distinction that exists within Anglo-American copyright law known as the idea/expression dichotomy, where it is emphasized that it is expressions of ideas and not ideas per se that are protected. I do not have the space to fully address this question here. I do think that the distinctions are not parallel, since ideas can be both types and tokens, as I have noted. More interesting is the question of whether or not expressions can be considered both types and tokens. They are clearly tokens, but is there a sense in which they can be considered types? It seems to me that this depends on how broadly or narrowly we interpret the term “expression”; to interpret it narrowly, or finely, would be to finely individuate expressions so carefully, that there could be no such type of thing—for example, even a perfect rendition of Martin Luther King Jr.’s “I have a dream speech” is still done by someone else in a different time and place. However, expressions conceived not so narrowly, or coarsely, would allow for some leeway, and permit us to see expressions as types as well. The important point for my purposes here is that, in the law in the real world, expressions are treated not as narrowly as to mean that expressions are solely tokens. For, if they were, then anyone could play any song at any time (since it is a different expression), and copyrights would be meaningless, since every expression is a new one.

property rights—that is, akin to property rights over material things. It is my contention that they are not in a particularly striking way: intellectual property rights are, as I have said, rights over types<sup>10</sup>, whereas paradigmatic property rights over physical items are rights over tokens. For example, when one owns a patent over a drug type, one has the right to control other drugs like it wherever they occur (within the jurisdiction of the legal system) and however they occur. This is not the case, for instance, with car ownership; when one owns a car, one owns only that particular car—not others like it.

It is thus important to clarify that while ownership of the objects of IP is type-ownership, this does not mean that one actually owns *ideas*; on the contrary, one owns material objects when one has IP rights. It is misleading when one is speaking to refer to IP ownership as the ownership of ideas. Standard ownership of IP—the ownership of patents and copyrights, in both forms I object to and those I endorse—actually gives one rights over a class of material objects. In common speech, however, we often speak of idea ownership. This is misleading, strictly speaking. Hence, to be clear: the current system of IP rights, and every system to my knowledge that has been proposed, speak of giving rights to specific material instantiations of ideas; not over ideas themselves.

So, IP rights are a kind of type protection (though, again, I am not sure this is often explicitly noticed). So this means that when you own the kinds of things that IP rights protect, you own something that is multiply realizable—you own a type. To own a token is to own one singular object. To own IP is to own something that can be instantiated in more than one place at a time.

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<sup>10</sup> This is typically the case. There are exceptions; trade secrets are not rights over types. Copyrights, depending on interpretive issues, may or may not be.

Thus, type-protection affords more powers to owners than token-protection. Now, my objection to STP (strong type-protection), which I will explain in ensuing chapters, is that the type-protection that STP affords is simply too strong. I instead forward a view of weak type-protection (WTP); it is still a kind of type-ownership, but it is significantly weakened. But it affords more protection than a system of token-ownership for ideas (the no-IP position). I will describe these positions in the remainder of this chapter. We will then be in a position to, in the next chapters, see why all plausible theories reject STP and the no-IP position in favor of WTP.

*Strong type-protection and the No-IP position*

In order to fully elucidate type-ownership (both STP which I reject and WTP which I defend), it is helpful to understand further an issue I brought up in the last section. This is that, perhaps surprisingly, IP ownership is (in most forms) a form of material, not ideational, ownership. For, ownership can occur at either the type or token level; and, it may occur over material or ideational resources. Consider this chart:

Type of thing owned → Level of restriction ↓	Material	Ideational
Type	Quadrant I: Traditional IP rights	Quadrant II: Idea-type ownership
Token	Quadrant IV: Paradigmatic, Material Object, Ownership	Quadrant III: no-IP position

Quadrants I and III represent the players we will consider for possible forms of IP rights. Quadrant IV, as noted, is our typical form of property right for concrete items.

Quadrant II is, I believe, uncontroversially absurd; it would give a person rights over the very idea of something—that is, over the abstract concept of the thing—such that others could not (morally) even think about that thing. Quadrant III represents the no-IP position, which will be discussed in further detail later in this section. Quadrant I is the typical general form considered for IP rights, as well as the form I endorse (which will significantly modify the current system).

To be absolutely clear, then, to own a table under Quadrant IV (material-token ownership) gives rights over only that one, concrete table, and nothing else; this is paradigmatic ownership. To own a table under Quadrant III (idea-token ownership) actually gives rights over that particular *idea* token, and nothing more—that is, no concrete tables are owned. Just the idea of that table is owned;<sup>11</sup> this is effectively the no-IP position. To own a table under Quadrant II—which is, again, ownership of the *idea* of a table—is absurd: it would mean no one could consider the idea of a table. To own a table under Quadrant I gives rights over a class of concrete objects based on similarity in function and/or design; but, as noted, one may own every token that falls under that type, or just some.<sup>12</sup>

Now, the current system is a material-type protection system because it does not cover *ideas themselves* wherever they occur; it covers material instantiations of those

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<sup>11</sup> An interesting question that may be asked here is whether ownership of an idea-token necessitates ownership of the material-token which first instantiates it. I suspect the answer is no, since I may come to own the idea of a widget, and that widget might happen (naturally) to occur somewhere in the world independently of me, and it wouldn't necessarily follow that I owned it.

<sup>12</sup> Could there be different levels of idea-type ownership as there is different levels of material-type ownership? That is, might there be a requirement of specific causal history inserted into idea type-ownership to make it less absurd, as I forward a similar requirement for material type-ownership? Again, this is an interesting question which I will not spend time on, as I am unsure as to its answer. I suspect there could be different levels of idea-type ownership. So, weak idea-type ownership allows ownership over ideational objects (whatever those are) so long as they are causally related to an original which is also owned. This may or may not be any different from material type-ownership. I set this possibility aside.



ideas wherever they occur. So, someone might be free, under material-type protection, to consider the idea-type table, for instance; whereas under idea-type protection, as described above, they are not. Material-type protection does, however, give rights over material instances of tables; and it does so at the type level. (And, incidentally, if a table were protected at the token level, only one particular table (ideational or material) would be protected, and that is all.) The crucial question about material type-protection (Quadrant I), it will be seen, is *which* material instances are protected—all or just some? WTP forwards *just some*—those that have the relevant causal history. This will be explained in greater detail in the next section.

Quadrant I, then, represents both STP and WTP, and thus includes both a system that I reject and that I endorse (respectively); hence, material-type ownership, I will claim, can come in objectionable as well as justifiable forms. (Please remember that STP includes, as noted earlier, the current Anglo-American patent system (and thus that system falls into Quadrant I).)

Now, some of the details of STP should already be clear. It is a material-type protecting system; it claims that ownership of some type gives a claim over all the tokens of the same idea type. All these tokens are those which are similar in function and/or design to the original, owned type. So, STP claims that ownership of the type, ‘table’ means that one owns all concrete tokens of that type. To generalize, then, if agent A owns type I, A owns all tokens of I, even those that are causally independent of A’s particular tokens I. That is, suppose agent A owns type I, and has in her possession tokens  $I_1$  through  $I_{10}$ . Further suppose another token  $I_{11}$  appears with no causal

connection to tokens  $I_1$  through  $I_{10}$ ; according to STP, A owns  $I_{11}$  as well, since it is a token of the type I which A owns.

I should make an important note here about type-ownership, with regard to the clarification I made above regarding the varying degrees of generality in what a type is. Ownership of the material-type “car” may give rights over a very broad or narrow set of material objects, depending on how broadly or narrowly we are to individuate types, since types themselves come in varying levels of generality. So, owning the material-type “car” may end up, if individuated narrowly, covering a small set of objects (say, those having 3 wheels of a certain dimension, and so forth). Or, owning the type “car” might end up, if individuated broadly, covering an incredible amount of objects (say, all moving objects capable of transporting other objects). This is one complication for a type-ownership view. The patent system, which, the reader will remember is a form of material-type ownership, is difficult to label precisely with regard to how broad or narrow it is. It is considered obvious that that system cannot be too narrow; were the system to protect only finely individuated types, then competitors could simply copy original works and add placebos of some kind, and therefore avoid the narrowly-defined protected type.<sup>13</sup> Hence, there is some reason to not, when constructing a type-protection system, interpret types as being too narrow.<sup>14</sup>

That will suffice as a description of strong type-protection. As I will defend in ensuing chapters, I reject strong type-protection from both a liberty and an incentives-

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<sup>13</sup> Cf. Richard R. Nelson’s *The Sources of Economic Growth*. Harvard University Press: Cambridge, 1996: 120.

<sup>14</sup> There is also concern that broad patents are detrimental; for this debate, see *ibid.* for a list of studies on this issue as well as criticism of those studies. A separate but related difficult question is this: if, say, a subsequent cure for cancer is radically different from an original (and type-ownership is the case), is the subsequent cure a violation? That is, is mere similarity in function sufficient for violation, or must there also be (or only be) similarity in design? The history of legal disputes surrounding this issue does not give us a clear answer.

concerned perspective. This, along with the fact that no other plausible considerations exist that will swing the balance back in favor of strong type-protection, lead us to reject such protection from all plausible perspectives.

On the other side of the spectrum of protection is the no-IP position. According to this, there is no specifically *intellectual* property; ideas, however, may still be protected by *other* property relationships. So, physical property rights over spaces such as a house, as well as the enforcement of contracts, might still be in place to provide some protection for ideas and other objects of IP. For example, if agent S doesn't want agent T to copy S's cure for cancer, under no-IP protection, S can protect this idea by concealing it (within a home, or other physical space itself protected by normal property relationships). Furthermore, S can contract with others with whom S wishes to share her idea to keep it secret, and enforcement of contracts might ensure this secrecy agreement. These ways in which ideas are protected, however, are not specifically intellectual property rights—hence my calling this the no-IP position. Ideas are protected under this position only insofar as *the medium in which they are contained* itself is protected. Thus, the no IP position gives some protection to ideas, but only that which follows from protection of other kinds of items (which are the substratum, so to speak, upon which ideas are contained).

I said above that the no-IP position is effectively idea-token protection. Strictly speaking, there are two different kinds of no-IP position; it may grant ownership rights over tokened ideas, or it may grant rights over token material instantiations of tokened ideas. I will, however, not endeavor to decipher which of these is the case, since it will make no difference in my analysis; I will be speaking, however, as if the no-IP position

gives rights over the token material instantiations of tokened ideas. If the no-IP position actually granted rights to the mental stuff (however that is construed) itself, it is plausible that ownership will also be had over wherever that mental stuff is codified. So, the no-IP position and idea-token protection, in the real world, gives the same rights of ownership.

Turning to a hypothetical example, however, we see that this question is actually much more complicated. Suppose that a particular idea P was so complicated that only the smartest person in the world (of which, suppose further, there is only one) could understand it; because of this, it is simply impossible for other agents to understand P, much less to discover that P. Also, suppose there were mind-reading devices, such that ideas could be taken from people (and they would no longer have those ideas). Under idea-token ownership, this would definitely be a violation. Under no-IP, it is not clear whether a wrong has been committed *over and above* potentially violating the wishes of an agent regarding her body (whereas under idea-token ownership, a wrong is committed beyond the simple violation of her body, viz., the wrong of taking P from her). I suspect that whether or not, according to the no-IP position, a further wrong is committed lies in deep metaphysical questions which are not the subject of this work. Hence, I will set aside this issue for now, and assume a real-world scenario for our purposes: the no-IP position is an idea-token protecting system, since the same rights are given to idea-tokens under both (namely, others cannot simply access your particular idea(s) without permission, but if you don't protect your ideas, you have no claim on what happens to copies of your ideas, since they are separate tokens of the same type).

Now, as with STP, I will in later chapters argue that the no-IP position should be rejected from both liberty and incentives-concerned perspectives. And, again, other

considerations do not swing the balance back in favor of the no-IP position, making the liberty and incentives-concerns sufficient for the rejection of the no-IP position. The rejection of the no-IP position and STP justify Weak type-protection, to which I now turn.

### *Weak type-protection*

What, then, is weak type-protection (WTP)? I have said that it is a middle ground between the extremes of STP and no-IP. It will bear similarities to both, but will be different in crucial ways.

To begin with, WTP starts as both the no-IP position and STP starts—it allows ownership over original tokens, protected by other physical property relationships (I assume here that some defenses of private property work). This “original ownership” is just that over a particular, initial token; one owns that token as one owns any particular token—it cannot be taken from one, one can decide what to do with one’s token, and so on. The fact that the original token might be a mental thing (in the case of an idea) or a physical thing (in the case of concrete objects) is irrelevant here, since even if the original token is mental, one can come to own (on each theory) the first concrete token that the original idea manifests. Thus original ownership, even if construed as being over an idea, will extend into whatever concrete thing first manifests that idea.

Now, what justification is used for this initial ownership is an important issue, but is also beside the point here; whatever view one ascribes to for property rights in general, all three views of ownership of ideas will start by defending ownership of original tokens (whether ideational or material) according to that view. The no-IP position, however,

stops there; this view says those original tokens are all that can be owned. (STP, by contrast, makes the blanket claim that all tokens that are functionally and/or compositionally similar to the original token are owned.)

WTP allows more than what the no-IP position allows. It moves protection from the level of tokens to the level of types, in allowing ownership over a class of objects, while the no-IP position allowed ownership only of tokens. However, the type-protection WTP provides is, obviously, not as strong as that of STP. This is because it puts a further requirement on the type-ownership endorsed by STP that is beyond simple functional and compositional similarity. It requires there be some sort of causal relationship between the original owned token and other potentially ownable tokens. It does allow ownership of a type, in that some objects that bear the relevant causal relationship and which are functionally and/or compositionally similar one can have a claim on. Whether or not one actually does have a claim depends upon details that I will present shortly. Simply note for now that this is a restricted type from that protected by STP, which paid no attention to causal relationship.

Thus, WTP says that one can own original tokened-ideas, as well as sometimes have a claim on other tokens which bear a causal relationship and are functionally and/or compositionally similar. So, over and above the no-IP position's protection of original tokens, WTP will sometimes grant a claim over *copies* of original tokens. Let us make this more precise, and, in particular, be clear about what the claim WTP grants to copies is over.

WTP is the view that one has ownership over one's original token(s), as well as a claim right over the *rivalrous uses of copies* of one's original token(s).<sup>15</sup> Now, a use of some token X is rivalrous if and only if use of X by one person reduces the availability or value of use of X by another person. For example, my use of the sun to grow plants is non-rivalrous use of the sun; it does not impact your ability to use the sun to grow plants (or do anything else<sup>16</sup>). My use of a pencil, however, is rivalrous—it impacts your ability to use that pencil.

It is important to note that the use of intellectual products is in a sense rivalrous and in a sense non-rivalrous. The sense in which such use is non-rivalrous is that everybody, everywhere, can think about, say, Einstein's theory of relativity, and this in no way impacts other people's ability to use it. Further, everybody, everywhere, can use it in other calculations. Thus we might say ideas are non-rivalrous in *consumption*. However, ideas might be (and often are) rivalrous in *value*—that is, the more people profiting off of Einstein's theory of relativity, the less each person stands to make. That is, each person who uses the theory to make a profit (say, by writing a book about it) impacts the ability of others to similarly make a profit (though perhaps to a very small degree for each). Thus, ideas admit of both rivalrous and non-rivalrous uses, and this is

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<sup>15</sup> As I will describe further below, for something to count as a copy, it must be causally related to the putative original. Also, incidentally, WTP may also claim that one has a claim right to some sort of credit; that is, if someone copies you, you may have a claim right to credit for coming up with the original. I set this interesting issue aside for now.

<sup>16</sup> Except, perhaps, to use the sun *exclusively* to do something else. That is, any use of a resource is rivalrous in the sense that others can no longer exclusively use that resource. So this description is not technically, logically precise; I am simply using the term, however, as economists generally use it. This means that, while the definition of rivalry as presented will allow for some examples that show all resources to be rivalrous (in at least one sense), for our purposes, the definition will do. It is trivial that my use of a resource clearly impacts your ability to keep me from using the resource—any right to anything is itself rivalrous; hence, we are justified in ignoring this possibility. What matters is when my use of a resource has a more significant impact than a trivial one on your use thereof. This significant impact can be measured economically, if need be. Cf. note 21, below.

not true of the objects of material token ownership; these latter objects are rivalrous in consumption.

So, WTP claims that when people copy your token(s), you have a claim on some *uses* of those copies, namely, those which will affect you.<sup>17</sup> Now, remember that I have said WTP allows independent inventors the use and even ownership of their own innovations; we thus need to be able to distinguish between a copy and an independent invention, so that WTP can indeed be distinguishable from STP. So what does it take for something to be a copy of something else (and not simply similar but independent)? Two factors are important here; first, note the crucial difference between WTP and strong type-ownership: WTP regards the *causal history* of ideas as relevant for their ownership. So, for X to count as a copy of Y, X must in some way be dependent for its existence upon Y. Spelling out in what way it must be so dependent is important, and I will say a bit more about this in the next paragraph (and at the end of this section).<sup>18</sup> Also, however, some functional and/or compositional similarity between X and Y is also necessary, since we would not say that something which simply depends upon some earlier thing therefore counts as a copy (e.g., the car is not a copy of the internal combustion engine). These are, then, the necessary conditions for X to be considered a copy of Y: X must be derivative of Y and be functionally and/or compositionally similar.

There are interesting side issues here which I should at least note. These regard how much dependence is necessary in order to be counted a copy. For instance, if some

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<sup>17</sup> In more than a trivial way; cf. notes 16 and 21.

<sup>18</sup> I should note that we may want to include a counterfactual clause to the effect that, for something to count as a copy, it must be the case that, were the original different in some specific way, the putative copy would be similarly different. This is to avoid wacky causal chains; we would not, for instance, want to say that drug Y is a copy of drug X, simply because (assuming functional and compositional similarity), drug Y would not exist were it not for drug X, when drug X was, say, a drug which allowed drug X's inventor to procreate, and thereby beget drug Y's inventor. Drug Y is dependent upon drug X for its existence, but in a wacky way; thus some counterfactual clause as the one above may be necessary.



crucial component of a token is identical to some other prior token, yet all of the other features of it are independent of the original, does this new token count as a copy? Or, suppose the opposite: all features but one are derivative, but that one that isn't is quite crucial; is this enough to be considered independent?

There are, then, certainly some issues of vagueness in what counts as a copy. (This is not, incidentally, a mark against WTP; STP has its own issues of vagueness in, for instance, determining whether an independent item is dissimilar enough from an original to avoid infringement.) Though I do not venture to answer this completely here, I would suspect that WTP would regard the dependence of the crucial features of the item in question as being of prime importance in determining dependency status. So, as in the first question, where a crucial feature is copied, yet other features are new, WTP would regard this as largely copied. However, if those other features played a significant role somehow—say, in generating a profit—and those other features were independent, the item's independence is more obvious. I will return to this issue after I introduce what will be an important example, to which I now turn, which is presented in order to elucidate WTP.<sup>19</sup>

Consider an example where I have manicured my garden in a particularly efficient and artistic way. You have observed this, taken some photographs, and made use of it in your own garden. You have copied the manicure of the garden, which I own (suppose). Now consider different cases; in case A, that is all the use you make of it. In case B, you

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<sup>19</sup> I will not here attempt to answer if complete functional similarity but compositional difference still counts as a copy (nor whether functional difference but compositional similarity also counts). I suspect that, in each case, they do count as copies, though not as significant a copy as a functionally and compositionally similar pair. I also, unfortunately, will not be able to spell out completely to what extent X must be functionally and/or compositionally similar to count as a copy. It seems clear that there are controversial and uncontroversial cases on both sides.

write a book about garden manicuring and make a decent profit. WTP will claim that there is a violation in case B, but not in case A. In case B you have made rivalrous use of a copy of my owned token—I am now less able to make a profit off of my token because of the way you used the copy in your possession. Had you, as in case A, not attempted to profit off your copy, WTP would claim that there was no violation; you did not make rivalrous use.

This is in contrast to both STP and the no-IP position. STP says both cases contain a violation, in that you have made unauthorized use of a copy of my token; you have constructed something functionally and/or compositionally similar, without my permission, and are therefore in violation (no matter what you do with your copy). Furthermore, supposing there was a different case—case C—where you happen to come up with the same garden manicure, but do so independently, STP would claim you are in violation of me. The no-IP position, however, finds no fault in either case; if I didn't want my garden copied, I shouldn't have let you see it.

Consider yet another different case for our garden example to illustrate some of the detail of WTP. In this case D, you did get your idea for the garden from me (and make a profit off of it), but you took no precise measurements at all (say you simply quickly drove by and got the idea). Certainly, your idea counts as dependent on mine; also, it might be somewhat functionally and/or compositionally similar. But we may want to resist calling it a copy if you have put much of your own time and ingenuity into the creation of your own garden. In this case I believe WTP would proclaim that, if the copy (on which you make rivalrous use) is violative at all, it may only be so to a small degree. That is, we can construct WTP to reflect how significant the copying is in the

cases where rivalrous use is made of copies. Thus, we may decide that, in cases like D, above, the original owner is to be compensated by the copier in the amount of a small fraction of profits. However, if the copying is more significant than in the case as explicitly stated, the fraction may increase. Importantly, the degree of compensation can be determined in part by how significant the copying is.<sup>20</sup>

However, case B is much more clearly a copy; its functional and/or compositional similarity is obvious (it is presupposed in the case), and it is also clearly dependent upon the original token. And, since you make rivalrous use of the copy, you are clearly in violation of me, according to WTP. In this case, you may not only have to turn over profits, but you may have to cease the activity which you engage in.

Now, return to the general issue about vagueness in what counts as a copy. If, as in case D, you “got your idea” from me, but the crucial components of the idea are largely independent, we may not want to count your garden as a copy of mine (and, in some cases, WTP certainly wouldn’t). Suppose, however, while you did add many components independently to your idea, you did copy one of the most crucial features, say, the location of certain kind of fountain in the garden (and suppose this is one of the big profit-generating aspects of the idea). In this case, a crucial component has been copied; you have more clearly copied me. WTP will regard you as in violation of me. This is in contrast to a case D where you have added independent, distinctive elements. In this case, it is clear that your idea’s dependency on mine is minimal; if there is any violation, it will be considered small by WTP. WTP can be further specified to better accommodate our intuitions about the dependency of putative copies, and the degree of violation in those cases.

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<sup>20</sup> I am by no means saying this would be WTP’s procedure. I am only suggesting it as a possibility.

An important detail for WTP which I have not described yet is whether or not there are to be *term limits* put upon the weak type-ownership that agents receive. Anglo-American patent law has a term limit of seventeen years—after that time, people have free access to what was patented. Would there be a similar term limit put upon WTP?

Before I answer this question, let me be clear that the legal reason for term limits on the patent system is utilitarian—it is thought that those seventeen years are sufficient to provide incentive to would-be innovators, but any longer would be detrimental in keeping useful ideas from the public sphere. So, since this reason is utilitarian, the principle behind term limits would not necessarily apply depending upon what one's theoretical inclinations are. And, since I attempt to stay as theoretically neutral as possible in this dissertation, I will therefore not make a claim as to how WTP should be constructed in this manner. Different theoretical positions will have different requirements. It is possible that some deontological theories would think there should be no term limits put upon WTP at all; it is also easy to imagine utilitarianism, for instance, putting a term limit on WTP. I do not know for sure. I only want to note here that this would be an issue for a fully fleshed-out version of WTP to determine, and that it is one point that different theories will differ on (while, as I will argue, they all agree to WTP in general).

I also need to be clear about an issue regarding when WTP counts an action as a violation. Suppose we ask if original owners must *actually* be using their ideas in the particular way copiers use the item copied to count as a violation, or if the mere *potential* for owners to use that item is all that is necessary for a case of copying and profiting off of to be a violation. For example, suppose I invent a drug which accomplishes function

F; you copy my drug, and market it, but not for function F; instead, you copy it for function G. Do I actually have to be making use of the drug for function G for this to count as a violation, according to WTP? Or, is the simple potential for me to use the drug for G enough?

WTP counts only those actions which are *actual* cases of rivalrous use as violations. It is simply not rivalrous use if I do not use the drug for function G; WTP counts your use as permissible. Now, once I do market the drug for function G, we have a different situation. And this situation is complicated if I begin to market my drug for function G only after seeing you use yours (that is, my use of the drug for function G is a copy of your usage). Though I do not wish to pursue this issue carefully, it seems that, if I market the drug for function G independently, you have no complaint against me, and may even owe me since you have copied me. If it is dependent—that is, if I got the idea for marketing the drug for function G from you—then our claims against each other may cancel out, and we may simply be in competition with each other at this point. The details here can be worked out; it is important simply to note that only actual rivalrous use counts as a violation under WTP, not potential rivalrous use.

It also remains to be seen *how much* of a claim an original innovator has on the rivalrous uses of copies of their tokens. That is, do original owners have a complete claim on the rivalrous uses of copies of their tokens, or a weaker one? This would take more time to develop fully, but, briefly, WTP would say that the strength of that claim should again vary with how independent the copy is from the original. As noted, there may be a significant difference between the two, and there may not be; WTP's claim will reflect this. WTP can be specified to say whether a weak claim (as in case D) involves

simple financial compensation for loss (or a portion of profit), or if it requires cessation of profiting activities (that is, if WTP requires anything in these cases).<sup>21</sup>

To sum up, then: WTP claims that one can own original tokens, as well as gain claim rights over the rivalrous uses of copies of one's original tokens. It denies ownership over ideas which bear no causal relationship to one's original token (a denial

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<sup>21</sup> An important issue is whether or not WTP will claim the following sort of case as a violation: suppose agent X copies some idea I from some other agent Y. X makes no rivalrous use of I beyond the trivial rivalrous use identified in note 14. Now, suppose this trivial rivalrous use is this: X will no longer purchase I from Y, when suppose they would have had they not had the permission to copy I. This is essentially equivalent to our garden cases A and D. According to WTP as I have described it, no violation is contained here, even though there is some (trivial) loss to Y, viz., the loss of the ability to profit from X's purchase of I. Now, in some cases, this "trivial" loss may not be so trivial; that is, the loss that is definitionally present in a case of copying might amount to a significant loss. Suppose, for example, this was Y's only way of making any profit whatsoever. This is a clear complication for WTP. Still, I believe WTP will bite the bullet and not call X's copying a violation for reasons stated in the chapter: so long as rivalrous use (beyond the trivial kinds) is not made off of a copy, there is no room (under WTP) to complain about this. Whether or not Y is in the end disadvantaged by this aspect of WTP will depend on other details. For instance, we may hold to other ethical principles alongside WTP to compensate for radical situations such as these. We may consider these situations radical because we must imagine strange situations for one person's copying (remember, without redistribution) to be damaging to an original owner. These strange situations are such as this: X copies I, where I is so valuable that only X could afford to pay for it (suppose X is ultra-wealthy). In this case, Y is disadvantaged, but it is only because of very special circumstances. The only situation that I can think of which is not radical in this way is the following: suppose multiple agents copy I, such that the trivial amount of damage done in one person's copying is repeated multiple times; thus, there are numerous individual instances of trivial damage, and this damage can add up. I regard this as the only non-strange instance where this kind of case can occur. (We should note, however, that these cases are also not altogether common; when someone is in a position to copy, it is usually because of the proximity of that person to an instance of the idea. Only so many people can be in this kind of position to do this kind of damage as a unit to the original owner. Incidentally, in case the reader thought otherwise, music downloading is not a real-world example of this kind of case. Illegal music downloading happens through redistribution of copies, and thus is not the kind of case we are here considering.)

But, if this case of copying (and disabling profit) actually occurs and disadvantages someone, then we must look more carefully to determine what must be done. Here is where we may see WTP undertake different forms depending upon one's ethical inclinations. Up until now, I have been arguing for WTP from all plausible perspectives. But this does not mean WTP only admits of one form. We may, for example, understand WTP to have provisions for compensation in cases like the one discussed above. So, some ethical theories may argue that WTP plus compensation in some or all cases might be correct, where others may argue for WTP without any compensation. (For example, if we hold to a liberal egalitarian theory of justice, we might compensate those disadvantaged by this kind of copying in order to bring them up to the correct level of well-being; our view might thus be for WTP plus compensation in all such cases. Or, if we hold to a hard right-libertarian view, we may regard this case as unfortunate for he who is less well-off, but we may not be required to do anything about it (if he didn't want this to happen, he should have protected his original tokens better); here, then, our view would be WTP with no compensation. I do not argue that this is the case; I only show what the possible views might look like.)

I do not wish to investigate this question further here, as my goal is to show that WTP is the justified form for IP rights. We may need to tweak WTP according to whatever ethical theory ends up being the correct one; but we have still made progress if we understand WTP to be the justified, general form for IP rights, and reject both STP and the no-IP position.

not held to by strong type-ownership). It also allows agents to prevent others from copying one's ideas and profiting off of those copies; this will allow for the effective marketing of ideas (an allowance the no-IP system denies). Also, since agents don't have to "fence in" their ideas which they may want to market by physically obstructing them with other physical property, WTP gives agents more security in being open with their ideas.

I should note before concluding that I do not regard my description of WTP as complete. There are numerous details that would need to be worked out for WTP to be a fully applicable legal doctrine. I have here provided the outlines of the view; I also hope that, together with what comes in further chapters, enough will be seen to show how WTP is the justified system of IP rights, especially when compared to the morally objectionable views of STP and the no-IP position. So, though WTP needs more work, I believe one upshot of the dissertation is that, since it is justified (and STP and the no-IP position are not), in fact WTP *needs* to be worked out more carefully, so as to guide us in our construction of IP rights. My hope, then, is to lay the theoretical foundation for justified IP protection. If I am successful, other work can be done to hammer out the details of the view as is needed.

### *Conclusion*

There are generally four types of intellectual property right—patents, copyrights, trademarks and trade secrets. These rights are typically understood to be rights over types, as opposed to tokens, since they cover something multiply realizable. When considering how IP rights might be construed, then, we have before us a spectrum of

possible protection for the objects of IP. On one end we have no-IP protection; if ideas are to be protected, they must be protected via other means. This means having physical property or contracts indirectly cover whatever ideas are to be protected. Thus, there is no intellectual property, on this view, though ideas may be protected in other ways. On the other end of the spectrum is strong type-protection; it gives a claim over objects that are functionally and/or compositionally similar to an original owned token, regardless as to their causal history. Weak type-protection—the view I favor and will argue for in the rest of the dissertation—also gives a claim over objects that are similar, but requires there be a causal relationship between the putative ownable and some original owned token. Only then may a claim over these copies of original tokens be gained.



### **Chapter 3: Incentives and the Justification of Intellectual Property Rights**

In this chapter I argue that considerations for incentives favor weak type-protection over both strong type-protection and the no intellectual property position. Insofar as one is concerned about the incentives potential innovators have to innovate, weak type-protection is justified as the form IP rights take. I begin this chapter by addressing what the incentives concern is. I then argue for weak type-protection over strong type-protection (on incentives concerns). I follow that section with an important qualification: pharmaceuticals represent a unique industry vis-à-vis the incentives concern, and may require stronger protection than what weak type-protection affords (on incentives concerns). The final section of this chapter argues that the incentives consideration favors weak type-protection over a position of no intellectual property. The upshot is that weak type-protection is justified according to the incentives concern.

#### *The Standard Argument for Intellectual Property Rights: The Incentives Concern*

It is thought, IP rights generate incentives to innovate, which is, on the whole, a good thing. Thus, we should have IP rights. This is by far the most common defense of IP rights in general, as well as of our current IP system in particular. It is the reasoning used by economists and lawyers for defending or justifying the current system (or something like it); it is also the argument outlined briefly in the US Constitution.<sup>22</sup>

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<sup>22</sup> The incentives argument in the US Constitution is at Article 1, Section 8, Clause 8. Lawyers and legal scholars regard the incentives argument or arguments like it as the primary justification for IP rights; Cf. Harris, J. W. *Property and Justice*. Clarendon Press, Oxford; 1996: 347.

Abraham Lincoln said that the patent system “added the fuel of interest to the fire of genius”.<sup>23</sup>

Let us try to be more precise about this argument. Lawyers and economists, and for that matter most laypeople, would say something like the following, if they were asked to justify IP rights.

*Incentives argument:*

- 1) The justification of a law depends in part on how good its consequences are.
- 2) It is a good thing to have technological and artistic innovations.
- 3) Having legal IP rights is the most effective way of promoting such innovations (because of its incentive effects).
- 4) Therefore, if all else is equal, legal IP rights are morally justified.

To be clear, the incentives argument (and the modifications I shall present below) all take a consequentialist form; the argument does not admit of a (plausible) deontological form. Now, premise 1 is simply part of the theory of those concerned with incentives. Premise 2, I will assume, is true (while economists do not agree entirely on IP rights, they do agree that innovation benefits social welfare)<sup>24</sup>. Premise 3 simply notes that if IP rights are in place, people will try harder and more often to create new art and new inventions (together which I will refer to as “innovations”)—which are good for everyone—since they stand to make more from doing so. An economist might say that

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<sup>23</sup> During his Second Lecture on Discoveries and Inventions, Jacksonville, Illinois, February 11, 1859. See [http://www.giga-usa.com/quotes/authors/abraham\\_lincoln\\_a001.htm](http://www.giga-usa.com/quotes/authors/abraham_lincoln_a001.htm).

<sup>24</sup> To be clear, I assume that to have incentives to innovate is better than not; and, all things equal, the more incentives to innovate there are, the better off we all are. So I am assuming what nearly every economist does and many actually argue—that, all things equal, we should foster innovation by creating incentives to innovate. Some may argue that it is possible that innovation is actually not a good idea for us. I will ignore this view in this dissertation. If innovation is, actually, harmful to us, then it might be the case that strong type-protection is better for us than a weak version. I believe this to be a radical position, and will say nothing more about it here, other than that, typically, such views spring from skepticism about “where technology has brought us”, with attention particularly on weapons of mass destruction, destruction of the environment, and so forth. While these examples are clearly important and concerning, and in-and-of-themselves matters for ethical exploration, it would be fallacious to conclude that they show innovation in general to be harmful. It seems clear that innovation in general is not harmful, though some particular innovations may have been.

the more incentive an agent or agents have to invest into the research and development necessary for the production of these goods, the more likely it is that people will actually attempt to produce them. The more attempts at production will increase the likelihood of actual production. So IP rights are the best way of providing these incentives. Hence, to have IP rights is better than not, given the effects of incentives upon stimulating people to create new art and new inventions.

The thrust of my concern is that this argument is overly simple; I do not claim it unsound. Specifically, I would ask, what is the *form* of the IP regime that is filling in the premise 3? For, I claim, if we are to read premise 3 as saying that strong type-protection (STP) is the most effective way of providing incentives then the premise is false, and the argument unsound. This argument would look like this:

*Incentives argument for strong type-protection:*

- 1) The justification of a law depends in part on how good its consequences are.
- 2) It is a good thing to have technological and artistic innovations.
- 3) Having legal STP is the most effective way of promoting such innovations (because of its incentive effects).
- 4) Therefore, if all else is equal, STP is the morally justified form for legal IP rights.

Now, if we change the premise to be arguing for weak type-protection (WTP), however, they are true and the newly formed argument is sound; this, then, is the incentives argument for (WTP):

*Incentives argument for weak type-protection:*

- 1) The justification of a law depends in part on how good its consequences are.
- 2) It is a good thing to have technological and artistic innovations.
- 3) Having legal WTP is the most effective way of promoting such innovations (because of its incentive effects).
- 4) Therefore, if all else is equal, WTP is the morally justified form for legal IP rights.

The incentives concern is simply that, all else equal, we should favor the IP regime which has the highest net incentive-to-innovate-benefits. This means that any disincentives to innovate must be added to whatever incentives to innovate exist under the regime in order to determine the net incentive-benefits of that regime. Whichever system has higher net incentive-benefits, the incentives-concern favors for the form of IP rights.

So, I will argue in this chapter that, comparatively, WTP fairs best on incentives-matters; it has higher net incentive-benefits than either of the two other possible IP regimes (STP or no-intellectual property protection, which I will call the no-IP position). The bulk of this chapter, then, will be an assortment of reasons to believe that STP is not as beneficial overall at providing incentives as it is thought to be, and that WTP can generate the demanded incentives without causing disincentives. WTP, then, is justified according to the incentives concern.

One important qualification is necessary here. In the second section of this chapter, I will admit that the pharmaceutical industry represents a unique position vis-à-vis the incentives consideration, such that my position with regard to this particular industry is less conclusive. This will become clearer later; for now, simply note that my thesis is tempered for this particular industry: it is inconclusive (from the incentives-concerned perspective) what system should be preferred for the pharmaceutical industry.

## ***Section I: The net-incentive benefits of WTP are higher than those of STP***

In this lengthy section I will present reasons to believe that STP does not provide more incentive than WTP, and, indeed, that WTP provides more. I will argue the following major points in this section:

1. WTP can provide a measure of incentives
2. STP negatively impacts incentives to innovate downstream inventions more than WTP
3. STP creates more disincentives to innovate than WTP
4. STP, in actuality, does not provide significant incentives

On the face of it, one might think that STP obviously provides more incentive for people. This is because, if the promise of exclusive rights which STP grants me brings with it (as exclusive rights typically do) the promise of more profit, it seems to follow that there is more incentive under an STP regime than under a regime (like WTP) which does not allow the same strong, exclusive rights. Thus, I first make clear how and that WTP actually does provide some incentive, and then I commence my attack on STP. I first argue that STP causes a significant disincentive to innovate in sub-sections 2 and 3, and then portray evidence to cast doubt on the positive incentivizing ability of STP in the first place. The upshot will be that WTP is in a better position than STP according to the incentives concern.

### *1. WTP provides incentives*

It may be feared that WTP will provide no incentive. Perhaps one is enamored with the difficulty of proving a case of copying, such that one is skeptical of the incentive innovators have to risk innovation, when their work is at risk of being copied.

On the contrary, it is simply mistaken to think that WTP adds no incentive to innovate at all, from the point of having no IP protection whatsoever; WTP does provide for some incentives. To some extent, this should be obvious from the fact that, as I have described, there are some similarities between WTP and the current copyright system. If one thinks the copyright system provides some incentive, it is likely that WTP will as well, since the protection is similar.<sup>25</sup> We should note, however, that issues regarding incentives are empirical ones, insufficiently investigated to make absolutely conclusive claims regarding them. I will portray as much relevant information as I can and still draw conclusions from that information, but we must proceed to some extent with the recognition that measurement in these areas is difficult. Still, I think we can conclude at least this minimal claim, that WTP does provide some incentive over the no-IP position. However, when we also consider the fact that WTP does not contain the disincentives that STP does, WTP actually ends up better in terms of providing incentives than STP.

Suppose Eli Whitney considers “patenting” his cotton gin. But further suppose that this “patent” is actually that provided by WTP—he knows that it is a violation of his right if someone were to take his particular idea of the cotton gin without his consent. No violation has occurred, however, if other people independently invent their own cotton gin or some other device that accomplishes the same goal. His right is violated, however, if he shows his cotton gin, say, to David under conditions of secrecy and David violates the bounds of their secrecy agreement. Also, and importantly, if he leaves his cotton gin

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<sup>25</sup> Though it is certainly possible that one could claim whatever incentives the copyright system has comes from the fact that, since it is so radically unlikely that two people will innovate the same object of copyright, producers are confident their ideas will be practically protected. This is a potential problem for WTP: perhaps the only incentives gained for WTP comes from the fact that it is simply unlikely the two people will innovate certain kinds of things in the same way. That is, the incentives gained under WTP would only be present for objects which are unlikely to be independently created (such as complete songs). I address this issue below (see page 90, directly before my conclusion).

outside where the public can see it, or if he leases, sells, or otherwise makes obvious to the public his invention, others cannot copy what he has done and spread the information to impact his ability to profit off of his idea. This means, then, that Eli's patent (remember, protected by WTP) can assure him some protection against would-be thieves—at the very least, some people do not want to violate the explicit moral law that condemns such violations (since, justified or not, many will believe they ought to follow the law), and others would be concerned about getting caught.

For example, suppose David is a good person and respects the moral law (and has not independently invented the cotton gin); because David is good and believes he ought to follow the law, he has a reason not to market Eli's device—it would be stealing and profiting off of Eli's intellectual property. Or, even if David is not so scrupulous, he may be concerned about being caught, and might therefore still not steal Eli's invention. So, some agents would not transgress the rules of WTP, assuring Eli more of a market share than he would have had in the absence of any protection, simply because there is a moral and legal rule against performing such actions.

That simple deterrence is enough to produce some incentive on Eli's part. How great that deterrence is, and how high the concomitant incentive is for Eli, is difficult to determine. It is clear, at least, that STP provides an entirely new category of incentive, as no one anywhere (under the jurisdiction of the law) is allowed to have a cotton gin unless they fulfill the conditions set by Eli, whereas under WTP only those rivalrous uses of copies of Eli's cotton gin are protected (along with Eli's original token). Hence, I admit that, theoretically, WTP may contain less positive incentive than STP. But, as I will explain carefully in the following sub-sections, this positive incentive gain that STP has

comes at the price of disincentives to others. Every positive incentive gain for one agent under STP brings with it a disincentivizing effect on others.

Thus, the deterrent effects of WTP are sufficient to provide some incentive. And, as I have mentioned, those incentives are not so significant as to stifle incentives other people have to create their own work. This is in contrast to STP, where the incentives gained over WTP bring with them concomitant disincentives on the part of others.

I should also note, however, that the ease of imitation—which is often used in defense of something like STP, since imitation reduces expected profits, and therefore creates less incentive—does not actually deter producers from producing. That is, there is often sufficient innovation without strong protection of ideas.<sup>26</sup> Fritz Machlup has noted, for instance, that it significant incentive to innovate may come from simply being the first person to market some innovation.

“...to have a head start on new processes or products, even if competitors are not barred from imitation...may be sufficiently desirable in a world of oligopolistic competition to bring forth all the inventive efforts that are now attributed to the patent incentive...Advocates of patent protection have for centuries propounded the faith in this institution, and their statements admit of not an iota of doubt. They may well have the truth—but faith alone, not evidence, supports it.”<sup>27</sup>

So, having a head start can be effective at providing incentives. Being the first to develop and market, say, a cure for cancer will do quite a bit not only in terms of the profit made on sales and investments before anyone else is able to imitate one’s product, but also in harder-to-measure terms. For example, a company which is the first to

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<sup>26</sup> Could there be sufficient incentive to innovate without weak protection of ideas? I investigate this question in the final section of the chapter, where I argue that we should reject this no-IP position. While it is difficult to measure precisely, it seems it is better to have some incentive to innovate, which is provided by WTP.

<sup>27</sup> In his *The Production and Distribution of Knowledge in the United States*. Princeton University Press, Princeton, 1962: 175-176. It is important to note that, while this claim was made in 1962, the situation has not changed much. I will display below what evidence does exist to support faith in the institution of the patent system.



develop and market the cure for cancer will profit just by being known to be the company that developed a cure for cancer. People will not only buy from this business, but they will also generally have positive feelings associated with that business. Indeed, a business stands to make less money if they do not have the opportunity to patent than if they do have that opportunity, but it by no means follows that other incentives to innovate aren't there. Being first to market can be a huge boon to a business, even if what is marketed can be imitated easily.

This initial point is only one of three major factors that F.M. Scherer identifies which he claims can explain why imitation does not necessarily eliminate innovative profits (and therefore does not necessarily stifle incentive to innovate). That is, Scherer notes that three phenomena might keep imitation of innovations from eliminating the profits from innovations: 1) the advantages of product leadership; 2) natural imitation lags; and 3) the existence of “nonpatent barriers to the emergence of a competitive market structure.”<sup>28</sup> I have already explained the first above in terms of being first to develop and market. The other two denote other advantages that exist within modern economies—the fact that some knowledge is complicated, such that *knowing that* some product works or is made up in such a way is insufficient for *knowing how* to use or make it. Thus, imitation usually takes time and effort, and there are often barriers to imitation and success in a field created by the economic system as it currently is. As Scherer notes,

“If pure and perfect competition in the strictest sense prevailed continuously—i.e., if sellers and buyers were numerous, products homogeneous, resources highly mobile, entry easy, and knowledge perfect—incentives for invention and innovation would be fatally defective without a patent system or some equivalent

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<sup>28</sup> In his *Industrial market structure and economic performance*, 2<sup>nd</sup> ed. Rand McNally College Publishing Company, Chicago, 1980: 444.

substitute...However, real-world markets are almost never purely and perfectly competitive.”<sup>29</sup>

The intuition, then, that the patent system is necessary for incentives to innovate—which, incidentally, is an intuition that many economists and non-economists alike have, *before* they begin to study the evidence—may exist because of the intuition of how perfect markets run. A perfect market is a situation in which there are a great number of both buyers and sellers (or producers), and there are no barriers to entry or exit from the market.<sup>30</sup> But, since markets are generally not perfect, since there usually are barriers to entry as well as a limited number of sellers or producers, it may not be the case that they are needed to provide incentives. As Scherer has pointed out, other incentives exist to innovate.

Edwin Mansfield and colleagues concur with Scherer. They found that

“...innovators routinely introduce new products despite the fact that other firms can imitate these products at about two thirds (often less) of the cost and time expended by the innovator. In some cases, this is because, although other firms could imitate these products in this way, there are other barriers to entry (for example, lack of a well-known brand name) that discourage potential imitators. But to a greater extent (at least in this sample), it seems to be due to a feeling on the part of the innovators that, even if imitators do begin to appear in a relatively few years, the innovation still will be profitable.”<sup>31</sup>

Innovation does happen even when imitation occurs. Consider the following quote from Jessica Litman, a law professor at Wayne State:

“Imagine for a moment that some upstart revolutionary proposed that we eliminate all intellectual property protection for fashion design. No longer could a designer secure federal copyright protection for the cut of a dress or the sleeve of a blouse. Unscrupulous mass-marketers could run off thousands of knockoff copies of any designer’s evening ensemble, and flood the marketplace with cheap imitations of haute couture...In the long run, though, as we know all too well, the

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<sup>29</sup> Ibid. Also see 447.

<sup>30</sup> There is more to what a perfect market is, but this is sufficient for our purposes.

<sup>31</sup> Edwin Mansfield, Mark Schwartz, and Samuel Wagner, “Imitation Costs and Patents: An Empirical Study,” *Economic Journal*, Vol. 91, No. 364 (December 1981), 907-918: 910; notes omitted.

diminution in the incentives for designing new fashions would take its toll. Designers would still wish to design, at least initially, but clothing manufacturers with no exclusive rights to rely on would be reluctant to make the investment involved in manufacturing those designs and distributing them to the public”<sup>32</sup>.

Two paragraphs later, Litman reveals her clever ruse: “Of course, we don’t give copyright protection to fashions...”<sup>33</sup> The point here, lest I be accused of being satirical for the sake of drama, is that innovation still occurs even amidst imitation (though the frequency can vary according to the industry in question).

So, though firms prefer not to have competitors, having competitors in itself does not deter firms from spending money on research and development. Thus, removing the monopoly power that patent holders have, at least, does not necessarily entail a lack of spending on innovation, since there are other ways to achieve the necessary profit.

So, there is incentive to innovate without STP; WTP contains a positive incentive to innovate. Importantly, it does not contain the concomitant disincentives to innovate that STP does. While STP frightens off would-be inventors by threatening violations if they happen to invent something similar enough to something that is protected, WTP allows independent invention. The only disincentives agents have under WTP are those not to copy and profit off of others work. This is not a disincentive to innovate, however. It is a disincentive simply to copy and hurt others’ ability to derive value from what they own.

I should address one possible complication here. It may be possible that WTP engenders a disincentive to a small segment of innovators; namely, those who are unsure about whether or not their derivative work is sufficiently different enough from previous

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<sup>32</sup> In her *Digital Copyright*. Prometheus Books, Amherst, 2001: 105.

<sup>33</sup> *Ibid.*, 106.

work to count as non-violative. That is, some putative inventors may be concerned that, under WTP, their innovations will not be recognized as sufficiently different from originals (so as to still count as a copy) and as negatively impacting the original owner's ability to derive value.

While this possibility is real, I believe it is small enough a segment of innovators, such that the disincentive to innovate caused by WTP in this sense is minimal. Under WTP, agents actually disincentivized from really innovating in this way must not only be making objects which are not obviously very different from originals, but they must also impact the ability of original owners to profit. More often than not, these agents will not actually be innovating at all. I am hard-pressed to come up with an example where these conditions are met, but where the agent is actually *innovating* something, and not merely copying and attempting to profit off of the copy. It is, of course, possible that agents who are actually innovating (and making a profit) may be improperly judged to be in violation, since we do not live in a perfect world where judges always judge correctly; thus, agents may fear this improper judging and therefore have a disincentive to innovate.

Still, it is difficult to believe this fear will be rampant amongst would-be innovators, and so we are safe in concluding there is no significant disincentive experienced under WTP. Additionally, please note that, in conjunction with the sub-sections to follow (about STP's lack of strong incentives and its disincentivizing effect), this sub-section amounts to reason to think premise 3 in the incentives argument for STP is false; STP is not the most effective means at providing incentives.

*2. Strong type-protection negatively impacts incentives to innovate downstream inventions more than Weak type-protection does*

Call an invention *downstream* if it depends for its existence upon some previous invention (or innovation). The car, for example, is a downstream invention of the internal combustion engine. STP, I shall argue, reduces the amount of downstream inventions; that is, without STP, we will see more downstream inventions than we would with STP. This is a significant problem, as most innovation—especially high technology innovation—is downstream innovation.<sup>34</sup>

Let me begin by portraying an extreme example that demonstrates the problem with STP. Suppose a patented pharmaceutical—call it drug Z—helps relieve the pain of people suffering from cancer. The owners of drug Z release the chemical formula (as they are instructed to—but often do not in great detail—by the patent office) so that people will know what is in drug Z. Suppose also that they publish the same work (perhaps they have confidence that their legal department will be able to scare off any IP thieves). Now, suppose finally that some other scientist, upon studying drug Z, discovers that, with modifications, drug Z could help treat the disease cystic fibrosis.

Under STP, our scientist must get the permission of the owners of drug Z in order to publish her work, and, of course, market or otherwise make available her discovery. In the meantime (i.e., during the time that passes while the owners of drug Z and our scientist negotiate a settlement between them), those with cystic fibrosis continue to suffer where they might not (if WTP were the case, since it allows our scientist to develop something like drug Z independently to use to make the modifications necessary

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<sup>34</sup> Cf. Scotchmer, Suzanne. “Standing on the Shoulders of Giants: Cumulative Research and the Patent Law.” *The Journal of Economic Perspectives*, Vol. 5, Issue 1 (Winter, 1991): 29-41.

to address cystic fibrosis<sup>35</sup>). This, of course, is assuming that scientists like the one in our example will even undertake research they know to be protected (or research that is similar enough in the law's eyes to constitute a violation). STP frightens people off from doing further work in areas where some work has been done, since that work is protected and they could be in violation. This is particularly unfortunate, since the most important work in various fields is not the new and revolutionary work that starts a new area of research (since the new and revolutionary work is often simply foundational—it is necessary in itself but not particularly dramatic). It is usually the follow-on or downstream inventions that have dramatic effect on our daily lives.

WTP, by contrast, would not frighten any one away from downstream research, since they cannot be prosecuted for violating IP rights unless they copy and profit off of those copies, impinging the ability of the original owner to make a profit. Thus, even though supporters of STP may laud it as generating strong incentives via the promise of exclusive rights, this ignores the concomitant disincentive that *everybody else* who could do work in the relevant field experiences. There is a strong disincentive to innovate using previous innovation when those items are protected.

Consider as an example the development of the airplane. Steven Carlson discusses this, with regard to what happened subsequent to the Wright Brothers' development of the airplane. Competitors had developed and patented better wing technology than the Wright Brothers had; but the patents that each party had disabled the

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<sup>35</sup> It is an important issue to what extent our scientist has “copied” drug Z when they undertake to independently develop a similar drug (to use as a base). Mere knowledge that it is out there, I would claim, does not suffice to count as a copy. If our scientist simply reverse engineers drug Z to create her own base, her work constitutes a copy (as described in greater detail in chapter 2). But she is not in violation unless she makes rivalrous use of that copy. She is specifically not in violation if, using the base which is a copy, she develops a sufficiently new drug that constitutes original work (since this is not a copy).

other from developing the airplane industry in the ways that each of the parties could.

Carlson notes that “With the strengthening of intellectual property law, patent rights are increasingly blocking the development of new technologies”.<sup>36</sup>

Carlson explains what is known as the “doctrine of equivalents.” This doctrine<sup>37</sup> “provides that the enforceable scope of a patent extends beyond the literal wording of the claims. The purpose of the doctrine is to prevent would-be infringers from circumventing a patent by trivially modifying the patented good.”<sup>38</sup> The doctrine, then, is necessary to type-protection in order for such protection to still have meaning.<sup>39</sup> However, this opens the door to invalid patents and frivolous lawsuits, as people can argue that their patent’s scope includes whatever new invention is in question. As one might imagine, this is particularly troublesome for follow-on inventions, since by definition these inventions use previous innovations. WTP would not have this characteristic. Under WTP, downstream inventors can copy the base innovations from others and, as long as they do not impact the ability of original owners to make a profit, downstream inventors can make their innovations. (Of course, under WTP downstream inventors can also

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<sup>36</sup> See “Patent pools and the antitrust dilemma,” by Steven C. Carlson. *Yale Journal on Regulation*. New Haven: Summer 1999. Vol. 16, Issue 2; 359-400, 359.

<sup>37</sup> See, for instance, [http://www.ladas.com/BULLETTINS/2002/0802Bulletin/US\\_DoctrineEquivalents.html](http://www.ladas.com/BULLETTINS/2002/0802Bulletin/US_DoctrineEquivalents.html).

<sup>38</sup> Carlson (1999) 366.

<sup>39</sup> Could type-protection exist without this doctrine? It seems that without anything like this doctrine, there would, practically speaking, be no protection whatsoever, since infringers would only have to add something trivial to avoid infringement. Thus, something like the doctrine needs to be in place. I suppose it is possible that there might be some middle ground between the extreme in not having anything like the doctrine and the extreme of the doctrine as Carlson relates it, but I am presently unaware of how this would be worked out. If STP was still the case, though with a *weaker* doctrine of equivalents (but still enough to ensure some protection from would-be infringement), it is still the case that STP will cause more disincentives to innovate downstream inventions than WTP (though there would be admittedly less disincentive to innovate since one is likely infringing). As I will describe in a moment, WTP allows for independent invention of downstream inventions. That is, since a downstream inventor can copy the base invention under WTP—but not under STP—as long as she does not impede the original inventor’s ability to profit, the downstream inventor can continue to innovate independently, using the copied base innovation. She has less disincentive to do this under WTP than under STP. This issue may require further exploration as an actual weaker version of the doctrine is developed, but I set it aside for now.

completely independently invent the base inventions needed; so, even if they can't use a copy in a particular case—say, because the downstream innovation based on it would impact their profits—they can make their own base to make the downstream innovation.) There are more downstream inventions under WTP than under STP.

An example here will help. Suppose an original owner O owns innovation I. A downstream inventor D is able to innovate  $I_2$ , so long as she has the base innovation I. If  $I_2$  will impact O's ability to profit off of I, then D may not, according to WTP, copy I and use this as the base for  $I_2$ . In this case, D must independently invent I. However, if  $I_2$  will not impact O's ability to profit off of I (or, what often happens, if  $I_2$  will complement I such that O's ability to profit is increased), then WTP says D can copy I and use it as the base for  $I_2$  since there is no harm done. STP, by contrast, stops D from doing any downstream innovating. Downstream innovations increase under WTP.

But let us turn from the theoretical to the empirical. F.M. Scherer said that companies

“have managed through various legitimate and shady practices to extend and pyramid the monopoly power derived from their patents. One way they do this is by fencing in a field of technology... When du Pont scientists “invented” nylon, for instance, they did not rest content with patenting the basic superpolymer's composition and processes for producing it. They systematically investigated the whole array of molecular variations with properties potentially similar to nylon, blanketing their findings with hundreds of patent applications to prevent other firms from developing an effective substitute.”<sup>40</sup>

It is of course difficult for downstream inventions to flourish when all means for making the basic innovation (i.e., the base upon which follow-on inventions depend) are themselves protected. Whereas under WTP basic innovations can be independently invented, copied (if they do not impact profits), or are at least sufficiently different from

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<sup>40</sup> In his (1980): 451, notes omitted.



originals, under STP all follow-on inventing must, in cases like these, go through those who own the original patent. This stifles efficiency in increasing the time it takes to get a downstream invention available and on the market as well as in increasing the costs of doing so. Such a phenomenon may have occurred (though here in particular with a complimentary invention<sup>41</sup>) to some degree with the development of the high-pressure steam engine. Scherer relates,

“One firm’s patent position may also block another producer from introducing improvements complementary to the original invention. An early example was James Watt’s steam engine patent. Access to it was essential if one were to develop high-pressure engines, in which Watt saw little value. Watt’s refusal to grant licenses impeded the work of Jonathan Hornblower, Richard Trevithick, and other on high-pressure engines until the patent expired in 1800, and this may in turn have had some small effect in delaying the introduction of steam locomotives and steam-boats.”<sup>42</sup>

These examples are meant to illustrate my general point: patenting (that is, STP) prevents or at least restricts people from climbing up and standing on the shoulders of giants. Since we rightly value downstream inventions, STP is disadvantageous for us; WTP, on the other hand, would at least allow people (as noted before) to create their own basic inventions for later downstream inventions.

In case the reader is curious about how common downstream research is amongst others who are not the original inventors, here is a nice list of downstream inventions not created by original inventors.

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<sup>41</sup> Complimentary inventions are a peculiar subset of downstream inventions; X is a complimentary invention to Y if X makes something about Y more efficient or better in some way. X cannot, therefore, be complimentary without also being a downstream invention (since X would not compliment Y if Y did not exist). X might exist without Y, but X cannot be a “complimentary” invention unless Y exists—it must have something to compliment. It is of course, possible that complimentary inventions come into existence simultaneously and independently, but this is extraordinarily rare. In this case, however, technically, we would have complimentary inventions neither which is downstream of the other. The case I am about to speak of regarding the steam engine, however, is not one of the rare cases.

<sup>42</sup> Ibid., 452, notes omitted.

“The telegraph companies did not invent the cable. Neither the telegraph nor the cable companies invented the telephone. [None of these invented] the wireless telegraph; they even declined to buy it...The gas companies did not invent the electric light. The horse-car street railways did not invent the steam turbine and the internal-combustion engine. Silk manufacturers did not invent rayon. Collar manufacturers did not invent the soft collar...Motion-picture producers did not invent television. Aviation pools and companies, either here or abroad, did not invent the jet engine. The basic concepts in electronics did not come from electric-equipment industries.”<sup>43</sup>

This list, of course, does not establish the frequency of downstream innovation taking place amongst agents other than the original owners; doing so would be difficult. I simply wanted to note some popular, and in some cases monumental inventions that did.<sup>44</sup>

It is important to note that it is notoriously difficult to establish the frequency of independent invention. The empirical data needed to establish this even for a small period of time would be enormous. It is, however, much more frequent than commonly thought. A little over eighty years ago, William F. Ogburn and Dorothy Thomas compiled a list of 148 modern inventions and discoveries which were independently *and simultaneously* invented (simultaneous invention denotes that there was no previous understanding on the part of the independent inventors that the invention in question was in any way related to some previously existing invention). Here are some of the big examples: calculus, natural selection, decimal fractions, molecular theory, the telephone, color photography, thermometer, typewriter, microscope, telescope, telegraph, microphone, sewing machine, stereoscope, and electric motors.<sup>45</sup>

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<sup>43</sup> From Floyd Vaughan’s *The United States Patent System: Legal and Economic Conflicts in American Patent History*. University of Oklahoma Press, Norman, 1956: 278.

<sup>44</sup> For more examples of downstream inventions generally held back by patents, see Nelson, Richard R. *The Sources of Economic Growth*. Harvard University Press: Cambridge, 1996: 136.

<sup>45</sup> All 148 are presented (with their claiming inventors) in the appendix of their “Are Inventions Inevitable? A Note on Social Evolution.” *Political Science Quarterly*, Vol. 37, no. 1. (Mar 1922), pp. 83-98.

Again, noting particular examples does not establish the frequency of independent invention. But we should also note that this trend of simultaneous invention is increasing with general technological increases. The economist Richard Nelson writes that examples like these are

“of inventions that, while representing considerable work and creativity on the part of the inventors, clearly were based on recent advances in public scientific knowledge. It is not happenstance that in these cases, others were also trying to take advantage of the scientific breakthroughs, often working along paths that were virtually identical to that followed by the winner. The patent went to the one who happened to cross the line first. Advances in science that point clearly to likely applications generate “races.” We believe that these situations, and they are likely to be increasingly common, raise important issues of patent policy.”<sup>46</sup>

There is little reason today to believe in the romantic, heroic picture of inventors as being solely responsible for bringing us whatever item they are credited with. In most cases, these inventions were likely to come anyway, and in many cases did.<sup>47</sup>

As a side note, there is reason to believe that opening one’s research up and not exerting IP-type rights over it can, unsurprisingly, benefit all as well as benefit (perhaps more surprisingly) oneself. Some recent research by Oren Bar-Gill and Gideon Parchomovsky first noted that many firms were publishing rather than patenting inventions, and then set out to determine why. After noting that broad patents<sup>48</sup> (i.e., patents which are described loosely and thus potentially cover a broad array of items) are in particular detrimental to follow-on inventions, Bar-Gill and Parchomovsky explain that

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<sup>46</sup> In his *The Sources of Economic Growth*. Harvard University Press: Cambridge, 1996: 139-140.

<sup>47</sup> For more on this issue, again see Ogburn and Thomas (1922); also see Epstein, Ralph C. “Industrial Invention: Heroic or Systematic?” *Quarterly Journal of Economics*, Vol. 40, no. 2. (Feb., 1926), pp. 232-272. While Epstein is clear that he does not take the position that Ogburn and Thomas do, that inventions are basically socially determined (though they do not take that position in the strongest way possible), he says nothing to criticize the incremental, social development view of innovation (242-252), while he does criticize the heroic view (241).

<sup>48</sup> See “The Value of Giving Away Secrets,” Oren Bar-Gill and Gideon Parchomovsky. *Virginia Law Review*, Vol. 89, No. 8. (Dec., 2003), pp. 1857-1895. As Bar-Gill and Parchomovsky note, broad patents are clearly bad for social welfare. See especially 1861, and note 10.

harm to subsequent invention actually leads to harm to the original inventor.<sup>49</sup> That is, cumulative invention is often in the best interest of original inventors, since downstream invention often increases the value of original inventions to a great degree.<sup>50</sup> Of course, this will not always be the case. It is simply important to note that open publishing is not always detrimental to one's profits.<sup>51</sup> The Open Source movement—a movement which forwards the cause of keeping the source code (the fundamental code necessary for computer programming) open and accessible—is a fairly successful movement; companies and programs which operate under an open source code still make profits.

As I mentioned in the last paragraph and as is clear, opening up one's research and not exerting control rights over it enhances social welfare.<sup>52</sup> Michael Perelman notes that

“In 1970 the Pentagon produced a study that found that “the U.S. lead in microwave electronics and in computer technology was uniformly and greatly raised after the decision in 1946 to release the results of wartime research in these fields”.<sup>53</sup> The same study said nuclear reactor and transistor technology development also benefited from an open research policy. In fact, another scholar concluded that semiconductors were “the major offspring of radar.”<sup>54,55</sup>

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<sup>49</sup> See *ibid.*, 1858. Also see Jerry R. Green and Suzanne Scotchmer. “On the division of profit in sequential innovation,” *Rand Journal of Economics*. Vol. 26, No. 1, Spring 1995: 20-33. Green and Scotchmer note that sometimes narrower patents are more profitable for first innovators (which is contrary to what is often thought, that broad patents are necessary for profits); this occurs when a later innovator has bargaining power due to its ability to choose not to undertake profitable investments. “Counterintuitively, the first innovator can be better off with a narrower patent when the patent's life is fixed” (31). The idea here is that, if a later innovator can choose not to undertake an investment which would help the first innovator, a narrow patent will encourage the later innovator to still do so, where a broad one will discourage her.

<sup>50</sup> Bar-Gill and Parchomovsky, 1859-1861.

<sup>51</sup> Incidentally, Bar-Gill and Parchomovsky also note that open access to innovations generally ameliorates the anti-commons problem, where too much knowledge is appropriated. See *ibid.*, 1863.

<sup>52</sup> In particular, Bar-Gill and Parchomovsky say, by encouraging downstream inventions. See *ibid.*, 1862.

<sup>53</sup> Qtd. in Daniel G. Dupont and Richard Lardner, “Needles in a Cold War Haystack,” *Scientific American*, Vol. 275, No. 4 (November 1996): 41.

<sup>54</sup> Qtd. in Robert Teitelman, *Profits of Science: The American Marriage of Business and Technology*. New York, Basic Books, 1994: 26.

<sup>55</sup> Perelman, Michael. *Steal this Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity*. Palgrave, 2002: 79.

Here we have an actual example of open research being clearly generally more effective at bringing about positive results. But this should come as no surprise—university research before 1980 was not patentable, and we would not say that said research was ineffective.<sup>56</sup>

Open research and publication then, has its benefits. How do I claim, then, that WTP fairs better than STP on these counts? Simply, WTP bears more in common with open access than STP does. To see this, first note that while STP entails a blanket restriction on a particular kind of innovation, WTP only blocks a particular instantiation of a kind of innovation (and copies of it). This means that WTP bears a similarity to open access and publication that STP doesn't. This similarity is the ability to observe what is out in the marketplace or published and use it to do further research (so long as one does not profit off of any copying). This stands in contrast to STP, where one may violate in many more ways, in particular by independently creating something that is in the same functional ballpark as what is protected. Now, there is a blurry line somewhere between noting what is available in the marketplace (and building one's own version) and carefully copying all the specifications of a protected work (and affecting the original owner's ability to profit), such that one is in violation. There will be, that is, tough cases. There are also clear cases, however; cases where we can be sure one has violated rights

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<sup>56</sup> It was the Bayh-Dole Act of 1980 that changed this. See [http://en.wikipedia.org/wiki/Bayh-Dole\\_Act](http://en.wikipedia.org/wiki/Bayh-Dole_Act), and [35 U.S.C. § 200-212](#). My opponents may readily admit that said research was not ineffective. However, it is more difficult to tell, of course, if university research was less effective before the Bayh-Dole Act. Any comparisons would have to take many factors into account. For instance, we can not claim that the rise in computer technology was due to proprietary restrictions (and legislation like the Bayh-Dole Act). Technology in general in the computer industry had been increasing steadily leading up to that time, and computer technology was rarely protected in its infancy (protection for the computer industry has gradually increased over time, especially from 1981 to 1994, where legal restrictions were gradually removed, allowing computer software to be patented as well as copyrighted; cf. note 31's reference to Bessen and Hunt (2004)). It is unclear, then, if the Bayh-Dole Act increased or decreased the effectiveness of university research.

by copying and profiting, and cases where independent (and possibly beneficial downstream) invention has occurred after simple learning of previous invention which in no way impacts protected works.<sup>57</sup>

Before I end this section and move to show how STP creates disincentives to innovate, let me turn to the software field to show how STP harms downstream inventions. Richard Stallman nicely sums up many of the points I have been arguing in this chapter. He argues that there are different levels of “material harm” that come from the obstruction involved in having proprietary software: 1) users can’t adapt or fix the program; and 2) other developers cannot learn from the program or base new work on it.<sup>58</sup> These are clearly different ways of stating that downstream invention is diminished with software ownership.<sup>59</sup>

Regarding the first material harm, Stallman notes that one of the great advantages that software has over older technology is how easy modification of it is. However, this great advantage is stymied by ownership—at most the only people who can (morally and legally) modify or adapt a program are those who have access to the source code (which

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<sup>57</sup> Incidentally, at this point (as well as at others during this chapter), one might think that it is not objectionable that, under STP, a downstream inventor is restricted from developing inventions. One might think that the prior inventor has some kind of natural rights claim over the innovation in question. I set this issue aside here, since I deal with it in a later chapter (arguing that there should not, deontologically, be STP), and since this chapter is on the incentives concern.

<sup>58</sup> In “Why Software Should Be Free.” In *Intellectual Property: Moral, Legal, and International Dilemmas*, Adam Moore, ed. Rowman & Littlefield Publishers, Inc. Lanham, Maryland, 1997: 283-297; 286-287. Stallman actually notes three, but the other one is unnecessary for our purposes here. He also notes a phenomenon that I find interesting, if not philosophically compelling. Since users typically will share software (music, movies, etc.), because, he says, they unconsciously recognize the wrong in ownership thereof, there is a kind of “psychosocial harm” involved in software ownership. This is because users, who are sharing what they have because they think it’s good to share and that it builds cohesion amongst groups of people to do so, are simultaneously bombarded with propaganda telling them they’re doing something wrong. Hence, they associate being neighborly with doing something wrong. I am unclear as to the philosophical precision of this analysis, but find it an interesting possibility nonetheless. (I should note that Stallman is not a trained philosopher, and hence does make reasoning mistakes in his paper. However, he often makes arguments that are compelling to philosophers.)

<sup>59</sup> The reader will note that WTP is still a form of software ownership. I address this concern at the end of this chapter. Basically, though, the same points I have been presenting apply: under WTP, programmers can adapt and fix existing work to fit their own needs, and can learn and base new work on owned items.

is, of course, protected). Stallman also notes some real world examples demonstrating the harms he describes, including a programmer he knew who worked at a bank, who, if she had the source code for a program she was using, she could have adapted the program to suit the bank's needs. But, since the software was protected, she could not, and instead had to work for six months to make a program that the bank needed but which already existed. She had to reinvent the wheel. (A particularly inspiring paragraph of his notes what he calls a "psychosocial harm" that results from software ownership. "It is demoralizing to live in a house that you cannot rearrange to suit your needs. You come to say, "Yes, this system isn't what we want, but we'll never be able to change it. We'll just have to suffer." People who feel this way do not do good work and do not have happy lives."<sup>60</sup> Though the (implied universal) generalization at the end is probably too strong, the point remains that having the ability to adapt what you use to suit your needs is an attractive feature, and it would be better if we could have it.)

In the software field, Stallman says, there was an evolutionary process of advancing software development, such that people could see very far and do quite a bit of work by standing on the shoulders of others. Software ownership, however, makes it so that "you can only stand on the shoulders of the other people *in your own company*."<sup>61</sup> This is the second material harm—people cannot simply work off of the work that others have done, reducing the ability of researchers in general. Clearly, progress is diminished when they can't work off of others' work without impediment.

No doubt Stallman would not approve entirely of WTP, as this still makes software proprietary. But it is clear that WTP is preferable to STP on Stallman's

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<sup>60</sup> Ibid., 290.

<sup>61</sup> Ibid., 291.

concerns, since the ability of others to innovate and develop is not as impeded under WTP as it is under STP. (I will return to some of these issues in the final section of this chapter, where I argue for WTP over the no-IP position.) This sub-section, we should note, constitutes part of the reason to reject premise 3 in the Incentives Argument for STP; there is a significant disadvantage to STP when compared with its absence, since downstream inventions are diminished.

*3. Strong type-protection creates more disincentives to innovate than Weak type-protection does*

This sub-section is an important clarification of part 2, above. The fact that STP creates disincentives to innovate in general—as I shall show in this sub-section—deserves special identification. In the last section, I argued for the more specific fact that STP creates a disincentive to innovate downstream inventions; I now generalize and argue that, beyond downstream inventions, STP causes a disincentive to innovate<sup>62</sup> (more so than WTP does).

First, remember that the primary subject in part 1 above was that downstream innovators are prevented from developing new inventions. This can happen because the mere fact that STP is the case, and as such that people have strong ownership over types, can frighten would-be innovators from innovating, even if those innovations wouldn't actually have been infringing (and also if they were). But note that this might happen whether the would-be innovator is technically a downstream one or not. That is, *any* given innovator might not innovate for fear of infringing upon a patent. This is one way in which STP actually creates a disincentive to innovate, and in which WTP would not

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<sup>62</sup> Not to mention the irony, since IP rights are supposed to provide incentives to innovate.



(since there would be no fear of infringement): if someone might have STP over some idea, I will be less apt to explore that idea, since I may infringe.

In this regard, remember the “doctrine of equivalents,” which allows that a party can be held liable for patent infringement even if the infringing item is not literally within the scope of the patent.<sup>63</sup> Clearly, the potential to infringe a patent accidentally is increased by this doctrine; the fear that one might infringe and owe remuneration to the patent owner might keep some would-be innovators from producing what they would have otherwise. (Remember here that it is unlikely that STP could continue to exist without something like the doctrine of equivalents, since infringers would only have to trivially modify their work in order to avoid violation.)

Not only do patents beget this general fear of infringement, and therefore hold back innovators who fear possible infringement and prosecution, but patents (and again, STP in general) cause a disincentive in people who would innovate, but don’t have the time or money (or simply won’t) to *research* whether or not some item is already invented and protected. Suppose an inventor has an idea for and the means to create widget. If our inventor wants to actually produce that widget, not only must he get over the general fear of possible infringement, he must actually research whether or not someone already owns the widget, or risk violation and prosecution, under STP. The cost of a single patent search is not too expensive, but the search cost is non-trivial<sup>64</sup>, and will add up significantly as more and more potentially patentable components make up that which is to be created (some computer programs, for instance, have thousands of potentially patentable components). That is, beyond simple disincentives to create for

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<sup>63</sup> See [http://en.wikipedia.org/wiki/Doctrine\\_of\\_equivalents#References](http://en.wikipedia.org/wiki/Doctrine_of_equivalents#References). The doctrine has, incidentally, been criticized for being too vague.

<sup>64</sup> In my research, I have found costs of a single patent search to be anywhere from \$240 to \$1000.

fear of violation, STP adds a further disincentive in forcing would-be innovators to research whether or not some idea has already been invented and is protected (of course, if would-be innovators had reason to trust their patent search which tells them they would not be in violation, than in this case they would not have the disincentive to innovate out of fear). Under WTP, this would not be the case: our inventor could simply invent—nothing stops one from independently inventing under WTP.

Patents generally put a stranglehold upon the ability of new producers and innovators to enter an established industry. As the economist Fritz Machlup notes, patents make it “almost impossible for new firms to enter...industry; patent litigation carried on by big firms makes it difficult for small firms to defend their own patents successfully.”<sup>65</sup> The difficulty which new producers and innovators have because of patents and the court costs associated with entering an established market might simply discourage those agents from attempting to do so. Of course, this is exactly what the established producers want, but this is clearly not good for competition nor acceptable in terms of incentives-concerns, since all people who are not the owners have less incentive to innovate.

Remember for a moment something I mentioned in the preceding sub-section—that the high pressure steam engine’s development was held up by Watt’s patent.<sup>66</sup> Though in this case the inventors Hornblower and Trevithick were actually not granted licenses to produce their innovations (by the patent owner Watt), it is easy to see how this very fact would deter other innovators from even beginning work on an idea they had.

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<sup>65</sup> From his (1962) 170. He continues that while it is true that there are some small firms that gain position against giants, “this is a question of industrial organization, not a question of the effects of the patent system upon the production of new technical knowledge.”

<sup>66</sup> Perelman (2002) 123-124.

So, disincentives can occur because agents fear litigation and/or research costs of determining whether one's innovation will infringe (or, if they do not fear these possibilities, they are at least impeded by their possibility). STP simply carries with it a disincentive effect. WTP would not have such an effect, since infringement can only occur when an agent copies and profits off of a token (in a way that impedes the profitability of the original) that is protected.

Also, James Bessen and Robert M. Hunt have seen that, in the software industry, firms which are known for "strategic patenting"—that is, patenting with the particular intention of bettering one's market position—actually tend to put less funding into R & D as they put more funding into their patenting.<sup>67</sup> That is, patenting becomes a substitute for R & D, for some firms. Small or new firms, for instance, have to spend their money on protecting what they do own; these are defensive strategies. "Mature" firms, by contrast, often put more funding into what patents they already own rather than invest further in R & D.<sup>68</sup>

Bessen and Hunt estimate that the increase in patenting that the software industry experienced in the 1990s led to about 10% less funding into R & D (which works out to be \$16 billion), at least among the firms they looked at.<sup>69</sup> The patent system—STP—causes a disincentive to innovate by giving an incentive to secure one's property rights. Firms spend their time and money securing and increasing their powers vis-à-vis their patents, rather than on innovating. WTP would not have this effect; since it does not give the monopoly power that STP does, firms have less incentive under WTP to spend their

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<sup>67</sup> Bessen, James and Robert M. Hunt, "An Empirical Look at Software Patents," *Journal of Economics and Management Strategy* 16, no. 1, 2007: pp. 157-89. Obtained at <http://www.researchoninnovation.org/swpat.pdf>.

<sup>68</sup> *Ibid.*, 39-40.

<sup>69</sup> *Ibid.*, 32-33.

money securing and increasing their rights. More money is, in this case, available to go toward innovation.

In the next section, I shall portray evidence to show that the incentive-benefits of STP are not that high—that is, we have some reason to see a negative in the overall calculation of the net incentive-benefits of STP. This, in conjunction with the negative incentive effects of STP that I have mentioned and the positive incentive effects of WTP, tells us that those concerned with incentives should favor WTP.

Before I conclude this section, however, I must mention some work by the economists Michele Boldrin and David K. Levine<sup>70</sup>, to which I will be making consistent reference to. In their work they create an economic model<sup>71</sup> which shows that, in most circumstances, having a system of IP rights is, on balance, worse than having no system of IP rights, in terms of social welfare.<sup>72</sup> They note many of the harms that I have been describing. In particular, they show that IP rights bring with them a decreasing

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<sup>70</sup> The primary work I shall reference is “Intellectual Property and the Efficient Allocation of Social Surplus from Creation.” Review of Economic Research on Copyright Issues, 2005, vol. 2(1), pp. 45-66. I will be quoting this paper, however, from the downloadable .pdf file available in Levine’s paper archive, located at <http://levine.sscnet.ucla.edu/papers.htm>. See also their “The Case Against Intellectual Property.” In the Center for Economic Policy Research (CEPR), Discussion Papers, <http://ideas.repec.org/s/cpr/ceprdp.html>. Shorter article in American Economic Review, vol. 92(2), 209-212. A longer version of this paper is available in Levine’s working paper archive, as above.

<sup>71</sup> Actually, they create their own model—which they claim to be more accurate—and also work, to some degree, within the existing one. Even under this old model, which holds the problematic assumption that no innovation takes place when there are no intellectual property rights, “Even in these special circumstances, our analysis casts abundant doubts on the established wisdom, according to which more IP protection is, from a social viewpoint, always better than less” (“Intellectual Property and the Efficient Allocation of Social Surplus from Creation”; <http://levine.sscnet.ucla.edu/papers.htm>, p.2).

<sup>72</sup> Some of their conclusions and/or assumptions might strike the reader as surprising, if that reader is familiar with the economic milieu in the last century or so regarding IP rights. They find old analyses quite problematic; for example, old analyses lacked modeling of the decision problem faced by potential innovators, they ignored the sequential aspect of innovation (often if not mostly, new innovations require previous innovations), but most importantly old theorists assumed that once copying began, it shot up to an infinite degree and thereby eliminated a producers ability to recoup costs (which is generally not the case), as well as that demand for intellectual products is elastic as opposed to inelastic (which is false, according to them). They discuss differences between their model and previous attempts throughout their paper, beginning on p.2.

probability of innovation over time.<sup>73</sup> Their model also establishes, however, that the competitive rents (i.e., the money one makes from competing to sell something) going to innovators would actually be sufficient to provide the incentive we want them to have. Hence, I will return to Boldrin and Levine's work in later in this chapter, where I discuss how incentives can be provided in absence of STP.

I do want to note here, however, a crucial aspect of their work, which shows a particular kind of disincentive caused by STP. IP regimes like STP actually give firms a disincentive to further innovate following some prior innovation.<sup>74</sup> That is, once an established firm has market power over some objects of IP, STP actually gives firms an incentive to innovate less, since they do not have to remain competitive with other would-be competitors who, under a different IP regime, might be able to establish market position. STP prevents competitors from entering the market and forcing established companies to innovate further and improve items. This is, of course, a particular kind of disincentive to innovate; it is a disincentive to build upon earlier innovations. But it is a clear disincentive to innovate, and one that would not be the case under something like WTP, where competitors can force established innovators to keep working. There is more innovation under WTP than under STP.

I should say, however, that Boldrin and Levine do not attempt to identify any middle-ground between STP and the no-IP position; they merely attempt to show that IP rights are, on balance, worse for social welfare than not having such rights. This would, of course, seem to include WTP, since it is a form of IP protection. However, I would contend that WTP does not fall prey to the same difficulties that IP rights (as they refer to

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<sup>73</sup> See *ibid.*, 13-14 to corroborate some of my earlier claims. See 2, 6, 12-13, 16-17, for how IP-rights diminish probability of innovation over time.

<sup>74</sup> *Ibid.*, 6.

them) does; that is, I would contend that it is really STP that is impugned in Boldrin and Levine's work. This is because what does the work for them in establishing the harm from IP rights is the same as what I have identified in this chapter so far—there is a negative effect upon society in terms of disincentives to innovate that arises from strong IP protection of the kind that STP provides. This disincentive comes from the fact that more and more of what is out there in terms of innovation is protected, leaving innovators with little to work with safely and confidently, and giving owners the comfort to stop innovating.<sup>75</sup>

Thus ends my discussion of the disincentives that arise from STP. Incidentally, note that this sub-section provides further reason why premise 3 in the incentives argument for STP is false; STP has serious disadvantages in the disincentives it begets. In the next sub-section, I show that the positive incentives provided by STP are actually not that high. This will serve to show that the *net* incentive benefits of STP are not great.

#### *4. STP, in actuality, does not provide significant incentives*

In this section I present powerful empirical evidence that shows the *positive* incentivizing effect of STP as, perhaps surprisingly, not being very high. The addition of this to the disincentive effects of STP as described in the last two sub-sections shows the *net* incentive benefits of STP as not being very high. In the next sub-section, I will argue that WTP does have some incentive benefits; this being the case, without STP having significant incentive benefits (as I show in this section) and in fact having disincentive

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<sup>75</sup> I imagine that Boldrin and Levine might still be suspicious of WTP, in that WTP will restrict how easily people can copy and turn around and make a profit, and that this might slow progress to some degree, in their view. I am unsure as to this, however, since I have no reason to suspect that they have considered the possibility of something like WTP.

benefits (shown in the last two sections), shows that WTP has more net-incentive benefits than STP.

I must pause to make an important clarification; I will be discussing empirical evidence about the current *patent* system. The reader may wonder why I present this evidence, as it is only one possible form of STP. It is, however, difficult to understand the relationship between our current patent system and a theory like STP in ideal form (for we are of course comparing ideal systems of IP protection). It is possible that some of the problems of the current system could be ameliorated while still holding to STP. Why, then, am I about to present empirical data regarding the effectiveness of patents, if my main concern is to show that STP is problematic? The answer is that the data below that shows the ineffectiveness of patents (at providing incentives) would not be changed if there were a more ideal STP system.

With regard to the issue before us (about the effectiveness of STP at providing incentives), it is difficult to see how a more ideal STP system would fair much better than our current system. For when patents are regarded as not being very effective, it is not generally because the system isn't operating as well as it could be, it is because of completely different reasons (e.g., that it is easy for other producers to legally invent around, simply because of the technology involved). That is, those who say that patents aren't very effective are not comparing the current system to what they could get if the system worked better *qua* ideal strong type-protecting system. The ineffectiveness of patents stems not from an inefficiency of the current way of protecting patents, but instead because of the nature of technology. For example, Joe's patent over a method of computing numbers isn't ineffective because the system doesn't protect his patent well.

If Joe's patent is ineffective (at producing incentives) it is because there are, for instance, other ways to compute numbers that don't fall under the rubric of the patent.

Note that it cannot here be said in response to me this is the way in which patents could be more effective at producing incentive—that the type-system could be more effective by simply protecting more and more and becoming ever more broad. For this would be to exacerbate the problems I identified in the previous sections—the broader the patent, the more other, independent inventors are harmed and given disincentives to do their work. By broadening and strengthening patents (i.e., by making them more effective at providing incentives), one diminishes the ability and incentive of others to use and innovate.

My opponent here might claim that, while I am correct to say that a strengthening of the patent system to compensate for its lack of strong incentive benefits would bring concomitant disincentives to others, it may still be that the balance of incentives would favor strengthening. That is, it may be that, though a strengthening of the patent system will bring about disincentives, the incentive gain achieved by that strengthening would be sufficient to outweigh the disincentives generated, such that, on balance, a more ideal patent system would be a stronger one. This, unfortunately, flies in the face of all work I am familiar with on patents. While there are those who suggest patents should be stronger than they currently are, these are never economists who carefully study the evidence. All of the theorists who study innovation and patenting that I have mentioned or will (Mansfield, Winter, Machlup, Nelson, Boldrin and Levine, and others) warn against patents being too strong.<sup>76</sup>

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<sup>76</sup> See, for example, Nelson, 1996: 120-121: "...the allowed scope of patents on today's inventions strongly influences the incentives today's inventors, and their potential competitors, have in engaging in subsequent



Thus, to say that we can increase the effectiveness of patents as incentives by strengthening them will not do as a response to my saying that the ineffectiveness of the current patent system is telling against STP as such (the latter, remember, because it is not the way the system works which makes it ineffectual). For if you strengthen the system to avoid my criticism and thereby attempt to create a more perfect type-protecting system, you consequently cause further disincentives in another realm. That is, by solving one problem for STP, you create another. I thus conclude that empirical information regarding our current patent system is relevant to criticizing STP, for the only way I can imagine solving it would make other complaints against STP even more prominent.

Now, I shall argue that it is not the case that currently existent patent protection (again, STP) provides the incentives it is purported or supposed to. With the exception of the pharmaceutical industry, empirical evidence shows that patents are not very effective at providing incentives.

Let me first introduce a partially independent consideration from showing the ineffectiveness of patents. We should note that patents may simply be shifting incentives to innovate something to incentives to innovate something patentable. Fritz Machlup and Edith Penrose note that

“To the extent that the patent system is effective, in the sense of causing people to do what they would not do otherwise, its effectiveness may consist chiefly in diverting existing activity into different, perhaps less productive, channels. This is one of the main contentions of the economists opposing the patent system. The diversion may be from

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inventive efforts...As a general rule, if allowed patent scope is broad, today’s inventors may proceed into the next stage of inventing without fear of encroachment by outsiders; outsiders are deterred from participating because of the likelihood that their invention will be held infringing. In contrast, if allowed scope is narrow, outsiders are less deterred from competing in the next round of inventing. What is the preferable economic context?...the theory of invention and technical advance in which we believe strongly disposes us to distrust central control, and we think the empirical evidence bears us out.”

ordinary productive pursuits into “inventing,” or from innovation or research activities in one field to the same kind of activities in another field in which the results enjoy patent production.”<sup>77</sup>

Patents may simply be, so say Machlup and Penrose, diverting funds that would have been spent on something else (even perhaps to innovation of something different) instead toward something patentable. Thus, if this is the case, we incur no real loss from not allowing patents. Of course, this will not always be the case, but it is an example of how patents are not as necessary as we may initially think.

I would also like to mention that it is fairly well-known that patents are often not used by companies as incentives to invent, but instead as weapons against other companies. Generally, companies will have patent portfolios; they will hold many patents, so that they can protect themselves in case they are sued by another company for infringement (in order to force a stalemate). They will also use patents to threaten other competing companies (who do not have equally powerful patent portfolios), to keep them from entering into a competitive market position. An example here is the telephone.

“American Telephone, after obtaining thousands of patents upon various alternate methods of accomplishing specific results, used some of them and let the others lie dormant. Once a selection was developed, standardized, produced, and installed on a large scale, it acquired subsequent inventions that threatened its position, not to develop and use, but to protect its position and salvage its investment in old equipment.”<sup>78</sup>

And, of course, if one company is using a patent as a weapon against other companies, this amounts to a disincentive for those others (that is the *reason* these companies have these patents—to cause others to have such a disincentive).

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<sup>77</sup> In their “The Patent Controversy in the Nineteenth Century.” *Journal of Economic History*, Vol. 10, No. 1 (May 1950); 1-29: 23 (notes omitted).

<sup>78</sup> From Vaughan (1956): 234.

This threatening is the case, sometimes, even when the companies who own the patent have not actually produced anything that they have the patent for.<sup>79</sup> Holders of undeveloped patents are called “patent trolls” and the patents they hold “submarine patents.” An example here is George P. Selden, who kept a patent application for automobiles from 1879-1895, and never built one.<sup>80</sup> We can also observe Jerome Lemelson who, obtaining patents on only loosely described products such as “robot vision”, garnered \$400 million in 1992 alone.<sup>81</sup>

Simply put, patents often play a competitive role within companies rather than a stimulatory one. But if this is true often (which, of course, it is very difficult to tell how often this is the case), then it is unclear to what extent patents are creating incentives to innovate. If they are simply a tool that companies use against each other, they are clearly not doing what they were intended to. This consideration, of course, does not show that patents are completely ineffective at providing incentives to innovate; I only mention it so that the reader is aware of what patents are often actually used for in the real world.

Now, let me offer some of the evidence that shows that the patent system does not provide the incentives it is supposed to. Note briefly that very little evidence exists to confirm the effectiveness of the patent system at providing incentives. Gerald Dworkin, reporting on a conference on IP, said, “I am particularly struck by the absence of

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<sup>79</sup> To be clear, patents—whether they are used to develop something or not—give rights not over an idea itself, but over all instances of an idea. If one person owns a patent over a cure for cancer, this is supposed to be a blanket right over all the concrete instances of that cure for cancer, *not* a right over the idea itself.

<sup>80</sup> Cf. Perelman (2002): 60. Also see 22-23, where we can find Perelman relaying a revealing point from an AT&T patent lawyer: “It appears to me that the policy of bringing suit for infringement on apparatus patents is an excellent one because it keeps the concerns which attempt opposition in a nervous and excited condition since they never know where the next attack may be made, and since it keeps them all the time changing their machines and causes them ultimately, in order that they may not be sued, to adopt inefficient forms of apparatus” (Qtd. in Noobar R. Danielian, *AT&T: The Story of Industrial Conquest* (New York: Vanguard Press, 1939): 99-100).

<sup>81</sup> From Perelman (2002): 60-62.

evidence for the proposition that patent or copyright effectively promoted (or promoted more effectively than alternative schemes of protection) even the least controversial end—the promotion and protection of technological innovation. Some have actually used the word faith in the context of assessing the view that patents indeed worked”.<sup>82</sup> So, what I will display below (about the effectiveness of patents, particularly in the pharmaceutical industry) to my knowledge exhausts what empirical evidence there exists that is contrary to my general position.

Kenneth Arrow’s “Economic Welfare and the Allocation of Resources for Invention”<sup>83</sup>, is the seminal work in economics arguing that the free market is unable to efficiently promote innovation. His view thus became the basic modern economic argument for IP rights—that is, the incentives argument. There is more current research, however, that challenges Arrow’s conclusions, and, more generally, casts doubt on the simple view that the patent system stimulates invention.

In this regard, Sidney Winter’s work is instructive. He first notes some of the limitations of Arrow’s work. He points out, for example, that Arrow’s model is only a partial equilibrium analysis—that is, it does not consider how prices in markets other than that in which the invention is made are affected. Thus, any results that are generated by such an analysis might be a very poor approximation of how the patent system influences markets in the real world, and thus we have only a poor approximation of how would-be

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<sup>82</sup> In his “Commentary: Legal and Ethical Issues.” In Weil, Vivian and John W. Snapper, eds. *Owning Scientific and Technical Information: Value and Ethical Issues*. Rutgers University Press, New Brunswick; 1989: 250-252; 251.

<sup>83</sup> In *The Rate and Direction of Incentive Activity*, R. R. Nelson, ed. Princeton University Press, 1962: 609-624.

inventors would respond.<sup>84</sup> For instance, inventors could realize how their invention will complement already-existing technology, invest a great deal in that technology, and profit significantly; this possibility is not considered by Arrow's analysis.

Winter mentions other limitations of Arrow's analysis, but rather than focus there, look instead at more recent research that Winter himself helped to conduct. He and others surveyed Research and Development managers, receiving 650 responses representing 130 different lines of business.<sup>85</sup> They received 10 or more responses from managers in 18 different lines of business. In the survey, they asked "In this line of business, how effective is each of the following means of capturing and protecting the competitive advantage of new or improved processes/products?" Two examples of what they asked were effective are: 1) patents to prevent competitors from duplicating the process/product, and 2) patents to secure royalty income. Respondents rated each of these (and four others) for both new processes and new products on a scale of 1-7, where 1 rated something "not at all effective", 7 "highly effective", and 4 "moderately effective."

Before I describe the survey results regarding patents, it is worth noting that in this same study, patenting scored lower than other strategies (on average) of how to appropriate benefits from innovation. Those other strategies were: secrecy, being first to

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<sup>84</sup> From "Patents in Complex Contexts: Incentives and Effectiveness." In *Owning Scientific and Technical Information: Value and Ethical Issues*. Vivian Weil and John W. Snapper, eds. Rutgers University Press, New Brunswick, 1989: 41-60; 42-43.

<sup>85</sup> All the details in the following is from *ibid.*, 45-56. The reference is: Levin, R., A. K. Klevorick, R. R. Nelson, and S. G. Winter. "Survey Research on R&D Appropriability and Technological Opportunity." *Brookings Papers on Economic Activity* 1987: 783-820.

innovate, moving quickly down the learning curve, and superior sales or service efforts.<sup>86</sup> Thus, patenting is not the most important aspect of protecting innovation.

Incidentally, if one finds survey evidence troublesome, note that these surveys, if biased, will not be biased in the direction of my claims. If they are biased, they are likely to bias toward the importance of patents, as patents tend to give them higher profits. That is, while it is very difficult to imagine R & D officials answering survey questions under the bias that patents aren't effective, it is easy to imagine how R & D officials answering survey questions regarding the effectiveness of patents could be biased toward positive answers. They stand to gain quite a bit if patents are in place, but it is not necessarily the case that they lose so much without patents that they would not conduct research. Hence, it seems to me that while the surveys conducted are interesting and meaningful, it is possible that even they overstate the effectiveness of patents. If the results are biased, they are biased in favor of my opponent.

The survey results are quite detailed, and minimized even in the paper of Winter's which I am relating. In response to (1), above, the average score for the 18 industries (for which they received at least 180 responses total) for new processes was 3.58; for new products, 4.52. These averages are the mean scores of the 18 industries. Winter says, "It is worth noting that the alternative—patents to secure royalty income—usually scores below patents to prevent duplication as a means of protecting innovative gains"<sup>87</sup>. Thus, to be clear, the details that will follow regard how effective patents are at preventing

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<sup>86</sup> This is noted in F.M. Scherer and David Ross's *Industrial Market Structure and Economic Performance*, 3<sup>rd</sup> ed. Houghton Mifflin Company, Boston, 1990: 628. Incidentally, Scherer and Ross also say that "Weighting the responses according to 1982 company-financed R & D expenditures in the reporting groups, the aggregate loss of inventions without patent protection would have been roughly 14 percent of those actually made" (629, notes omitted).

<sup>87</sup> *Ibid.*, 46.

duplication; the question of how effective patents are at securing royalty income typically earns a less effective rating than all the details below. I focus on the first question, to be charitable, since it always generates a higher average. Our concern is, after all, to try to understand just how important patents are at protecting profits. Preventing duplication is, of course, one means of protecting profits.

Also, let me not simplify something that is truly more complex: those averages are in some cases quite disparate between industries. The cosmetic industry, for example, has a mean score of 2.94 for new processes and 4.06 for new products, while the pharmaceutical industry (which, from this survey, clearly benefits the most from patents) gives a 4.88 to new processes and a survey-high 6.53 for new products (again, in response to (1)). Thus, how effective patents are clearly depends on the kind of industry in question.

As a side note, Alan H. Goldman agrees. In his “Ethical Issues in Proprietary Restrictions on Research Results”<sup>88</sup>, he says that the effectiveness of patents to encourage technological advancement

“may be more true in infant industries than in those which are highly developed and technologically sophisticated. When numerous patents already exist in a field, the effect may be to stimulate the development of inferior alternatives by competitors, rather than useful invention...In short, the effect of patents in an industry varies with its stage of development, the nature of its products, the pace of change in the industry...and so on.”<sup>89</sup>

Goldman’s theoretical position here compliments Winter’s empirical one—it is far too quick to simply say patents provide incentives to innovate; the picture is more complex than that.

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<sup>88</sup> In Weil and Snapper, 69-82.

<sup>89</sup> Ibid., 73.

Incidentally, in his paper (stemming from the original work on the survey), Winter identifies many of the considerations that limit the effectiveness of patents.<sup>90</sup> These vary from the fact that some patents are unlikely to be held valid if challenged, to that competitors can legally “invent around” patents, and that technology is moving so fast that patents are irrelevant. There are more. By far the biggest limiting factor is that competitors can legally invent around patents.

I must pause here to address an important concern the reader may have; these factors which Winter notes limit the effectiveness of patents might also mean that, contra the position I argued earlier in the chapter, there is not so bad a disincentive to innovate consequent upon the patent system. That is, one might think that, if it is true that patents are not all that effective at providing incentives, because, for example, competitors can invent around patents and so forth, then it seems to be the case that the disincentives I identified earlier in the chapter are not so bad.

It is true, to some extent, that there is a relationship between the incentives one person has and the disincentives others have. Thus, to some extent, as we see empirical reason to believe that incentives are not very high, there is some reason to suspect disincentives will not be very high. But there is not a one-to-one relationship here; though I will admit disincentives go down to some degree as incentives go down, it is not to a great degree. This is because there are still incentives, as I have pointed out, outside of the patent system to innovate. To be the first to innovate something is a great incentive to innovate, for example. Thus, there are incentives already provided; the patent system is only supposed to increase those incentives (and, as I have argued in this section, it does not do so to a great degree). Companies will still innovate, I have argued,

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<sup>90</sup> This and all the following details are from Winter, 48-49.



in the absence of patents (but they will of course take out patents if they can to increase their profits). Thus, even if patents exist and don't incentivize all that much, those patents can still cause a significant disincentive to innovate amongst others. So, while there may be a relationship between diminished incentives and diminished disincentives, it is not a one-to-one relationship, and we can conclude that there are still significant disincentives, even if there are diminished incentives.

Now, let us look beyond Winter to see more reasons to doubt the effectiveness of patents at providing incentives. Fritz Machlup noted that in 1959, “[i]n some of the considerations concerning industrial R & D and company profits the patent system may play a role, though this is by no means certain.”<sup>91</sup> Machlup then faces this problem of how important patents are to R & D head-on in this lengthy quote:

“In reply to the question whether patents are essential to the continuance of large expenditures for research and development, an officer of a large company stated that he might cut down these expenditures to perhaps one half of the amount spent at that time if patent protection were removed. It happened, however, that approximately one half of the R & D budget of that company was then devoted to the tasks of securing patents and enforcing the exclusive rights which they were supposed to confer. Hence, if the company were suddenly relieved of the necessity of spending money on obtaining patent rights and litigating about them, the remaining half of its budget would still buy the same amount of genuine research and development work. Many officers of large patent-holding corporations do not think that their research expenditures are dependent on patent protection. An officer of the DuPont Company stated the opposite opinion. But a great friend of strong patent protection, Robert E. Wilson, petroleum researcher and oil company executive (later Atomic Energy Commissioner), speculating about the adverse consequences of a “weakening of the patent system,” contended that this—though most harmful for the “progress of both science and industry”—would *least* affect the research policies of large companies...Hence, it seems not very likely that the patent system makes much difference regarding the R & D expenditures of large firms.”<sup>92</sup>

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<sup>91</sup> In his (1962), 162.

<sup>92</sup> Ibid., 169-170.

Corporations themselves—while always fighting for patent protection—simply don't seem to count such protection as necessary for innovation. Furthermore, Machlup also relates that “The patent applications per million dollar R & D expenditures declined from 53 in 1941 to 22 in 1950, 18 in 1954, and less than 8 in 1958.”<sup>93</sup> This means that, even with increasing R & D expenditures, the result is not more patentable objects (since patentable objects by firms entails patent applications—most firms patent whatever they can). This suggests that R & D exists independently of patenting; patenting is generally what companies will do if they can to obtain further competitive advantages. The upshot is, of course, that companies will attempt to innovate in the absence of patent protection. Of course, they will obtain patent protection if they can—why wouldn't they, since it will likely mean higher profit for them? But this does not at all mean they will not innovate in absence of patents.

The chemical industry was, at Machlup's time, where the highest correlation existed b/n R & D expenditures and patent applications pending. But, in general, any

“high correlation between self-financed R & D expenditures and applications for patents strongly suggests that industry tends to spend its own money on inventive efforts *where these efforts are most likely to lead to inventions. It does not establish that these expenditures would not be made without the promise of patent protection.* Undoubtedly, if there is a chance to obtain patents on inventions, industry will not pass up this chance. But it cannot be demonstrated from any statistical relationships that only the patents rather than the inventions were wanted, or that inventions without patents would not have been considered worth the money spent on research.”<sup>94</sup>

This will also be important an important point later, when I address the effectiveness of patents in the pharmaceutical industry. For now, simply note that in very few industries—as the studies both above and Mansfield's, below, show—are patents

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<sup>93</sup> Ibid., 174.

<sup>94</sup> Ibid., 175. Emphasis added.

effective at providing incentives. As Machlup claims in a footnote, at least in 1962, “...neither the theoretical nor the empirical evidence thus far presented can support the claims frequently made for the patent system as an important, or even the chief, factor in technological and economic progress.”<sup>95</sup>

The situation hasn’t changed much, at least up until 1981, when Edwin Mansfield showed much the same thing that Machlup did. He and his colleagues researched chemical, drug, electronics, and machinery industries, studying the costs and time of developing and introducing legal imitations of 48 innovations. They found that “Patents do tend to increase imitation costs, particularly in the drug industry, but excluding drugs, patent protection did not seem essential for the development and introduction of at least three-fourths of the patented innovations studied here.”<sup>96</sup>

More recent research by Mansfield makes an even worse case for the necessity of patents: according to this research, the average for 100 firms (including the drug industry) has, in the absence of patent protection, less than 14% of all new products not being developed, with less than 11% of all new products not being introduced at all (again in absence of patents). If we remove the drug industry from the analysis, the averages dip to less than 10% and 8%, respectively (while removing the chemical industry entirely moves the average down to less than 7% and less than 6%, respectively).<sup>97</sup>

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<sup>95</sup> Ibid., 176n.

<sup>96</sup> See Mansfield et. al. (1981): 917. See also 915: “According to the firms, about one-half of the patented innovations in our sample would not have been introduced without patent protection. The bulk of these innovations occurred in the drug industry. Excluding drug innovations, the lack of patent protection would have affected less than one-fourth of the patented innovations in our sample.”

<sup>97</sup> See his “Intellectual Property, Technology and Economic Growth,” in *Intellectual Property Rights in Science, Technology, and Economic Performance: International Comparisons*, Francis W. Rushing and Carole Ganz Brown, eds. Westview Press, London, 1990: 17-30. I should note that Mansfield is specific that he is not against IP rights.

Patents do seem to make a difference, in particular in the pharmaceutical or chemical industry, but it is not nearly as much as it is often made out to be. What little evidence exists shows that, except in the pharmaceutical industry, most innovations would still exist in the absence of patent protection. Winter concludes that, “On the empirical side, there is plenty of evidence for the general proposition that industrial contexts are extremely diverse in ways relevant to intellectual property policy, and for the specific proposition that patents do not always, or even generally, play a key role.”<sup>98</sup>

It is simply not the case that the patent system provides significant incentives to innovate (with the possible exception of the pharmaceutical industry). This tells against the incentivizing effect of STP, since the patent system is a kind of STP, and could not be made much better while still retaining the characteristic features of STP (such as providing monopoly power and exclusive rights). (Thus, to change the current system would either be to weaken it in a way I would support, or just to change minor details.) So, we do not have significant incentives coming from STP. Remember, however, that in the last two sub-sections I presented reasons to believe that STP has a significant disincentivizing effect on innovation. All in all, then, STP is not in a great position vis-à-vis the incentives concern. Also, please note that this sub-section, in conjunction with the previous subsections, show premise 3 in the incentives argument for STP to be false; it is not the case that STP is the most effective way of providing incentives.

#### *Conclusion for Section I*

STP is to be rejected from incentives-concerned perspectives. It contains significant disincentives not present under WTP. It also does not incentivize as it is

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<sup>98</sup> Winter, 57.

supposed and purported to. WTP contains incentives, and includes no real disincentivizing effect. The net incentive-benefits of WTP are higher than those of STP. Incentives-concerns, then, favor WTP over STP. STP is unjustified.

There is one possible exception to this conclusion; the pharmaceutical industry occupies a special place vis-à-vis the actual incentivizing effect of STP. In the next section, then, I address this industry's special place given these concerns.

## ***Section II: The Pharmaceutical Industry and STP vs. WTP***

As presented in section I.3, the pharmaceutical industry (and perhaps the general chemical industry of which it is part) consistently scores better with regard to the necessity of adequate incentives. It seems the ease of imitation, along with lesser brand loyalty and other factors, in this industry is so great that there is a stronger (at least perceived) need for the kind of protection patent ownership (STP) provides. In this section, I address this concern; my general conclusions are mitigated for this industry. I claim that incentives-concerns do not clearly favor WTP or STP; that is, it is *inconclusive* what IP regime should be in place for pharmaceuticals, given a concern for incentives.

It is clear that patents make a difference in this industry. I will not argue against this. It is instructive, however, to note that we have moved from the following general proposition that defenders of the patent system used to justify patent rights, namely, that patents are necessary to provide incentives, to a much weaker claim. Empirical evidence shows that patents are significantly effective at providing incentive for only one industry—pharmaceuticals. This is a significant diminishing of the patent-defender's position.

In the next several paragraphs, let me address in further detail the issue of incentives and pharmaceutical R & D. While I cannot deny what I have already said—that patents seem to make a difference in the R & D that goes into pharmaceutical development—I will try to still reduce the significance of this claim. My goal is to show that, while the pharmaceutical industry is indeed exceptional vis-à-vis the claims I have been making, it is not clear that we should retain STP for pharmaceuticals (though I repeat that what we should do is inconclusive). What will have to be done to compensate for losses in the pharmaceutical industry's R & D is more complicated, and I will make some suggestions shortly. First, however, let me perform some damage control and note how the lost R & D in the pharmaceutical industry would not be as significant as it may at first seem.

First, note that 57% of medical research spending is actually government funded (by the National Institute of Health, universities and charities and others); only 43% is industry-provided.<sup>99</sup> This, of course, encompasses more than just pharmaceuticals, but it would be a mistake to think that all the funds pharmaceutical companies put into R & D come from internal resources. Thus, some research will likely still occur as it is already funded from a different, external source that would be unaffected by the lack of patent protection.<sup>100</sup> Hence, the losses incurred from a switch to WTP in terms of lost incentives to innovate in the pharmaceutical industry, while still significant, would not be such that there would be little to no R & D into new pharmaceuticals. Since the funds that are being directed into R & D are not completely internal—that is, since firms that

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<sup>99</sup> Perelman, 133.

<sup>100</sup> Incidentally, Dean Baker (of the Center for Economics and Policy Research) estimates that the 100 billion that Americans spend on prescription drugs would be reduced to less than 25 billion in the absence of patent protection (qtd. in Perelman 133). And, as I noted above and will say more about below, some of this missing 75 billion can be provided in other ways.

are performing the R & D are subsidized by external sources—firms do not need to recoup *all* the costs of R & D in order to have an incentive to innovate. Remember that it is generally thought that would-be innovators need the promise of IP rights in order to have incentive to undertake risky R & D; but, since it is not entirely their own money that these innovators are spending, they do not need to recoup costs that, technically, *they* are not spending. They only need to recoup internal costs to have incentive to innovate. We have before us, then, one reason to not exaggerate how much R & D would not occur if STP was not the case.

Furthermore, as noted above (along with F. M. Scherer), there are alternative ways of providing incentives to innovate. For instance, the government could subsidize pharmaceutical companies (more than it already does) to compensate for any lost R & D that occurs as a result of abandoning STP. Additionally, award programs could be set-up to reward successful innovators, such that researchers have further incentives to conduct risky R & D. And these awards or subsidizing programs can be funded not only socially, but also by charitable contribution. Finally, there may well be more ways of remunerating innovators that I am not aware of; the point here is that we should look for those ways, since, *outside* of the pharmaceutical industry, STP is on-balance less incentivizing than WTP; and, if we can increase the incentivizing power of WTP for pharmaceuticals through other strategies, we should.

The reader, however, may despair of some of my suggestions, or the possibility of other remunerating strategies, because they may consider the sheer size of the expenditures involved in pharmaceutical R & D. That is, it may be thought that the

amount of subsidizing or awards that would have to be given to innovators would be so large that it would be either unadvisable or even impossible to so compensate.

Though of course it is possible that we could not or should not so compensate, short of detailed empirical analysis we cannot know this. I will try to provide some reason to doubt it. First, for clarification, it is important to understand how the R & D process occurs for pharmaceutical companies. We should not be under the impression that pharmaceutical companies make no profits on innovations after their patent expires (though, of course, due to imitation by competitors and generics, their profit is significantly diminished at that time). Also, we should not be under the impression that pharmaceutical companies make exclusive profits for the entire seventeen years they have a patent. In fact, it is (on average) only the last five years of a patent's life where a pharmaceutical company expects to make profits from what it has patented.<sup>101</sup> The first dozen years or so are spent in research, development, the federal approval process, as well as investment into the product. Companies stand to make quite a bit more if they invest a significant amount into their products before they are released onto the market (in educating the public as to the significance of the product). There is a very high initial investment cost, then, along with the costs of research and development.

Thus, companies simply aren't able to make profits until about the 12<sup>th</sup> year of a patent's life. So, when we calculate how much we must compensate companies if we wish to subsidize or award them, hoping to induce them to conduct risky R & D, we

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<sup>101</sup> These details, and those that follow in the paragraph, come from correspondence with Julian Gee, former Vice-President of Pfizer, Inc. Before his retirement in 2001, he was responsible for product development, technology acquisition, and marketing for the Animal Health Division of Pfizer. The empirical details I portray here he believes to still be the case (as of our discussion in August of 2006), as well as true for more than just the Animal Health Division, and other pharmaceuticals as well. Finally, while the data I have I received from him, the conclusions that are drawn from that data are, of course, mine; thus, any errors in reasoning stemming from what I present here are mine, and not his.



should not imagine that we must pay them for seventeen years of lost profits. Instead, we only have about five years of payments to make.<sup>102</sup> Now, I do not pretend that this amount is small because of this. Indeed, the amount of profit that a pharmaceutical company can make in those five years can be enormous. My intention here is only to not let that already enormous amount become exaggerated. I would, however, remind the reader that what we hope to accomplish by rewarding or compensating innovators is not matching profits that they would have made under STP. All we need to do is give the would-be innovators reason to still conduct research, and that does not mean giving them rewards equal to what profits they would have under our current patent system, since we are not trying to compensate for their lost profits.<sup>103</sup> We are trying to compensate for any lost incentives to innovate.

Now, I should admit, supposing we cannot or should not attempt to compensate pharmaceutical R & D, and that too much of that research would be lost if we abandoned STP entirely, that it is possible that incentives-concerns would advocate a mixed IP-system. That is, it is possible that an exception should be made for pharmaceutical research, and allow STP in that area and that area only. I certainly do not claim this to be the correct route, but it could possibly turn out to be that. Again, we lack sufficient empirical analysis to tell us for sure.

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<sup>102</sup> Such small bounds of payment are not relegated to patents and the pharmaceutical industry. Indeed, for the objects of copyright, were we to fund whatever lost incentives WTP had compared to an STP, we would only have a short period of high fees to pay (even though, as I have noted, WTP is very similar to current copyright; I am only considering a hypothetical case here). “In the case of books and movies, most sales take place within three months of initial release.” Qtd. in Boldrin and Levine (2005) (11).

<sup>103</sup> Additionally, “the evidence shows that most generic drugs, selling at a quarter of the price and being clinically and functionally perfect substitutes for the original products, never capture more than 50% of the market (Caves et al (1991), Congressional Budget Office (1998))” (Qtd. in *ibid.*).

I suspect, but cannot argue completely, that incentives-concerns do not favor a mixed system because a) all of the disincentives associated with STP in general<sup>104</sup> exist in a significant way within pharmaceutical research (here, I'm thinking in particular of harm to downstream pharmaceutical research—an extraordinary amount of research into pharmaceuticals could be lost simply because of one company's patent); b) we can still fund some (since, by hypothesis, we cannot do all or most) of the lost R & D through alternative means<sup>105</sup>; c) Boldrin and Levine's work at least presents us with a model of how sheer competition amongst innovators, in absence of IP-monopolies, will not impede innovation, and might even stimulate it<sup>106</sup>; and d) the data that we do have regarding how much R & D would be lost if patent protection were abandoned *might* be biased<sup>107</sup> in that direction.

The safe conclusion we can draw here, then, is that what IP regime incentives-concerns favor for pharmaceuticals is inconclusive. This is because of the demonstrable difference STP seems to make in incentivizing in that industry. This does not mean, however, that STP should be the case for that industry, since we do not have an adequate measure of the disincentives caused by STP within that industry, nor an adequate measure of the incentives that would be present under WTP (though we certainly have some reason to believe incentives in this industry would be reduced under a WTP system). Thus, it is inconclusive what incentives-concerns tell us to do with the pharmaceutical industry.

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<sup>104</sup> See pages 12-30.

<sup>105</sup> See page 46.

<sup>106</sup> See pages 28-29.

<sup>107</sup> See pages 72-73. I certainly do not claim that they are biased. I only note that, insofar as one is skeptical of surveys, in this case it only helps my position, since bias is likely to be on the side of my opponent.

### ***Section III: The net-incentive benefits of WTP are higher than that of no-IP***

The reader may note from the last sections that the gradual diminishing of the necessity of STP as an incentive to innovate (by showing that there are other incentives to innovate) might be stronger than what I want for my overall project. That is, the reader may think that perhaps sufficient incentives exist such that *no* intellectual property is sufficient on incentives concerns, such that the no-IP position is to be favored. In this brief section, I address this concern and argue that, on incentives-concerns, WTP is to be preferred to the no-IP position.

As noted in section I, WTP does provide *some* incentives. So, though it may be true that the need for incentives is *exaggerated* (such that STP is unnecessary vis-à-vis incentives to innovate), this does not mean that the need for incentives is *absent*—it simply does not follow from an exaggerated need for incentives that there is no need for incentives. Remember the point of the incentives concern: we want to ensure that innovators will keep on innovating. If we can provide incentives for them to do so without causing too much damage, we ought to. So, if WTP provides incentives, incentives-concerns tell us to prefer WTP to the no-IP position, so long as WTP does not contain concomitant disincentives, as the STP system does. And, in fact, if WTP contains any disincentive at all, it is so small as to be insignificant, as argued above.<sup>108</sup>

One other possibility might concern the reader. Remember what I said against STP in section I.2., regarding Bessen and Hunt’s work showing that R & D and patents

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<sup>108</sup> At the end of section I, before the conclusion (p. 34-35), I admitted the possibility of a small segment of downstream innovators who fear that their innovations will a) impact an original owner’s ability to profit off of their idea, of which our downstream innovator’s innovation is downstream, and b) be mistakenly taken to be “just a copy” and considered not very different. This segment would be very small.

over software act as substitutes amongst “strategic patenting” firms, rather than compliments, such that patents are not used as incentives to innovate (and actually cause a decrease in R & D). The reader might think that WTP has this disadvantage over the no-IP position: even though WTP does not fair as bad as STP does in this regard, it is still possible that firms which have weak type-protection over their products will divert spending from innovation onto securing their powers over their products. I cannot deny this possibility; however, we must be clear about what it is. Sometimes, under WTP, we will see firms diverting funding that, in the absence of WTP, would go toward innovation. Instead these firms will spend this money on, say, seeking out those who have violated their ownership rights.

While this possibility is real, please note that it is nowhere near as significant as under STP, since there are fewer ways under WTP in which one can violate, and there are thus less options for prosecution. Not only this, but this worry about WTP assumes that firms will spend money on innovation in the first place when there is no-IP protection. While I do not doubt some innovation will occur under no-IP protection, it will not be nearly as much, since copying would be rampant. Imagine the situation if firms could simply copy and take products from other firms without restraint; the amount of secrecy necessary to protect one’s innovations, such that one could still make a profit, would be staggering. In this kind of situation, firms have much less incentive to invest the kinds of funds necessary to conduct successful R & D.

WTP assures some protection for the products one’s ideas. So even if there is an incentive to divert funds from innovating toward the legal mechanisms required to protect one’s rights, this disincentive to innovate is small (much smaller than it is under STP).

Also, the worry about this disincentive to innovate relies upon an implausible premise, namely, that the no-IP position will ensure nearly as much innovation as WTP will; the disincentive consequent upon a complete lack of IP rights is clearly higher than that consequent upon WTP's legal mechanisms.

This is, the reader may note, another way in which WTP acts as a nice balance between the extremes of STP and the no-IP position. Whereas STP claims that it is necessary to provide incentives to innovate, we have seen that this necessity is exaggerated and STP's ability to live up to being, overall, incentivizing is dubious. The no-IP position, however, does run afoul of this concern—it does not provide adequate incentives. While it is true that STP exaggerates the need for incentives, this does not mean there is no such need. WTP cuts this balance nicely; it provides necessary incentives without causing the disincentives that STP begets.

The reader may also be concerned that one issue I raised in rejecting STP, above, might apply now to WTP. The reader might think that we should have no IP rights (a la the no-IP position), but provide grants and prizes to compensate for lost incentives (as I suggested above we do to replace lost positive incentives due to rejecting STP). Though we can, of course, have grants and prizes with any system, WTP still provides more incentive than the no-IP position, since WTP can have the same grants and prizes as we would have under the no-IP position, plus those granted by the protection WTP affords. So, the incentives concern will still favor WTP. (And, please note again, WTP can do this without causing the disincentives STP begets.)

Another issue is more general: the reader may be concerned that, as with STP, all of WTP's positive incentivizing effect brings with it disincentives for others. One person

has incentive to innovate X, others have a concomitant disincentive. Again, to some degree this is obviously true, and there may not be a difference in kind between WTP and STP in this regard. However, there is a clear difference in degree; since WTP allows independent invention (as well as downstream innovation if the innovation is new enough, not to mention free copying if no harm will be done to original owners), significantly less people have disincentives than under STP. The only people who will have disincentives (beyond those who would merely copy and profit), are those who fear their innovations will not be determined different enough from those protected, which also impact the original owner's ability to profit. This is not a significant group of people, and the negative incentive incurred here is, again, significantly less than that which would occur under a no-IP situation, where rampant copying would be the case.

So, since incentive-benefits are higher under WTP than under the no-IP position, incentives concerns quite simply favor WTP. Now, if one is concerned not merely with providing incentives per se, but with some other concern entirely (such as overall level of well-being, for example), such that the no-IP position could provide sufficient incentives for these purposes, we must investigate what these other reasons for providing incentives are to adequately understand what IP system to prefer. At this point, however, we are no longer looking at solely the incentives-concern. We are now bringing in other issues and values; issues and values which I will address in a later chapter, where I try to show that whatever plausible values are brought in, the balance will still not be tipped in favor of the no-IP position (or of STP).

Take, for example, Utilitarian values, which command us to provide incentives to innovate because of the positive affect they provide on overall level of well-being. It

may be thought here that the no-IP position will provide sufficient incentive to meet utilitarian expectations. Again, I will delve into this issue more deeply in a later chapter. Here, however, I will say that as long as there is no (or insignificant) harm caused by WTP, since its incentives-benefits are higher than the no-IP position, it is clear that utilitarianism will favor WTP. Indeed, I would claim there is no significant harm from WTP, and will argue this more completely in a later chapter.

Thus, focusing our attention on incentives-concerns, we can see that WTP is to be favored over the no-IP position, since WTP incentivizes where the no-IP position does not, and WTP does not cause the disincentives to innovate that would diminish its net incentive-benefits. Incentives concerns again favor WTP.<sup>109</sup>

I would like to address one final potential problem for WTP.<sup>110</sup> As noted very early on in the paper, in at least one important way, WTP looks like the copyright system; this is that they both allow for independent invention. A critic of mine might suggest, however, that the reason this is allowed for under copyright is that it is simply unlikely that two people will independently invent the same song, for instance. Thus, the protection that copyright affords does not need to include protection against independent invention. Not so for the patent system, says my critic. WTP's allowance of independent invention for the objects of patents means that there is no (or at least significantly less) incentive under WTP for those objects. Thus, any gain WTP has in providing incentives

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<sup>109</sup> The reader will note that this sub-section can be read as a partial defense of the incentives argument for WTP. Having WTP is the most effective way of providing incentives, and there are no significant disadvantages under WTP as compared with its absence. A full defense of this argument would involve showing that WTP causes no significant harms in general, which is beyond the scope of this chapter. I turn to it in my fifth chapter.

<sup>110</sup> This is the issue I previewed in note 25, above.

over the no-IP position is minimal, since it does not protect objects in the way those objects need protecting.

This concern is coherent, but not too troublesome for WTP. This is because, while it is true that it is easier to independently invent the objects of patents than the objects of copyrights, it is still not easy to invent. The mere fact that others out there can and will independently invent some object you are working on does not mean you have no or little incentive to invent that object. The mere fact that one will have competitors in the marketplace does not deter one from entering that market. To be sure, there is less positive incentive to invent these objects under WTP than under STP; this is something I have admitted all along. But there is still a non-trivial incentive provided by WTP; others cannot simply copy one's work and impact your profits. That knowledge will protect you to some degree, and therefore provide you with an incentive to innovate. So, this concern about WTP, I believe, does nothing more than reiterate that WTP has less positive incentives than STP. It does not show that WTP has little more incentive than the no-IP position. WTP does have more incentive than the no-IP position, since one's innovations will be protected from being copied and used in a way that would hurt one. This is sufficient to provide significant incentive when compared with a situation where one did not have this assurance. The no-IP position is therefore unjustified, according to a concern for incentives.

### ***Conclusion***

Weak type-protection fairs better than both strong type-protection and the no-IP position on incentives-concerns. That is, insofar as one is concerned with incentives, one



should favor WTP as the form for IP rights—WTP is justified. This is only one reason to favor WTP, however; in a later chapter I will argue it is conclusive, as other considerations will not swing the balance back in favor of either STP or the no-IP position. Importantly, in the next chapter I will also argue that liberty concerns establish the same conclusion: WTP is to be favored to both STP and the no-IP position; WTP is justified. Together, these two considerations (liberty and incentives) make up the most commonly argued for positions in regard to IP rights. Now, I will not claim these two issues are the only important issues—indeed, every ethical or political theory will have considerations of their own that they will regard as crucial. However, I will claim that whatever other considerations these various ethical or political theories favor, so long as they are plausible, these theories will not favor a switch back to STP or the no-IP position, given the concerns for incentives and liberty.

## **Chapter 4: Liberty and the Justification of Intellectual Property Rights**

In this chapter, I argue that a view based solely on a deontological concern for liberty makes weak type-protection the justified form of intellectual property rights. As far as issues of liberty are concerned, the other two possible regimes of protection for intellectual property rights—strong type-protection and no intellectual property protection—are unjustified. The concern for liberty is, along with the incentives concern which I addressed in the last chapter, one of the most prominent concerns present in the literature on the justification of intellectual property rights, as well as property rights in general. I hence address what a view based solely on a concern for liberty will say about what the structure of intellectual property rights should be; I conclude it regards weak type-protection as justified.<sup>111</sup>

After explaining what I mean by liberty and the liberty view, I argue first why this view would regard strong type-protection as unjustified. I then show how the same view would also reject a system of no intellectual property. I then explain why weak type-protection is justified.

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<sup>111</sup> I remind the reader that in chapter five I will expand my analysis of the justification of intellectual property rights to include other considerations beyond liberty (and incentives). Few theorists, of course, will be concerned solely with liberty. I address liberty separately as it is the most prominent issue with regard to the justification of intellectual property rights aside from the incentives issue. Thus, in conjunction with chapters three and five, this chapter addresses the justification of weak type-protection from many plausible views; while liberty and incentives are the most prominent issues, other plausible considerations outside of these two do not swing the balance away from the justification of weak type-protection (in favor of either strong type-protection or no intellectual property protection).

### *I. Liberty and the liberty view*

I must clarify that I will be speaking of specifically empirical—as opposed to normative (e.g., moral or legal)—liberty. An empirical liberty is different from a normative liberty; whereas the latter makes explicit the various permissions one has to undertake certain actions, the former simply refers to what is physically possible for one to do. One has the (normative) moral liberty to fly, for instance, if one has the moral permission to do X, even if X is illegal or physically impossible for one to do. A moral liberty, that is, is simply something that someone has the moral permission to do, regardless of what one physically can do. One does not, however, have the empirical liberty to fly—it is simply something one is not able to do. So, one has empirical liberty to X if and only if 1) one is physically able to X; and 2) one is not *empirically unfree* with respect to X. One is empirically unfree with respect to X when one cannot X because of the action(s) (or disposition(s) to perform some action) of some other person(s); that is, an agent is empirically unfree (not at liberty) with respect to X when, were it not for this other person's action or disposition, the agent could X.<sup>112</sup>

For example, suppose Joe has the empirical liberty to cut down an apple tree. This means that 1) Joe is physically capable of so cutting down, and 2) that he is not empirically unfree from doing so. If Joe was empirically unfree from doing so, this would mean that some other agent or agents were preventing Joe (through their actions or dispositions to act) from cutting down the apple tree. So, if, for instance, Kay had a property right over the apple tree, which, if it were enforced, would amount to Kay's having a disposition to prevent Joe from cutting down the apple tree, Joe would be

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<sup>112</sup> This is a simplification of Matthew Kramer's notion of non-moral freedom. Cf. Kramer, Matthew. *The Quality of Freedom*. Oxford: Oxford University Press, 2003: 3.

empirically unfree to act in that manner; Joe, in this case, would lack empirical liberty. (Also, Joe would lack empirical liberty if he had no arms and legs (and didn't have the money to hire anyone else), but this would be because of his inability to fulfill condition (1), not because some other agent was preventing him from doing so.)

It is this notion of liberty that I will use, then, as this is what people care about when they speak positively about having liberty, especially with regard to intellectual property (IP) issues. People want to know what actions they are able to perform, and what actions they cannot. IP laws, *when enforced*, restrict the kinds of things people can do. It is possible, of course, that IP laws might not be enforced (or not be enforced well). When this happens, we approximate or basically have a position of no intellectual property. I will thus be assuming hereafter that whatever IP laws are erected are at least mostly enforced. Again, then, IP laws restrict the actions of agents when they are enforced. Similarly, however, a lack of IP laws—that is, a system of no intellectual property protection (henceforth, the no-IP position)—also restricts the kinds of actions people can undertake (e.g., when there are no IP rights, the ability of those who would market their innovations is restricted). Hence, we are concerned with empirical liberty since we are concerned with the kinds of actions people can undertake under an enforced legal regime.

Another clarification is in order. I say will be arguing for weak type-protection (WTP) from a view based solely on a deontological concern for liberty.<sup>113</sup> The reader may wonder if this is a *libertarian* concern or not. I do not want to take a position on this, as I do not want to argue that libertarianism is one specific thesis, or some other one.

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<sup>113</sup> Though I believe also that consequentialists concerned with liberty will be moved by some of my concerns. I will not defend this claim here. In the next chapter I give a brief preview of how this might be, but the issue must unfortunately be mostly set aside.

If one takes the concerns I raise to be libertarian, that is fine, and one can interpret my claims here as being of a libertarian nature. However, if one does not, nothing hangs on this; how I describe my concern is what matters, not what label it receives.

Specifically, then, I am concerned with the ability respective individuals have to pursue their own projects in life and make their own choices about what happens to them. If something is a restriction of liberty, then, I take this to mean that an individual has had her possible choices restricted in an objectionable manner. There are non-objectionable restrictions of liberty; for instance, when one has violated someone else's rights (i.e., has restricted someone else's choices), one's liberty is not objectionably restricted if one is restricted in some ways. Also, one's liberty has not been violated when one is denied the ability by nature to breathe underwater (whether or not anyone is interfering with one in any way)—this was not a choice one could make (it was not an empirical liberty). But, if one has respected the choices of others, and one's possible choices have been restricted by others, one's liberty has been violated. This is the sense in which something is a restriction of liberty. (I should be clear that when I speak of violations of liberty, I am neutral between these being understood as liberties to perform actions or liberties from being restricted.)

The position I argue for here, then, simply says that, all things equal, those actions are right which respect liberty, and those actions are wrong which restrict liberty. As I have noted, this "liberty view" is concerned *solely* with liberty. The reader may think that other considerations matter; I do not take a position on this. Instead, I argue that the liberty view regards WTP as justified in this chapter; in my next chapter, I address other

plausible ethical values, and show that considering these alongside (or independently of) liberty will not change our conclusion: WTP is justified.

According to this liberty view, a legal *system* is wrong if it restricts the privileged liberties of individuals more than is necessary to be consistent with the respect for the liberty of others.<sup>114</sup> Let us, for ease, call this the liberty view. The liberty view does not require that one promote liberties; it only requires that one respect them. A violation of liberty is the same as a failure to respect liberty, on this view. Now, if the liberty view must choose a system, and all available options restrict liberty to some degree, how does the liberty view determine which system is justified? I believe the best answer here is that the liberty view will countenance some set of liberties as *privileged*; that is, there are some liberties that agents must not be denied. So, even though the actions of agents under every system will violate some liberties, the violation of some liberties simply doesn't matter much, as they are not members of the privileged set.

For example, a system which restricted only my ability to move a particular pebble from one specific location to another is not as disrespectful as a system which restricted my ability to make a living. In this case, the liberty view would select the former system, since the ability to move a particular pebble in a particular way is clearly not a privileged liberty. The liberty view wants agents to have certain crucial empirical liberties (consistent with other agents also having them); it will therefore select systems on the basis of how well the systems respect those crucial liberties. The liberty view, then, demands that a justified legal system will not violate any liberties in the privileged

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<sup>114</sup> In a moment I explain more about what I mean by “privileged.” In general, I am here simplifying a truly complex issue. An entire treatise could be (and has been) written on what exactly liberty is and how systems should respect it. I put the position as broadly as possible to encompass different possible deontological views concerned with liberty.

set, and it prohibits nothing more than this. That is, the liberty view prohibits all and only actions that are restrictions of other people's privileged empirical liberties.

What is this privileged set of empirical liberties? It would be, of course, difficult to enumerate them all, and so I will not try to do this. Instead, I will argue that WTP fulfills this demand; any liberties it restricts are not those of the privileged set. Now, there may or may not be some theory that unifies the liberties in the privileged set; I remain neutral on this issue. If we became aware of what defined the privileged set, what I have to say here would have to be consistent with that; but, again, I shall not assume that there is or is not an explanation of the relationship of various liberties in the privileged set.

So, I shall argue first that STP prohibits liberties in the privileged set—specifically, it prohibits others from using and marketing their innovations. Next, I show that the no-IP position also prohibits liberties in the privileged set; the fact that agents cannot effectively market under no-IP stifles their ability to make a living off their innovations. I end by showing how WTP is justified.

## *II. The liberty view regards STP as unjustified*

The Liberty view would reject STP. Such a system involves extensive restrictions of liberty. STP restricts the liberty of people to do what they will with their time, labor, and resources; and this liberty is clearly part of the privileged set, encompassing as much as it does. Tom Palmer notices this restriction, and explains it with regard to a specific kind of object—a patented process; stemming from an example from Jan Narveson, he says:

“My ownership claim over my computer restricts your access to that computer, but it is not a blanket restriction on your liberty to acquire a similar computer, or an abacus, or to count on your fingers or use pencil and paper. In contrast, to claim a property right over a process is to claim a blanket right to control the actions of others. For example, if a property right to the use of the abacus were to be granted to someone, it would mean precisely that others could not make an abacus unless they had the permission of the owner of that right. It would be a restriction on the liberty of everyone who wanted to make an abacus with their own labor out of wood that they legitimately owned.”<sup>115</sup>

STP gives one a claim over what other people do; even independent inventors, with labor and material they own, are barred from making and using what is owned (when, suppose for simplicity, there has been no contractual agreement to hand over what is labored upon). Under STP, non-owners are not free to do what they want with their own labor, time, and resources. The liberty of *everyone* who could have used (in any way) what is protected is infringed, in that none of them is at liberty to use an owned item (except for the owner).<sup>116</sup> And, since it is clear that the privileged set of liberties would include being able to use and making a living off of one’s own innovations, STP clearly violates a liberty from the privileged set.<sup>117</sup>

Consider an example. Suppose agent S invents a cure for cancer. Under STP, all agents who are not S who could make use of the cure for cancer (by, for example, at least making their own) lose liberty in that they can not use the cure for cancer freely. They cannot make their own cure for cancer for their own personal use; they cannot administer it as they see fit for others. They also cannot market the cure. All this is possible when their cure was completely independent of S’s cure. Also, suppose the cure was really

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<sup>115</sup> From his “Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects.” *Harvard Law Journal and Public Policy*, vol. 13. 1990; 817-865: 843.

<sup>116</sup> The amount of people who could use an item is potentially huge. It might also be small in some cases, but there is no reason to suppose it will be small on average.

<sup>117</sup> It is worth noting that liberty is violated, under STP, even when people aren’t actually creating the independent inventions, since they now *can not* independently invent.



quite simple, though it was not obvious in any way. Suppose, for instance, a very simple chemical substance, found in all homes, was the cure. Once S begins to market the cure, some other agent T realizes the cure is simply these household chemicals. T is not at liberty—supposing T wants to follow the enforced law—to personally use the cure. All other agents are also not at liberty (under the same supposition) to make personal use of the cure.

This is, of course, a fairly extreme example.<sup>118</sup> But other examples need not be so extreme. If one invents and gains STP over a more efficient way of mowing one's lawn, others now are not at liberty to use all their own items to perform that same act. And, again, this is regardless as to whether or not those others have seen or heard of one's manner of mowing; since one owns that manner of mowing (under STP), others cannot use it without one's permission. This is a restriction of liberty which the liberty view cannot abide.

But, the reader may note, there is a concomitant restriction of liberty involved in the rejection of STP. This restriction is that one no longer has the liberty to exclusively market and/or exclusively use an item. What, then, should the liberty view conclude? Is the liberty view forced into a contradiction, saying that we should both reject STP and reject its rejection?

No, for the rejection of STP—while containing a lost empirical liberty—does not involve a rejection of a privileged liberty. Rejecting STP means rejecting the liberty to

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<sup>118</sup> It might be thought that not too many people could independently invent such a cure, given the complexity of the issue. While this is to some extent of course true, please see my chapter 3, page 52, where I speak of the frequency of independent and simultaneous invention and discovery, often of quite significant innovations.

exclusively market and exclusively use.<sup>119</sup> But, the liberty to exclusively market or use simply does not count as a privileged liberty. Exclusive use/marketing is not necessary for anything; one can usually make a living, for instance, without having exclusive marketing rights.<sup>120</sup> The liberty to exclusively market/use is obviously a subset of the liberty to market and use; as the reader will see, I *do* regard the latter as a privileged liberty, but there is no reason to regard the former that way as well. Exclusive marketing/use necessarily involves restriction of the liberty of all others. And it is difficult to see how a privileged liberty would include such a restriction for everyone else.

STP, then, disrespects the crucial liberties others have to use and market their own innovations. When we reject STP, we do not disrespect a crucial liberty; we only disallow others from disrespecting the liberties of still more. Now, let me pause to make an important clarification. While I will continue use the locution “respects...” or “is more respectful of liberty”, I do recognize this can be somewhat misleading. Please keep two things in mind regarding this. First, I should note that the liberty view, as I have described it, is a deontological view. And, it is a very tricky matter determining exactly what requirements a deontologist will have of a state. It is possible, of course, that a deontologist might find states immoral simpliciter; if this is the case, then it makes no sense to ask what a deontologist will require of a state regarding its IP laws. Thus, what I argue for here assumes that the deontological liberty view regards at least some states as

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<sup>119</sup> Please note that this is the liberty restriction involved with WTP. As I will note, all systems of IP protection as well as the no-IP system contain liberty restrictions. I will below argue that those under WTP are not of the privileged set.

<sup>120</sup> Please see my chapter 3 (e.g., page 72), where I note the other ways outside of patenting (which ensures exclusive marketing rights) to secure profits from innovation; some of these are accomplished when marketing is not exclusive. Simply being the first to innovate something is often enough to make a profit.

justified; it then asks what the IP laws should look like in those states. (I set aside anarchist concerns in this dissertation.<sup>121</sup>) And, when I speak of something respecting or disrespecting liberty, I mean that the privileged set of empirical liberties is respected or it is not.

Second, in no way do I insinuate that the notion of respecting liberty means, for instance, to maximize or promote it. What I do mean is something along the following lines: the deontologist concerned with empirical liberty wants to ensure that individuals are free from interference with their important choices, so long as those individuals have not and are not interfering with others. Thus, the deontologist wants the state to respect the liberty of its citizens in this sense; regarding IP, the state should select the IP regime which respects individuals' privileged liberties regarding the objects of IP, so long as those individuals also do not interfere with others.

Now, in order to further explain why I think the liberty view will regard the lost liberty to do what one will with their time, labor, and resources (which was the liberty restriction involved in STP) as the restriction of privileged liberties, consider our garden example from chapter two and a couple of its cases. You and I have created the same elegant and efficient garden; in case C, this is purely accidental—your garden is completely independent of mine. In case B, however, you have observed my garden, taken some photographs, and applied what you have learned in your own. Also, in case B, you write a book about garden manicuring and make a decent profit.

The possible liberty restrictions are these: if you were to be prevented from doing what you have done, you would lose the liberty to do what you will with your time, labor,

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<sup>121</sup> Though I would remind the reader what I said in note 119, above, that the no-IP position itself contains liberty restrictions.

and resources (that is, build your own garden, and so on). If I was prevented from stopping you from doing what you've done, I would lose the liberty to exclusively market and/or use the garden (or books about the garden). Which of these restrictions is more disrespectful?

It is easy to see that my loss of liberty to exclusively use and/or market my garden is *not* as disrespectful. For, at least in this case, not only can I still use my garden, but I can also *still* market my garden (though for admittedly less than under STP). Whereas, if you lose the ability to do what you will with your time, labor, and resources, this is a significant disrespecting of liberty, since you simply cannot do what you could have if I did not own the manicure of the garden. You are completely bereft of options vis-à-vis the owned garden (under STP). If we reject STP, and I then do not have the liberty to exclusively market the garden, I can still *use and market* my garden, and you can have your copy of the garden for personal use. The only thing I cannot do is use/market the garden *exclusively*. That is, the only liberty I've lost is the ability to restrict others' liberties in a particular kind of way; I've lost no privileged liberties.

I must here stave off a potential objection. The reader might think that, in fact, to deny innovators the liberty to exclusively market is to restrict a crucial, privileged liberty. The time and effort agents put into research and development of ideas is sometimes huge; further, the benefits that these ideas sometimes contribute to the general welfare is sometimes so significant that to deny innovators exclusive rights to their innovations is surely a denial of a crucial liberty.

While this consideration is moving, it is inaccurate in suggesting that there is a lost crucial *liberty*. The intuition at work, here, is much more likely that innovators

deserve our thanks in some concrete form. It is not an intuition about what liberties people have; these innovators, that is, could lose the liberty to exclusively market their important innovations, while still being rewarded in numerous other ways. If this was the case, it seems the intuition is satisfied—exclusive marketing can be denied while still giving agents all the liberties they are not to be denied. It is a further question whether and what innovators *deserve*.<sup>122</sup> STP is not needed to retain significant liberties.

Another potential issue notes that STP will generate larger amounts of wealth for original innovators; thus, it might be thought that the liberty to obtain vast wealth is violated when we abandon STP. Again, however, I would respond that the liberty to obtain vast wealth is not part of the privileged set. I would agree that the liberty to obtain wealth might be a part of that set, but STP is not needed for this. One can make a fine living competing with others in the marketplace; WTP provides for this. (Note that I am not arguing that people *cannot* obtain vast wealth; I am only arguing that it is not a privileged liberty to do so. Indeed, this *could not* be a privileged liberty, as it is not the case that everyone can obtain vast wealth (otherwise it would not be vast), and thus one person's satisfied privileged liberty to obtain vast wealth means that others are denied it.)

So, while both systems restrict liberty, the liberty restricted under STP is more significant than the liberty restricted by rejecting STP, in that we lose no privileged liberties in losing STP, while we lose privileged liberties under STP. I do not see how the liberty view could regard a system which restricts what all other agents—those who independently invent, especially—who could possibly use (in any way) an owned item as justified.

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<sup>122</sup> One which I explore, to some degree, in the next chapter. I argue there that desert theory also regards WTP as justified.

Let me be clear on this mark: when STP is the case, *independent* invention is not allowed. If one person invents a cure for cancer and obtains ownership rights over that cure, others cannot use (in any way) that cure, even if they were working on that cure, and were only seconds behind the owner in doing whatever needs to be done to obtain ownership rights (making the claim, filing the paperwork, etc.). (Also, of course, those independent inventors who never heard of the original item's already being invented and owned are disallowed.) It is not respectful of the liberty of these independent inventors to bar them from using what they have independently invented; this is a significant disrespecting of the choices people can make in life. And, it is much more disrespectful than simply disallowing someone to exclusively market their innovation, since exclusive use is merely a subset of use, and thus to bar from use is much more significant than to bar from exclusive use. So, while ownership rights always limit what others can do, STP is unique and objectionable for limiting what independent inventors can do.

Also, however, STP limits the liberty of agents to copy and make personal use out of what they see out in the world. Consider this time garden case A, where you see my garden, make a copy, but do nothing more than make personal use out of it. Here, you have indeed copied me, but you do not harm me in any non-trivial way.<sup>123</sup> STP prevents you from this relatively innocent activity. This disrespects your liberty.

Now, consider how rampant this kind of copying for personal use actually is in the world. You see the way your neighbor cuts his lawn. You notice the way the guys down at the car-wash make efficient use of water. You go out to the store and hear a nice melody in the background of awful grocery-store music. You notice how nice someone's

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<sup>123</sup> There may be trivial damage in that I now cannot charge you for the copy. See my chapter 2, footnotes 16 and 21 for lengthy discussion of this issue.

outfit matches their pleasantly-colored hair. You realize that the active ingredients in some cold medicine do a great job at helping you sleep at night. Your kids want to play the game they saw someone else playing (perhaps on television, in the neighborhood, or at the ballpark). In all of these cases, you might want to do the same or something very similar to what you experienced someone else do.

Simple copying of objects out in public for personal use like this happens numerous times daily all over the world. Our daily lives both exist and advance by learning from what other people do, and incorporating that learning into our personal lives. STP allows agents to restrict the liberty of others to copy and make personal use in this way. If your neighbor owns the method he has of cutting his lawn, you can't use it even if you will not try to market it. If some pharmaceutical company owns the cold medicine, you can't isolate its ingredients to create a helpful sleep aide. STP restricts this very natural occurrence in allowing agents to claim ownership rights over their innovations. This is unjustified—it violates the liberty of others who are not violating any one else's liberty. It restricts liberties that are part of the privileged set.

Now, it might be thought that, in many of these cases, STP won't be granted for various reasons (e.g., the innovation is not really innovative at all—it's quite obvious<sup>124</sup>). While this may be true in some cases, in any case where the innovation is not so obvious, agents can obtain STP over the innovation should they so choose. In those cases, the liberty of all who would simply see the item and make personal use of a copy of it is infringed. This is an unjustified restriction of privileged liberties.

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<sup>124</sup> The Anglo-American patent system (a form of STP) does include “non-obviousness” as a necessary condition for a patent grant.

It also might be thought that the probability of people claiming STP over such things is low. This may be; in noting what I did above I do not mean to say these things are likely to be protected under a STP regime. I only want to note how commonplace personal copying of objects out in public is, and how we should take care in restricting this behavior. For, the danger to restrict too much is there; STP gives agents the ability to protect these things, such that others can't make personal use in the way I've described.<sup>125</sup>

So, both independent invention and copying for personal use are stifled under STP. Those concerned with liberty as I have described should reject STP. Indeed, those concerned with liberty should embrace WTP, as I now move to argue in the next section that the liberty view also finds the no-IP position unjustified. Following that section, I will be explicit about the justification of WTP.

### *III. The liberty view regards the no-IP position as unjustified*

The liberty lost under some form of IP protection (which, as I will soon defend, should be WTP), when compared to that lost under the no-IP position, is not very disrespectful; this lost liberty is that of freely copying *and* profiting off of other people's work. Though this is a lost (empirical) liberty, is it a loss of a liberty from the privileged set? That is, is the lost liberty to freely copy and profit off of other people's work disrespectful of crucial liberties? I will claim that it is not, while the lost liberty to effectively market one's innovations as well as generally be more open with them (not

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<sup>125</sup> A compelling example here is Microsoft's patent application over the "Is Not Operator"; it is essentially a logical operator for computer programming languages. See US patent application #20040230959 (e.g., at <http://www.freepatentsonline.com/20040230959.html>). The Is Not Operator allows a program to use a single operator to compare two variables and determine if they point to the same location in memory.



having to protect them if you don't want others to copy and impede your ability to profit)—which are the liberties lost in the no-IP situation—are disrespectful of crucial liberties. Though the claim here may not be as clear as in the last section<sup>126</sup> (where the restricted liberties under STP were significantly disrespectful), to lose one's liberty to freely copy and profit off of other's innovations is simply not to lose a liberty from the privileged set; to lose one's liberty to make a living off of one's own innovations, however, is.

Let us again return to our garden example and compare the liberty lost under some form of IP rights (WTP or something like it) and that under no-IP. Under some form of IP rights (even a weak form), your actions in case B—where you have copied my garden (to a significant degree), and profit off that copy, impeding my ability to do so—constitute a restriction; under no-IP, they do not. Under some form of IP protection, you lose the liberty to copy and profit off of those copies. Under no-IP, however, I lose the liberty to effectively market my idea for the garden. I also lose the liberty to be more free with my garden; if I don't want you to engage in the behavior you engage in, I must put a wall around my garden. That is, I must *fence-in* my garden so that other property relationships can now protect it.<sup>127</sup>

In this case, it seems clear that to disrespect an agent's liberty to market their ideas effectively, and to force them to fence-in their ideas should they not want them copied and profited off of is an infringement of a privileged liberty. It is more disrespectful than to disallow copying and profiting off-of behaviors. This is easy to see

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<sup>126</sup> I generally regard the no-IP system as preferable to STP, though will not defend that position here.

<sup>127</sup> I should note that “fencing-in” may be literal or metaphorical; sometimes, we put literal walls around objects to protect them from the public. Other times, we simply keep things hidden in different ways; when I say that inventors must “fence-in”, I mean either literally or metaphorically.

since, under at least one form of IP protection—WTP—other agents can still make personal use of copies of ideas; they simply can't make a profit off of them. By contrast, under no-IP, original owners are stultified; their ability to make a living is impacted since imitators can easily rival their market position; and, they must protect all their ideas via other property relations, which further decreases the profitability of an innovation (since people won't know as much about it, and therefore won't pay as much). So the lost liberty under WTP is just not as significant as that under no-IP; it is intuitive that the loss of one's ability to make a profit off of what one copies is less significant than losing one's ability to effectively market.

For a real-world example, consider a drug company's position regarding the no-IP position. Under some form of IP protection, the drug company has the liberty to profit off of their ideas<sup>128</sup>; under no-IP protection, the drug company effectively loses this liberty, as, once the idea is outside the bounds of physical property relationships, others are free to copy and profit unhindered. The company's ability to market their drug is at least diminished, because of the actions of other agents; it may even be eliminated. This is especially likely when the original innovator is in a weaker market position than other copying agents. If a copying agent has the means to out-market the original owner, they will, and the original owner's choices are either eliminated or at least severely limited.

So, while under WTP other agents can't copy the drug and make a profit off it, they can still copy the drug and make personal use of it.<sup>129</sup> Under no-IP, however, the

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<sup>128</sup> Note, however, that WTP does not allow an agent to *prevent* other agents from profiting off of their own ideas, as STP does.

<sup>129</sup> I should admit that the situation may be different in the future; if copying becomes so easy as to point, copy and replicate some object, such that copying for personal use takes little to no effort or ability at all, we may have to rethink what our IP regime should be. In the meantime, however, I am content with arguing that WTP is justified today; that WTP restricts no privileged liberties in these times.

company can be totally eliminated from the market, or will at least be significantly damaged in this regard. The liberty lost under no-IP is a privileged liberty: one is stultified when it comes to making a living off of one's innovations. This is clearly more significant than that lost under some sort of IP protection—the liberty to copy and profit off of others' ideas simply can't count as a privileged liberty. It is difficult to see how this liberty could be privileged.

No-IP protection simply does not sufficiently countenance the liberty of producers. By correcting the wrongs of STP (which did not countenance the liberty of independent inventors or non-producers in general), the no-IP position goes too far and doesn't countenance original owners enough. The ability of these producers to make choices regarding their products is significantly threatened under a system of no-IP protection; their privileged liberties are restricted. For this reason, the liberty view would reject the no-IP position. This tells us, therefore, that some IP protection is necessary. Are we doomed to compare the no-IP position to STP, and see which one is more respectful of liberty?

#### *IV. The liberty view regards WTP as justified*

We are not doomed to recognize either STP or the no-IP position. We can countenance the crucial liberties of producers without abandoning the crucial liberties of non-producers (simple users) and independent inventors. We do this by embracing WTP for our legal form of IP protection. Where STP and the no-IP position fail according to the liberty view, WTP succeeds. WTP, I claim, is justified according to the liberty view.

My claim may already be obvious from the criticisms of STP and the no-IP position in the last two sections. Since some IP protection is justified (since the no-IP position is not), but strong type-protection is also unjustified, we clearly need a weaker version of IP protection in order to be justified according to the liberty view. Let us see, then, how WTP is justified, and avoids the pitfalls of the other two systems.

First, WTP countenances the privileged liberties of independent inventors. Since WTP says that agents can own their innovations and copies of their original tokens, and since independent innovations are not copies, independent innovation is allowed for under WTP. WTP requires, for any item one has a claim over, that that item must be causally related to an original token to even enter the playing field of protection. Independent inventions are, by definition, causally distinct. Under WTP, then, independent inventors have liberties they did not under STP. And, these liberties are of the privileged set. The liberty to use what one has innovated, and the liberty to make a living off of those innovations, seems clearly to be one of the more important liberties people have.

Remember, also, that while there is a liberty lost under WTP (when compared to STP), this liberty is not in the privileged set. The liberty lost under WTP is that inventors do not have the ability to exclusively market, where they did under STP. However, I argued above that this lost liberty does not amount to much, since it simply is not the case that this liberty is of the privileged set. Inventors can still market their innovations under WTP; they can still make a living. There is no reason to countenance the ability to exclude others—which is what exclusive use rights allow—as part of a privileged set, when those others don't threaten one in any way.

Also, however, WTP recognizes the liberties of simple, personal use of copies that do not affect the ability of original owners to make a living. Under STP, these liberties are lost. WTP allows the personal use of copies; WTP only denies agents the ability to make a profit off of copies they make.

Thus, WTP does not err where STP erred. Also, however, WTP does not fall prey to the mistakes of the no-IP position. The no-IP position did not adequately countenance the crucial liberties of producers, in allowing other agents to freely copy and profit off of producers' innovations. This is explicitly what WTP denies. So, WTP allows producers the liberty to effectively (but not exclusively) market their innovations.

Also, I have noted, WTP allows producers to be more open with their items. The knowledge that, under no-IP, one's ideas might be copied and therefore limit one's ability to profit off of them, might lead producers to fence-in their creations and not allow anyone to see or sample those creations, because of the fear producers might have under a no-IP situation.

The reader may remember here that there is liberty lost when any system of IP protection is enforced; this is the liberty to freely copy and profit. Though this is a lost liberty, I have claimed it is insignificant and not part of the privileged set. This is because those agents who would copy and profit can still use what they copy under WTP; they simply cannot make the profit they would try to. Thus, the liberty lost under WTP is not significant, especially when compared to the lost liberty to effectively market at all (which is that lost under the no-IP position). I simply cannot understand how the liberty to profit off of others' ideas could be part of the privileged set.

Thus, WTP provides a nice balance between STP and the no-IP position. It is justified as the form our legal IP rights should take. While there are liberty concessions made under WTP (as I have noted, no system is without liberty restrictions of some sort), those concessions are not of liberties from the privileged set. They certainly are less significant than those experienced under STP or the no-IP position. WTP is justified.

Finally, I must deal with a possible problem for WTP. Above I referred to garden case B to demonstrate how WTP respects privileged liberties more than no-IP. But might this just be one kind of case? Consider another case which might at first seem show WTP to be intuitively implausible. Suppose Jack runs a boat-touring business on a lovely lake somewhere. Jill sees Jack do this, and starts her own boat-touring business; she now provides competition for Jack. Does WTP call this a restriction? And, if so, isn't this counter-intuitive, not only since this kind of practice is rampant, but also because that's the risk a business like that one incurs simply by its nature?<sup>130</sup>

WTP doesn't necessarily judge this a restriction, but it might. Whether or not it does will depend upon the extent to which Jill has copied Jack. I did not fully establish in chapter 2, where I discussed WTP more completely, how much of a copying must be present for WTP to consider a copier's action as violative. This was intentional; I believe this issue will need to be worked out carefully as WTP is more fully developed. Here, however, we can say a couple important things. First, as a reminder, I have said that we can construct WTP to reflect our intuitions regarding how significant the copying is. If it is simply that Jill "got the idea" from Jack, but put together everything on her own, we may not regard this as a case of copying at all, and Jill is completely at liberty to compete with Jack. (In actuality, I do not regard Jill's actions in this case as one of copying,

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<sup>130</sup> I owe this example to Henry Kreuzman.

though I do not wish to argue for this here.) However, if Jill mapped out all of Jack's movements, copied all of the specifications of Jack's boat design and all other relevant business details, it is more plausible to say that Jill has copied Jack. She is in violation; she owes Jack compensation of some sort. And, we can adjust the compensation WTP demands to reflect how significant her copying was or how much damage she did.

Second, it may be that there should be a "non-obvious" requirement under WTP as there is under the current patent system (which is, the reader will remember, a form of STP). That is, in order to get protection over one's ideas, we might require that those ideas be non-obvious. As the story was put above, it's fairly obvious that if one has a boat and takes it on a lake, one might be able to get people to pay for it. Thus, WTP might say Jack's idea was not one which could be protected.

But this is only one way which WTP can be modified as is necessary. Generally, I have not outlined all the conditions for ownership under WTP. All I have tried to do is note that WTP is better than no-IP (and, from earlier, STP) according to concerns for liberty. The example I noted above, while important to clarify aspects about WTP, does not show the view to be counter-intuitive. So, cases like this will require some further specification of WTP, but there is at this point no reason to believe that that specification would be too difficult.

Before concluding, I want to be clear that while I have not been specific about exactly which liberties form the privileged set, I do think we have enough reason before us to conclude that WTP restricts no liberties from the privileged set, while both STP and the no-IP position do so restrict. The liberties restricted under WTP (those of exclusively using/marketing and of copying and profiting off of) can not plausibly be said to be in the

privileged set, as both of these liberties involve significant restrictions of others and simply are not that important. Owners can still market and use even if they cannot exclusively do so. Copiers can still make personal use even if they cannot profit off those copies.

In contrast, the liberties lost under STP and the no-IP position are part of the privileged set. Losing one's ability to use one's own innovations (as under STP), or losing one's ability to make a living off those innovations (as under no-IP), both stifle individuals and severely limit their options. The privileged set of empirical liberties, then, is respected by WTP, and disrespected by STP and the no-IP position. WTP, again, provides a nice balance between STP and the no-IP position. WTP is justified according to the liberty view.

## **Conclusion**

I have argued that theorists concerned solely with empirical liberty should favor WTP to STP or the no-IP position. Those concerned with the privileged liberties individuals have should select WTP for our legal IP regime. In conjunction with our conclusion from the last chapter, this means that the two primary concerns with regard to IP rights—the incentives concern and the liberty concern—both favor WTP for the form IP rights should take. If all else is equal, then, WTP should be the form IP rights.

In the next chapter, I will show that many plausible ethical theories—which may or may not take the liberty- or incentives-concerns seriously—all regard WTP as justified. These theories will span the gamut of views which are often used in the context of the justification of IP rights. Also, many of the theories I will discuss are those often



cited by contemporary philosophers in general as among the most plausible. This means that chapter five will show that all else *is* equal—since no concerns modify our favoring of WTP from concerns for liberty or incentives, many plausible theories regard WTP as justified for the form for our legal IP rights. This creates a strong presumption for the overall justification of WTP as the form our legal IP regime should take.

## **Chapter 5: Other Plausible Theories and the Justification of Intellectual Property Rights**

In this chapter, I will present various ethical theories, and argue that they all regard weak type-protection as justified, while strong type-protection and a system of no intellectual property protection are both unjustified. So, I will be considering other ethical concerns beyond the two primary ones discussed in the last two chapters (the incentives and liberty concerns). These other concerns do not force us to retain strong type-protection as our legal intellectual property regime; nor do they force us to embrace a position of no intellectual property rights. Since none of these other ethical values—which are in some cases consequence-based and in some cases rights-based—regard weak type-protection as unjustified, on all the theories we will consider, weak type-protection is justified in being our legal intellectual property regime.

Furthermore, this chapter (in conjunction with chapters three and four) establishes a strong presumption that weak type-protection is justified overall in being our legal intellectual property regime. While there are certainly ethical theories I have not considered, I will have considered all the major theories cited in the literature on intellectual property rights, as well as ethical theories which are generally regarded by philosophers as plausible. So, though I do not claim that *all* plausible theories regard weak type-protection as justified, we have some reason to presume that they will, given the conclusions of the theories I do consider.

I will first present various consequence-based views; with some important exceptions, I will argue that weak type-protection is justified according to these views.

After that I will consider a few deontological views; my conclusion will again be that weak type-protection is justified according to these views.

### **I. Consequence-based theories and the Justification of Weak Type-Protection**

I endeavor, in this section, to round-out some of the concerns raised in chapter four (my chapter on incentives), such that we can see what various theories concerned with consequences would determine regarding a state's IP laws. In chapter three, I restricted my analysis to a strict concern for incentives, merely for simplicity; it is unlikely that consequence-based theories would regard only this issue as important. Here, then, I will introduce complications from consequence-based theories, in order to see what total theories would conclude regarding IP protection. The upshot will be that no change has occurred in our conclusion from that previous chapter: WTP is justified, according to consequence-based theories, where STP and the no-IP position are not.

I say I will consider "consequence-based" theories, and not "consequentialist" theories, as I will be looking at more than just the latter; specifically, after discussing utilitarianism and various distribution-sensitive theories, I will consider contractarian views in this section (which are deontological), since the considerations that determine what system such views find justified are consequence-based. (The distribution-sensitive views I will consider are prioritarianism, equality of opportunity consequentialism (which I will also refer to as egalitarianism), and consequentialist desert theory.) I believe this is a nice sample of theories which are either taken to be generally plausible or at least relevant for issues about IP rights. Since, as I will argue, all of these theories will regard

WTP as justified (with some minor qualifications), there is a strong presumption that plausible consequence-based theories will generally regard WTP as justified.

### *Utilitarianism and the Justification of WTP*

Please re-consider the different incentives arguments presented in chapter 3.

#### *Incentives argument for strong type-protection:*

- 1) The justification of a law depends in part on how good its consequences are.
- 2) It is a good thing to have technological and artistic innovations.
- 3) Having legal STP is the most effective way of promoting such innovations (because of its incentive effects).
- 4) Therefore, if all else is equal, STP is the morally justified form for legal IP rights.

#### *Incentives argument for weak type-protection:*

- 1) The justification of a law depends in part on how good its consequences are.
- 2) It is a good thing to have technological and artistic innovations.
- 3) Having legal WTP is the most effective way of promoting such innovations (because of its incentive effects).
- 4) Therefore, if all else is equal, WTP is the morally justified form for legal IP rights.

We can understand these arguments in a utilitarian manner, if we please. All we need to do is eliminate the ‘in part’ clause from the first premise in both arguments, and understand ‘good’ in the arguments to mean ‘happiness’ or ‘well-being’ (which of these two—or other options—we should understand utilitarianism to be concerned about is unimportant; this is not the place for a discussion of the best way of phrasing utilitarianism). My claim is thus that premise 3 in the incentives argument for STP—when understood in a utilitarian manner—is false. The same premise in the incentives argument for WTP—understood in a utilitarian manner—is true; therefore the utilitarian incentives argument for STP is unsound, while the same argument for WTP is sound.

Note that my complaint against the argument for STP is no different from my complaint in chapter 3 about the incentives concern in general. Not surprisingly, then, my reasoning is the same. Here are the reasons I proposed in chapter 3 for rejecting premise 3 in the incentives argument:

1. WTP can provide a measure of incentives
2. STP negatively impacts incentives to innovate downstream inventions more than WTP
3. STP creates more disincentives to innovate than WTP
4. STP, in actuality, does not provide significant incentives

All of these are relevant for the utilitarian. Indeed, this should not be surprising, as the incentives concern is usually phrased or understood in a utilitarian manner. I simplified my analysis of the incentives concern and ignored utilitarianism in chapter 3 only because it was important to understand how the incentives concern related to IP protection in general, since other views might make use of the incentives concern, before complicating it with other theoretical considerations. Over the rest of this section, then, I will explore how these other theoretical considerations affect our conclusions regarding the incentives concern. As I have said, our conclusions will not alter.

So, given that the utilitarian is concerned with maximizing well-being in the world, what possible considerations are there that could change our conclusion in chapter 3? Do we have any reason to suspect that, though the incentives concern alone regards WTP as justified (and the other systems as unjustified), utilitarianism would not (or would regard one of the other systems as unjustified)? That is, regarding the conclusion in the incentives argument for WTP, do we have any reason to suppose that *all else is not equal*?

Let us first consider whether utilitarianism would consider STP justified. There is nothing, beyond the incentives argument, that could possibly justify STP according to utilitarianism—all else is equal, and WTP is justified (if the no-IP position is also unjustified). The only way I can see that STP could increase the amount of well-being in the world is if it provided better incentives for people to innovate more. But, as we know from our chapter 3 (and the second through fourth reasons for why the incentives argument regards WTP as justified—numbers 2 through 4 from above), it is simply not the case that STP does provide, on-balance, the best measure of incentives. WTP, as we know, does not cause the disincentives STP does, and itself has some incentivizing effect. This puts it as more incentivizing than STP. Utilitarianism cannot, then, for this reason regard STP as justified; and there seems to be no other way in which STP could promote well-being in the world. Hence, Utilitarianism regards STP as unjustified.

It is admittedly more difficult to determine what utilitarianism would consider regarding the no-IP position. Even though, as chapter 3 argued, WTP fares much better according to the incentives concern, with added utilitarian concerns, it is not as clear that the no-IP position is unjustified. This is because, unlike with STP, there are utilitarian reasons to consider the no-IP position. For instance, it might be better for the well-being of all if there were no property rights at all (intellectual and otherwise). It might be thought that, if nobody could own, say, a cure for cancer, this would be better for everyone since no one would be prevented access from the drug.

This is, of course, a considerably difficult issue; determining whether property rights are better than no property rights is not an issue I wish to discuss in detail here. Still, we can tentatively conclude in favor of rejecting the no-IP position for a couple

















































































































































