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Intellectual Property Law and the Promotion of Welfare

Christopher Buccafusco¹ & Jonathan S. Masur²

Introduction

The U.S. Constitution grants Congress the power “to Promote the Progress of Science and the Useful Arts” by granting copyrights and patents to authors and inventors. This language is understood by most courts and scholars to entail a utilitarian or consequentialist approach to IP law. The possibility of obtaining copyrights and patents encourages creators to produce new innovations that ultimately redound to the public good. By providing incentives to creators that are balanced with the interests of the public and with subsequent creators, IP laws can optimize creative and innovative production. Unlike IP systems in other parts of the world, US IP law generally eschews so-called “moral” or deontological considerations such as justice and fairness.

Although there is considerable consensus regarding IP law’s philosophical orientation, there has been little discussion of its deeper normative goals. Most courts and scholars agree with the idea that IP law should provide incentives to creators, but there has been almost no analysis of why creativity and innovation are good. This is simply taken as given. But what, exactly, are the interests that IP law should promote? How should we understand what constitutes “the Progress of Science and the Useful Arts?” Various answers to these questions exist. One possibility would be to interpret the constitutional language literally and narrowly. On this view, IP laws should encourage developments in knowledge and technology irrespective of broader interests. Another option would be to interpret the constitutional language broadly to encompass a general social welfare calculus: IP laws should be subjected to some form of cost-benefit analysis to determine whether they ultimately make people better off.

In this chapter we discuss a variety of ways of understanding the normative goals of a consequentialist IP regime. We argue that the best approach derives from recent work in the field of hedonic psychology. The principal consequentialist goal of IP laws should be to maximize social welfare, where welfare is understood as subjective well-being. We do not argue that IP laws cannot have other interests beyond consequentialism; there may be room for concerns about fairness and justice, as well. But where IP law is motivated by welfare considerations, it should do so in light of how laws and policies will affect people’s happiness.

We in Part I begin by reviewing the commitments of U.S. courts and scholars to a consequentialist orientation for IP law. Although there is a broad consensus that the law should promote good outcomes, there has been less discussion of the kinds of outcomes that the law should be promoting. In Part II, we address different ways in which IP law could be understood

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to promote good outcomes. For example, IP law could be narrowly focused on promoting creativity and innovation or it could be more broadly directed towards general social welfare. We argue that the latter, broader focus is more appropriate. We then consider three different accounts of human welfare and how the law can promote it: preferentist, objectivist, and hedonic. We support the hedonic account of human welfare and describe its strengths over the other options. Then, in Part III, we discuss what a hedonically oriented IP policy would look like.

I. IP Law and Consequentialism

The constitutional text provides the foundation for IP law in the U.S., but, like most provisions of that document, it leaves considerable room for debate and interpretation. Most important for our purposes is the language “To Promote the Progress of Science and the Useful Arts.” Each of the principal terms has been discussed by scholars at considerable length (Solum, 2002; O’Connor, 2015; Oliar, 2006). For example, scholars have questioned whether this text imposes a meaningful limitation on Congress’s power or whether, instead, it is simply preambular and non-limiting. They have also attempted to define “Science” and “useful Arts” and to understand their relations to copyright and patent law.

One way or another, however, most courts and scholars have agreed that IP law in the U.S. should be governed by some version of consequentialism. That is, IP laws exist to promote certain goals rather than, for example, to vindicate natural rights. This stands in stark contrast to the philosophical foundations of most European IP systems, where the moral rights of authors and inventors provide justification for the legal system (Baldwin, 2014). In the U.S., IP rights are merely the means to a desired end. As the Supreme Court has explained:

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired. ...The copyright law, like the patent statute, makes reward to the owner a secondary consideration. (*Sony Corp. v. Universal Studios*, 464 U.S. 417, 429 (1984), internal citations and quotations omitted).

In the patent context, the Court has offered similar reasoning:

The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens. In return for the right of exclusion—this ‘reward for inventions,’—the patent laws impose upon the inventor a requirement of disclosure. (*Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974)).

On this view, the “rights” that authors and inventors receive do not devolve from the spiritual connection between creators and their works, nor are they representative of the Lockean intellectual labor that creators have mixed with the common. Instead, copyrights and patents are an administrative solution to an economic problem (*Aronson v. Quick Point Pencil Co.*, 440 U.S. 257 (1979)).

The difference between these approaches is evident in a variety of legal doctrines. In U.S. copyright law, for example, authors generally do not receive the right to attribution for their works or the right to prevent their destruction or defacement. These are important components of European systems that protect *droit d’auteur*, or moral rights. In the U.S., they are thought to excessively impinge upon speech interests, sequential creation, and creativity markets (Adler, 2009). In patent law, inventors must be named in patent filings, but U.S. law imposes no further requirements that inventors be named in products commercializing inventions. To the extent that U.S. IP law does incorporate non-consequentialist concerns, such as in the Visual Artists Rights Act or in the ability of authors to terminate transfers of their copyrights, these injections of justice and fairness concerns are the exceptions that prove the consequentialist rule.

Academics in the U.S. have generally followed the Supreme Court, and they have fleshed out the economic theory behind the rights (Landes and Posner, 2003; Cass and Hylton; 2013). Both in copyright and patent law, rights are understood to flow from the state’s desire to promote certain valuable outcomes by providing incentives to individuals and corporations (Lemley, 2005). Because creating new works and inventions is costly, and because the works and inventions can be cheaply copied, creators would not have sufficient incentives to invest in innovative activity. Copyrights and patents provide periods of exclusivity during which rights holders can charge supracompetitive prices to offset the costs of their creative investments. Providing rights is costly, however, because it creates deadweight losses and can inhibit further innovation. Accordingly, IP regimes seek to balance the rights given to creators with those available to subsequent creators and to the public.

Although scholars often differ sharply with respect to how the law should maintain this balance, they generally concur in the belief that this is IP law’s overriding goal. And while important and forceful arguments in favor of natural rights or deontic approaches to IP law have been made (Hughes, 1988; Merges, 2011; Kwall, 2009), these approaches have yet to find consistent support.

II. Versions of IP Consequentialism – What Should Congress Promote?

We share the belief that IP is best understood in consequentialist terms rather than deontic ones. The IP Clause seems to speak in consequentialist terms, and most courts and commentators to have considered the question have described the purposes behind IP in consequentialist terms as well. But the notion that IP is consequentialist raises as many questions as it answers. What, precisely, is IP meant to promote? What is the maximand, or across what factors should IP be maximizing? There is a wide variety of different options, and those options have significantly divergent ramifications for the shape of intellectual property law. In this Part, we consider the various possibilities and highlight which of them have gained the greatest currency within the judicial and scholarly communities.

A. Promoting Science and Useful Arts

First, as the Constitution suggests, IP could be meant to promote science and the useful arts, full stop. In other words, the Constitution could be dictating that IP be structured to maximize the production of useful innovations (patents) and creative works (copyright), with those innovations and works viewed as ends in and of themselves. This type of approach might be justified on a number of different theoretical grounds. First, it may be that the Constitution does not mean to instantiate one vision of the good, be it welfarist (in any of its forms) or non-welfarist. Accordingly, to avoid taking sides, the Constitution—and the laws that spring from it—should perhaps be interpreted to maximize some other worthwhile quantities without striving for any greater theoretical ambitions (Bracha & Syed 2014). Innovation and creativity might be those quantities. Alternatively, one might imagine that it is too difficult for any social planner—court, Congress, or otherwise—to fashion rules that are effective at increasing welfare. Every rule will create too many unforeseen effects—too many ripples in the pond. Any attempt to manage welfare directly is doomed to failure through unintended consequences. Accordingly, it might be that social planners are advised to concentrate on more easily identifiable or obtainable quantities, such as innovative and creative works.

We believe that these are defensible but ultimately unpersuasive arguments. Innovation and creativity are not ends in and of themselves under most views of the good. While we do not wish to minimize the difficulty involved in promoting welfare-enhancing law and policy, this is a task that policymakers regularly undertake. Indeed, the entire enterprise of cost-benefit analysis, which now pervades the regulatory state, is geared toward enhancing welfare.

Moreover, if the goal were simply to maximize the production of innovation and creative works, patent and copyright law would likely assume very different shapes. Generally speaking, the longer the intellectual property term, the greater the incentive to innovate because the greater the rewards. We say “generally speaking” because in some cases extensive intellectual property protections might retard follow-on innovation, as when blocking patents or patent thickets increase the costs to subsequent inventors trying to follow in the footsteps of an initial inventor. In addition, there is reason to doubt the incentive effects of IP beyond a certain time horizon (Balganesh, 2009). Nonetheless, if the goal were only to maximize innovation and creativity, the patent term would likely be substantially longer, at least for certain types of inventions such as pharmaceuticals. (The copyright term is already extremely long and ever-increasing.)

In order to make sense of the fact that the patent term is *not* much longer—and few scholars believe it should be longer at all—it must be the case that the desire to encourage innovation is subject to one or more side constraints. One side constraint is the desire to reduce the deadweight loss that is generated when the law awards monopoly rights and permits inventors to charge monopoly prices. Yet once the law seeks to achieve more than one end—encouraging innovation, subject to the desire to minimize deadweight loss—it must find a way to balance these competing considerations. The need to strike a balance between two objectives forces policymakers to consider the law’s ultimate desiderata, rather than merely focusing on one or the other intermediate goal. We are thus not surprised that the view that the IP Clause directs

policymakers to promote the progress of science and creativity, without any additional consideration, has acquired few adherents either within the courts or the scholarly literature.

B. Promoting Social Welfare

If IP does not exist to promote science and the useful arts alone, then it must be geared toward promoting some view of social welfare. However, that very basic conclusion immediately raises a more vexing question: what is the proper measure of welfare? What, precisely, should IP law be maximizing?

1. Preferences/wealth

The most widely adopted view of welfare is that welfare consists of the satisfaction of individual preferences—typically fully-informed, rational preferences, but occasionally simple expressed preferences (Sumner, 1996). This view prevails among the vast majority of economists. It relies on a straightforward logic: if a person obtains what she desires, that must make her better off—otherwise, why would she desire it? (Many economists would impose the additional limitation that the preference must be self-interested in order to cope with the issue of individuals with preferences for helping others at their own expense (Adler and Posner, 2000).) Economists believe that an individual's preferences are best measured by using market transactions: if an individual chooses to purchase a good for some amount of money, the transaction reveals that the individual values the good more than she values the money used to obtain it (Boyle, 2003). Accordingly, this theory of welfare comes with a mechanism for obtaining some understanding of how much welfare a society possesses, and whether that welfare is increasing or decreasing.

This conception of welfare as preferences is the dominant view within intellectual property law as well (Demsetz, 1969; Menell & Scotchmer, 2007; Boyle, 2007; Kapczynski & Syed, 2013; Tur-Sinai, 2015). Essentially all economists who study IP subscribe to it, and many legal scholars do as well. Indeed, the entire structure of IP in the United States seems to favor a preferentialist account of social welfare. The market is the mechanism through which IP is meant to incentivize innovation. By rewarding inventors and creators with monopoly rights over their innovations and creative works, IP allows them to reap supracompetitive profits. But the owners of IP can only realize these profits if individuals are actually willing to purchase their products and services. If there are no market participants with preferences for the patented or copyrighted goods, their creators earn nothing and IP is irrelevant. The value of IP is linked to the market value of the underlying good, and thus to individual preferences (Beebe 2017).

Contrast this system of intellectual property with alternative mechanisms for encouraging creativity and innovation, such as government-sponsored grants or prizes (Hemel and Ouellette, 2013). Mechanisms of promoting innovation that do not rely on the market do not necessarily rely on preference satisfaction as the measure of whether an innovation should be produced or will be funded. The policymakers choosing which projects to fund could base their decisions on any other consideration, including deontic criteria. (Although in some cases they may come under electoral pressure to support projects that will satisfy consumer preferences.) Nevertheless, while there is a substantial amount of public grant-based funding for science and

the arts, the vast majority of funding incentives for innovation and creativity are provided through intellectual property. Accordingly, while it is not the case that every type of innovation policy rests upon preferentist foundations, *intellectual property*—at least as currently conceived—generally does.

At the same time, preferentist approaches to welfare are subject to trenchant critiques. Some opponents, typically from a philosophical tradition, argue that there is more to the good life—more to welfare—than realizing the things that an individual wants. These scholars locate human welfare in a more objective notion of human flourishing: either possessing a set of objective capabilities and entitlements (Sen, 1993), or doing well the things that humans should do (Foot, 2001). (We discuss flourishing and objective approaches at greater length in the section that follows).

A second type of objection, arising primarily from the disciplines of psychology and behavioral economics, observes that individuals often desire things that turn out not to make their lives better off by any observable measure (Bronsteen, Buccafusco, and Masur, 2015). A typical example involves a family that trades an apartment in the city, close to the parents' workplaces, for a large house and a yard in the suburbs. In many cases, the larger house offers few hedonic benefits to the family. They are not happier living in it than they were in their smaller apartment, and they quickly adapt to the size of the house so that it soon feels as though it is not especially large. However, the move to the suburbs is tremendously costly in psychological terms. The parents must now drive in traffic an hour each direction, and driving in traffic makes them miserable. Not only is the experience itself very unpleasant, it also takes them away from their children—the entire purpose of moving to the suburbs in the first place.

While this example is hypothetical, the data behind it are very real and well-documented (Kahneman et al., 2004; Stutzer & Frey, 2008). And this is only one example of what is variously termed an “affective forecasting error” or an instance of “mis-wanting.” The upshot of this significant body of research is that an individual's preferences are not always a reliable guide to what will actually make that individual happier and increase her quality of life. Unless one accepts preferences as a tautological definition of well-being, there is ample evidence that preference satisfaction does not necessarily lead to improvements in individual welfare.

For the most part, these critiques have not penetrated intellectual property. Most scholars persist in equating welfare with preference satisfaction for purposes of measuring the effectiveness of intellectual property. And as noted above, the intellectual property system continues to be organized predominantly around market mechanisms that rely upon preference satisfaction. But that should not obscure the fact that cracks are showing.

2. Objective Approaches

The leading alternative to preference-based conceptions of welfare is a set of loosely-related philosophical approaches that are commonly grouped under the heading of “objective accounts.” Some of these approaches, following Sen (2005) and Nussbaum (2000), describe welfare as the possession of a set of goods enumerated in a list. These “objective list” theories of welfare do not always perfectly correspond, but they typically involve a related and overlapping

list of objective goods as their measure of welfare (Lewinsohn-Zamir, 2003). Other objectivist theories borrow more heavily from the Aristotelian concept of flourishing, typically understood as “doing well that which it is characteristically human to do” (Foot 2001). These “flourishing” or “virtue ethics” conceptions of welfare tie individual well-being to participation in a set of positive or “virtuous” activities. Here, too, there is substantial overlap with objective list approaches. While virtue ethics does not typically specify in advance the particular activities that lead to flourishing and a good life, the goods and activities that form the basis of objective list theories are commonly viewed as constitutive of flourishing by Aristotelians.

What these two flavors of ethical theory have in common is that they locate welfare in a set of objective considerations outside of the subjective preferences or desires of any given individual. For the objectivist theorist, the goods on the objective list, or the activities constitutive of flourishing, are valuable regardless of whether (or how much) any person desires them. The individual’s welfare is determined by the existence or non-existence of those quantities and activities, without reference to the individual’s own views. This approach has sown the seeds of criticism by preferentists (and hedonists, as we will describe below), who point out the incoherence of relating individual welfare—which would seem to be the most subjective and individual of quantities—to external objective considerations (Adler and Posner, 2003). Other scholars have observed that the selection of the particular items found on objective lists will typically reflect the preferences of the philosophers who put them there (Sumner, 1996). In addition, most objective theories do not offer mechanisms for weighing the various welfare goods against one another or for making inter- or intra-personal welfare comparisons. This makes them difficult, if not impossible, to use in policymaking that requires trade-offs. Regardless, objectivist theories are the principal competitor to preferentist theories of welfare, and they have gained significant currency within the philosophical and legal communities.

Objectivist theories have recently begun to make their way into intellectual property as well. Some scholars have begun with objective approaches to welfare and argued that they should be imported directly into IP, equally with any other area of law (Frischmann, 2014; Derclaye, 2013; Derclaye, 2012; Fisher and Syed, 2007). Others have argued in reverse, claiming that IP cannot be justified or defended on preferentist or hedonic grounds (Tur-Sinai, 2014). These scholars argue instead that IP is best conceived as furthering and representing an objectivist conception of welfare and should be reformulated to better accomplish those ends.

The connection between IP and objective theories of welfare is not difficult to understand. Creativity and innovation, the foundations for copyright and patent law, are canonically “virtuous” activities that are commonly thought of as partially constitutive of a good life according to essentially every objective conception of welfare. If one imagines IP from the producer side—IP should exist to encourage and enable individuals to produce creative and innovative works—then it becomes immediately natural to envision IP in objectivist terms. In addition, numerous scholars have pointed to failures and shortcomings in the market for innovation and the ways in which ability to pay does not always map onto welfare (Kapczynski, 2012). For instance, pharmaceutical drugs that produce substantial benefits for poorer individuals—such as citizens of developing nations—might increase welfare dramatically by improving the lives of many people. But the market for such drugs might be quite meager because of the limited purchasing power of the individuals who could consume them. By

contrast, pharmaceuticals that cater to wealthy individuals might be highly valuable in the marketplace even if they improve few lives (and improve those lives only marginally). In light of these pathologies, the natural step for many scholars is to argue that IP should be reformulated to advance a set of ends chosen objectively, without reference to the particular preferences of the affected individuals as expressed through their wealth.

The problem with these objective welfare theories of intellectual property is that they are typically tied very closely to the outcomes of individual lives (Tur-Sinai, 2014). To proponents of objective conceptions of welfare and IP, what makes a particular innovation worth pursuing is that it improves the lives of some group of individuals—witness the emphasis on medicines, particularly medicines for the poor. It is a well-documented fact that illness and poor health can substantially affect subjective well-being (Powdthavee & van den Berg 2011). Advocates for objectivist conceptions of IP have not offered independent justifications for these normative goals beyond the fact that they promise to improve the lives of the individuals concerned. In other words, these objective considerations appear to be founded in traditional subjective conceptions of welfare—preferences or hedonics (Griffin, 1986). Proponents of objective conceptions of IP welfare have succeeded in demonstrating that the market, as it currently exists, is not the ideal mechanism for generating welfare-enhancing outcomes. They have not succeeded in demonstrating that objective conceptions of welfare are superior to hedonics-based formulations. Indeed, the fact that arguments regarding objective conceptions of welfare for IP inevitably resort to reliance upon subjective improvement of life is suggestive of the objective view's inherent weakness.

3. Happiness

In recent years, a third conception of welfare as based in subjective hedonic experience has returned to prominence within philosophy and legal academia (Bronsteen, Buccafusco, and Masur, 2015). The hedonic approach to welfare is based on the idea that the best measure of an individual's well-being is her subjective experience of life: the positive and negative feelings that she experiences. The more positive feelings and fewer negative feelings she experiences, the greater her welfare. Crucially, the issue of what sorts of experiences will generate positive and negative feelings is entirely up to the individual. Some people might experience pleasure from listening to opera and engaging in philosophical debate; others might prefer eating steak and playing video games (Bronsteen, Buccafusco & Masur 2010). For that matter, many individuals presumably derive happiness from being treated fairly and justly, or from knowing that others have been treated accordingly. Thus even traditionally objectivist or deontic conceptions such as fairness or justice can affect welfare if (but only if) they affect the positive and negative feelings that individuals experience (Bronsteen, Buccafusco & Masur 2015).

This conception of welfare as subjective well-being (or “happiness”) dates back to Jeremy Bentham but fell largely out of favor over the course of nearly two centuries. It has lately been resurrected in part due to work by psychologists, who have innovated new mechanisms for measuring individual happiness (Kahnemann et al., 1999). Their work has been followed by normative arguments from philosophers and legal scholars who press the point that happiness is the best way to understand what it means for an individual to live a good life.

As these philosophers and legal scholars have pointed out, the subjective well-being conception of welfare holds several substantial advantages over preferentist and objectivist conceptions of welfare (Bronsteen, Buccafusco, and Masur, 2015). First, it accounts for the fact that individuals often desire goods that do not appear to improve their lives and mis-predict the types of things that will improve their well-being. Most notably, while individuals typically strive for ever-greater levels of wealth and material possessions, these goods do not appear to impact individuals' subjective well-being significantly (Bronsteen, Buccafusco, and Masur, 2013). This is different from a claim, such as objectivists might make, that there is nothing worthwhile or valuable in material wealth and possessions for theoretical normative reasons. Rather, it is an empirical observation that wealthier people do not lead lives that are substantially happier or better *even by their own lights* than people of more modest means.

Second, unlike objectivist approaches the subjective well-being approach treats welfare as intimately related to an individual's own well-being and desires, not an outsider's. That is, whether a good or experience is welfare-enhancing for a given individual depends upon the feeling it produces in that individual and how that individual relates to it, not upon whether a third party judges the good or experience as valuable. Third, it possesses a close, intuitive tie to standard notions of welfare: if an experience makes a person happy or produces good feelings, it makes intuitive sense to say that it has increased her welfare. Fourth, it is no more difficult to make inter- or intra-personal hedonic comparisons as it is to make such comparisons from a preferentist standpoint, and generally easier than making such comparisons within any type of objectivist welfare framework (Bronsteen, Buccafusco & Masur 2015). Fifth and finally, the hedonic account of welfare does not rely upon any theoretically difficult constructs, such as "fully informed preferences," which are impossible to determine in practice. A policymaker or legal decisionmaker who wishes to assess whether some legal rule or project will increase subjective well-being need not engage in complicated and normatively fraught laundering of individual preferences (Adler and Posner, 2003). She need only measure the happiness of an affected population before and after a policy intervention to know whether the intervention produced a positive effect on well-being (Bronsteen, Buccafusco, and Masur, 2015).

A hedonic approach to IP would in many respects resemble the objectivist approach described above. One of the fundamental precepts of a hedonic conception of welfare is that individuals often (mistakenly) desire things that do not make them happy and do not improve their own welfare, and they frequently fail to desire things that will make them happy and improve their welfare. This is true even when people's desires are motivated by the goal of increasing their own happiness (Adler, Dolan, and Kavestos, 2015). Thus, markets cannot be relied upon to produce welfare-maximizing outcomes when participants are not making fully informed, rational, and self-interested decisions about which goods to consume. Accordingly, a happiness-based IP policy could be used to help determine the types of goods that are most likely to increase well-being, rather than simply relying upon market participants to select the goods they prefer. Policymakers could then structure IP law to help facilitate the production of those goods.

The crucial difference between a hedonic approach to IP and an objectivist approach lies in how one determines the types of goods whose production IP law should be designed to promote. An objective approach would rely upon the intuition and reasoning of the policymaker,

informed by philosophical theory. A hedonic approach would instead rely on empirical data: policymakers would study which goods and activities improve overall cumulative individual subjective well-being over time and then promote or advance the development of those goods and activities. The hedonic approach would be tied to lived individual experiences; the objectivist approach would be divorced from the experiences or feelings of the people who will be affected by IP. Given that welfare is intuitively understood as a subjective concept, tethered to the individual's own life, we view this distinction as a decisive advantage for the hedonic conception.

At first glance, such an approach might appear paternalistic—people do not always know what will make them happy, so the government will decide for them (and then provide it). In truth, however, there is nothing more or less paternalistic about hedonism than about any other typical approach to public policy. When the government engages in any of its typical functions—building a park or a road, promulgating environmental regulations, or levying taxes in order to fund social services—it is attempting to provide citizens with goods and services that will make their lives better. This is the very nature of government and public policy. The objectivist approach would direct policymakers to provide the goods and services that objectivist scholars think are best, regardless of whether people desire those goods or whether they actually improve people's lives. That approach to policy smacks of paternalism. The preferentist approach directs policymakers to provide the goods and services that people say will make their lives better *ex ante*—before they have experienced them. It is responsive to individual desires, but not to sound science: what if people are mistaken about what will make their lives better off? The subjective well-being approach, by contrast, simply instructs policymakers to provide goods and services that have *actually* made people's lives better (by their own reports) *ex post*—after they've experienced them (Bronsteen, Buccafusco & Masur, 2013). This is not paternalism; it is just smart policymaking, informed by the best data on the effects of government policies and projects on well-being.

Partly because the study of law's effects on subjective well-being is in its infancy (Bronsteen, Buccafusco, and Masur, 2015), relatively few scholars have adopted a hedonic approach to IP. There is, however, a growing cohort who have at least explored the possibility that IP law might be reoriented in a hedonic direction (Manta, 2013; Derclaye, 2013; Rai, 2007). As we noted above, IP law in its current instantiation adopts a fundamentally preference-based approach to welfare. In the following section, we will sketch the outlines of how a hedonic-centered view of IP law might be constructed.

III. Implications for IP of Varying Approaches to Welfare

We have already alluded to the various ways in which different conceptions of welfare will affect IP policy differentially, and in this part of the chapter we sketch such competing conceptions more directly. Due to space limitations we focus on patent and copyright law, the two major areas of IP, although similar analyses of trademark, trade secret, design law, and others would undoubtedly be illuminating.

IP law has typically been designed to create consumer welfare by giving producers economic incentives to do things they would not do without those incentives. The law thus

affects welfare in two distinct ways: on the consumer side and on the producer side of the equation. This part differentiates between the two ways in which IP law affects welfare, turning first to consumer welfare and then to producer welfare.

A. Consumer-side Welfare Effects

1. Patent Law

One of the central teachings of the voluminous literature on hedonic psychology is that individuals are often mistaken as to what will improve their lives. People often believe that certain goods or experiences will increase their happiness, only to find their happiness unchanged or even diminished. The implication of this research is that the sorts of choices that individuals make in the marketplace—the goods or experiences they purchase—may not be a perfectly reliable indicator of what will improve these individuals' welfare. On the contrary, there might be particular types of goods or services that will increase individual well-being much more than others, and much more than market-based decisions would indicate. This suggests that intellectual property policy should self-consciously favor innovation in welfare-enhancing technological sectors, even at the expense of other areas of technology that do not have the same effect on individual welfare.

Which areas of technology are most likely to lead to gains in well-being? The leading candidates are technologies that improve health and prolong life. There is ample evidence that health is one of the primary drivers of well-being (Powdthavee and van den Berg, 2011). An individual's health status is highly correlated with her well-being, and because most people's lives are happy even through old age, extending their lives will typically provide significant boosts in their lifetime welfare. Improvements in pharmaceutical and medical device technology should thus lead to improvements in human welfare, perhaps more than advances in any technological sector. A policymaker who has adopted a hedonic view of welfare would thus favor legal rules that optimize innovation in these technological fields. Because pharmaceutical drugs and medical devices have large up-front research costs and low copying costs, scholars tend to believe that progress in those fields is best served by longer patent terms and stronger IP rights (Burk and Lemley, 2009). There is also evidence to indicate that strong patent protection for pharmaceuticals does not significantly inhibit follow-on innovation (Sampat and Williams, 2015). And because most Americans are covered by health insurance, patented drugs and medical devices remain widely available despite monopoly prices. There is thus a plausible case for strong patent protection for medical technologies as a matter of hedonic welfare.

The problem with attempting to favor health-related technologies is that patent law is generally technology-neutral. The same patent law that governs pharmaceutical drugs and medical devices also governs semiconductors, consumer electronics, and every other type of technology. Burk and Lemley (2009) have observed that in some cases judges can tailor patent law to fit the particular needs of a particular industry or technological field, but this is a marginal effect. To first approximation, patent law functions similarly across technologies. And while strong patents might increase innovation in pharmaceuticals and medical devices, the same might not be true in computers, software, or electronics. These fields of technology suffer more from problems of overlapping patents—thickets and anticommons problems—than medical fields

(Burk and Lemley, 2009). Excessively strong and numerous patents might eventually begin to retard innovation. If courts or legislators were to make patents more powerful, this would likely inhibit progress in computers and consumer electronics at the same time that it promoted innovation in pharmaceuticals and medical devices.

Under typical assumptions, scholars and policymakers would face significant uncertainty as to the proper course of action in the face of such competing considerations. There is no a priori reason to favor either electronics or pharmaceuticals over the other. The market heavily rewards innovation in both sectors, as evidenced by the volume and value of sales. On a preferentist account of welfare, a policymaker would be forced to conduct a complicated calculation to determine which area of technology yields the greatest returns, and thus whether increasing or decreasing patent strength would increase overall welfare. This type of cost-benefit analysis is extraordinarily difficult if not entirely impossible in the patent context (Masur, 2015).

Yet a hedonic approach to welfare may offer an answer to this difficult problem. In contrast to health-related fields, some technologies—including consumer electronics—likely have relatively minor impact (if any) on overall welfare. A great deal of innovation in the consumer software and electronics sectors is directed at expensive products (smartphones, tablets, plasma televisions, etc.) available only to individuals above a certain level of income. At the same time, there is mounting evidence that increases in wealth have only extremely minor impacts on happiness (Kahneman and Deaton, 2010; Oswald and Powdthavee, 2007). Even individuals who dramatically increase their income realize only marginal gains in well-being (Bronsteen, Buccafusco, and Masur, 2013). This implies that these consumer electronic devices might be contributing very little to well-being, particularly given how much they are being used. The average American watches several hours of television per day, and smartphone users average more than an hour of daily use (Nielsen, 2014). If high-tech televisions and smartphones were contributing positively to our well-being, it should be reflected in higher hedonic levels for wealthier people. Yet the data reveal no such trend. In fact, at least one study has linked smartphone use to depression, although the finding is correlative and not necessarily causal (Saeb et al., 2015). Of course, these findings are highly speculative, and it may turn out to be the case that modern computer technologies have dramatically improved well-being (at least for some sub-groups in the population). But there are at least tentative reasons to believe that this is not the case.

If our conclusion is correct, it could be beneficial from a well-being perspective to pursue stronger patent protection in the interest of increasing innovation in pharmaceuticals and medical devices, even if this resulted in harm to other industries such as computers and electronics. If all technologies are not created equal for purposes of improving welfare, then policymakers need not refrain from taking steps that maximize innovation in some at the expense of others. Alternatively, the hedonic approach offers yet another reason in support of using different patent rules for different areas of technology in order to encourage innovation where it is especially valuable without harming progress in other fields (Burk & Lemley, 2009). All of this is to say that macro-level hedonic understandings of welfare provide a means for answering difficult policy questions without a full-blown cost-benefit analysis. A patent policy formulated on hedonic terms might be structured very differently than the status quo, and this could be

accomplished either while holding patents facially neutral with respect to technology or by abandoning that tradition of neutrality.

In addition to drugs and medical devices, there are other types of technology that likely have a meaningful impact on human welfare, measured hedonically. In particular, any technology that reduces environmental pollution—and thus morbidity and mortality from harmful exposure—should significantly affect welfare (Bronsteen, Buccafusco, and Masur, 2013). This is especially true in light of the catastrophic welfare effects predicted from global climate change (Masur and Posner, 2011). Likewise for technologies that improve automobile safety or reduce other types of everyday risks. And there are even more commonly overlooked types of technology with the potential for meaningful welfare impacts. For instance, hedonic studies have demonstrated that the manner, time, and distance of individuals' commutes to and from work can dramatically affect individual welfare (Gilbert, 2006). Driving in traffic is one of the least pleasurable activities in which an individual can engage (Kahneman et al., 2004). If an individual moves an hour further away from her workplace, she substitutes two hours of leisure per day—during which she might engage in a pleasant activity—for two hours of unhappy driving in traffic. The diminution in overall well-being could be very substantial. Thus, a hedonic approach to welfare would support whatever intellectual property rules would maximize innovation in technologies to improve or shorten commutes, including driverless cars, more intelligent traffic management, railroad technology, telecommuting equipment, and the like. These industries have not been the subject of sufficient study to allow us to determine whether stronger or weaker patents would be more productive of innovation and development. It is possible that the same patent rules that are helpful for pharmaceuticals might be harmful for environmental technologies and other welfare-enhancing improvements. Regardless, the broader point is that a hedonic conception of welfare offers a set of prescriptions for patent law that differ substantially from the status quo. Once policymakers come to understand welfare in hedonic terms, a similar rethinking of patent law should not be far behind.

2. Copyright

Understanding copyright law's affects on human welfare is considerably more complex than understanding patent law's. Few would doubt that contemporary science and technology are much better than they were in the past. Almost no one would choose nineteenth-century surgical practice over twenty-first century medicine. But there isn't nearly the same uniformity of judgment about the virtues of Taylor Swift versus Beethoven.³ Although many people accept that science and technology are capable of "progressing," it is difficult in the modern world to argue the same for the arts (Beebe, 2017). Assuming that one of the goals of creative production is to improve people's lives, how could we know if it does so?

The difficulty of answering questions like this one has led to nearly total dominance of copyright jurisprudence by preferentist thinking. If consumers are willing to spend money to purchase the latest books, albums, and movies, they must think that doing so will make them happier. Why should the law judge for people which works will most add to their happiness? *De gustibus non est disputandum*—in matters of taste, there can be no dispute. As Oliver Wendell

³ Even the authors of this chapter disagree.

Holmes, Jr. warned in his famous *Bleistein* opinion, “It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside the narrowest and most obvious limits.” (*Bleistein v. Donaldson Lithographic Co.*, 188 U.S. 239, 251 (1903)) Creative works have value to the extent that they “command the interests of any public.”

As Barton Beebe (2017) has recently argued, copyright law’s approach to aesthetic progress has largely been accumulative—more works and more sales equal more value and more welfare. From the perspective of consumer welfare, this approach seems difficult to debate. How could we measure whether television programs contribute more to happiness than sculpture and dance? Some people prefer television, and some dance. According to this approach, copyright law should encourage all of these products equally and let consumers choose.

But do people make accurate judgments about their own welfare when it comes to consuming content? And do more options lead to more happiness? At least some evidence of television watching suggests otherwise. Heavy TV viewing seems to be associated with lower levels of subjective well-being, although testing causality is often difficult when measuring people’s behaviors in the real world (Frey et al., 2007; Bruni and Stanca, 2008). There is some evidence that people who watch a lot of television do so at the expense of “relational” activities with others that tend to make them happier (Bruni and Stanca, 2008). And some people, especially heavy TV watchers, seem to do far worse when they have more channels to watch (Benesch et al., 2010). While we do not think that these studies are strong enough to recommend removing or reducing copyright protection for television programs, they are important because they illustrate potential limitations with the preferentist approach that dominates the field.

The “more is better” approach to creative production assumes that allowing people to find products that precisely match their tastes is valuable. Because consumer tastes are heterogeneous, people are more likely to find things that maximize their welfare if they have more options to choose from. But empirical social science research has called this view into question. Studies have shown that having more choices of products may not create greater happiness with the product chosen and, in fact, more choices may diminish happiness (Schwartz, 2004; Hsee and Hastie, 2006; Scheibehenne et al., 2010). When confronted with an enormous variety of goods, people struggle to decide which to choose, and they focus on irrelevant aspects of goods. In some cases, the people choosing from a wider set of options are less happy with their choices than those choosing from a narrower set.

In addition, the value that people obtain from creative works arises in part from the fact that they are often embedded within a larger shared cultural experience. Watching television is fun, but talking about a new episode with friends is often just as much fun. Copyright law’s accumulationist approach to creativity risks creating smaller and smaller pockets of cultural and social interaction over new works. Although people may be able to find works that satisfy their unique preferences, they may find that they have no one with whom to discuss them. If cultural heterogeneity becomes cultural atomization, people may lose out on the sorts of relational experiences that are most conducive to happiness. This can be thought of as a type of cultural collective action problem. It might be in no individual’s interest to switch from watching their preferred television show (or movie, or music) to someone else’s, which is why atomization

persists or increases. But if many people decided en masse to consume the same creative work, they might all be better off.

These concerns raise challenging questions for IP law's accumulationist approach. More creative production will not necessarily produce more welfare. Unfortunately, given the current state of our knowledge, it is difficult to suggest how copyright law can strike the right balance between heterogeneous tastes and social cohesion. Further research is needed to more precisely understand the relationship between choice and welfare.

Consumer preferences and consumer welfare may also diverge with respect to the pace of creative production in certain fields. In many areas, consumers seem to demand rapid replacement of existing cultural goods with new ones. Fashion design is the leading example. But consumers' preferences for novelty may not be consistent with their subjective well-being. People buy clothes in order to stay on trend even though their old clothes are still functional (Hemphill & Suk, 2009). As William Shakespeare explained, "fashion wears out more apparel than the man" (Shakespeare, 2004). In these situations, works become "obsolete" before they lose their function and before people stop getting pleasure from them. In fact, the very thing that makes them obsolete is the existence of new products to consume.

To the extent that this is true (and it may be true in many other creative fields as well), copyright law should not promote rapid cultural "progress." Unlike for cancer treatments, where we typically want the pace of innovation to be incredibly high,⁴ slower rates of creation and replacement of some creative goods may be optimal. If the rate of innovation is slower, existing works will not lose their hedonic value as quickly, and consumers will not need to purchase new works to obtain the same amounts of pleasure. From a demand-side perspective, this is preferable. In the context of fashion design, extending copyrights might, counterintuitively, improve consumer well-being by slowing down the pace of innovation. Raustiala and Sprigman (2006) argue that the current lack of protection leads to shorter fashion cycles as new designs get rapidly copied and become obsolescent. Giving designers protection for their creations could mean that they are not copied as rapidly and stay on trend longer, thereby allowing consumers to slow down their purchasing of new clothes. In other contexts as well, copyright law might pay closer attention to how its doctrines affect the pace of creative production and obsolescence. For example, book publishers have little interest in maintaining consumer demand for older fictional works that are available in cheap used editions if that demand cuts into consumers' desire for expensive editions of new works (Maurer, 2015).

In fact, a similar dynamic might exist in the context of some patented goods such as consumer electronics. A piece of technology such as an iPod or iPhone becomes obsolete not just when it breaks or cannot handle modern song formats, but also when it is surpassed by newer and more exciting versions of itself. Yet as we note above, there is scant evidence that these newer types of technology are contributing much, if anything, to happiness. If stronger patent rights slowed the pace of innovation in the computer and consumer electronics sectors and reduced the rate at which technologies became obsolete, this might impose little or no welfare

⁴ In fact, we want the pace of innovation to be such that the benefits of a given pace exceed its costs. Innovation could arise too rapidly even for cancer treatments if the costs associated with a faster pace exceed its benefits.

cost while preserving resources that could be employed for other purposes. Such is the paradoxical conclusion we draw from the fact that improvements in these types of technology are not obviously making our lives better.

B. Producer-Side IP Effects

Thus far we have largely concentrated on demand- or consumer-side welfare effects of IP law and policy. That is, most of the discussion has centered on the consequences of various policy choices for the well-being of the individuals who consume the fruits of innovation and creativity. Yet there is an important second half to this question: the effects of IP on the well-being of the many individuals who produce innovative and creative works. Many millions of Americans work in industries that are shaped by patent and copyright law, and their welfare is in some ways dependent upon the form and substance of those laws.

In the sections that follow, we survey how different conceptions of welfare might compel different types of IP law and policy. To be sure, there are limits on the strength of the effects that IP policy changes can generate. The work and responsibilities of a software engineer or semiconductor designer are not likely to change substantially in response to changes in patent law. The life of a visual artist may not undergo drastic revision if courts amend copyright law at the margin. But IP can impact well-being on the producer side as well, and we will explain how.

Here, we believe that patent and copyright law can in many ways produce similar types of effects. Accordingly, we discuss patent and copyright law together and focus on the different types of welfare benefits that creative and innovative production can generate for those individuals on the production side.

1. Creativity as Benefit

In the standard law and economics account of IP, the process of creation or invention is generally viewed as costly. Creating new works or inventions takes time and resources that people and firms would be unwilling to expend unless they were given the opportunity to obtain supracompetitive prices for their creations. On this view of creators' cost-benefit calculations, the activities associated with creation enter exclusively on the costs side of the equation. Even without the benefit of happiness research it seems evident that this picture is too narrow. Many people create and invent for the joy that they experience while doing so (Devlin and Sukhatme, 2009). From the perspective of subjective well-being, however, we can more fully account for the positive value that creators experience while engaged in new challenges.

Researchers studying well-being have observed that one of the most pleasurable experiences is "flow," the sense of being totally engulfed in a challenging task (Csikszentmihalyi, 1990). One of the most reliable ways of experiencing flow is to be involved in the process of creating something new. Writers, musicians, computer programmers, and scientists often experience enormous positive affect when they are engaged in activities that prove difficult but susceptible to completion and mastery. To many of them, the hours spent writing, coding, and thinking are not costly; they are not simply the means to some other

valuable ends. Instead, the activities associated with creating and inventing are often ends in their own right. The works and goods generated by these activities often seem to be by-products of the truly valuable goal.

Once we see the processes of creativity and innovation not simply as costs that must be borne on the way to generating valuable goods but rather as goods in their own right, our perspective on IP law and policy changes. Most obviously, the law and economics account of costs and benefits is likely to go awry if it neglects the substantial benefits that creators and innovators experience. The addition of exclusive rights as an incentive to create will often be supernumerary when creators have derived sufficient benefits from the act of creating in the first place. This is not to suggest that monetary incentives are never necessary for creative work. There is bound to be substantial variation in the extent to which authors and inventors experience positive welfare from creating. Love poems rarely need monetary incentives to be produced, but databases might always need them. And even though creators might generate substantial amounts of joy from creating, they still need to live and eat. IP law would do well to understand and adapt to the variations in producers' need for external stimuli.

In addition, although creativity itself may need little incentive in many cases, other costly resources may be necessary to actually produce and distribute the goods associated with creative production. Although some number of screenplays would likely be written in the absence of copyright protection, movie studios will not produce movies unless they have a chance to recoup their investments. If we think that certain kinds of creativity and innovation demand the expenditure of significant capital resources to emerge, then we need to make sure that those supplying the capital have sufficient reason to do so. Thus, when analyzing the kinds of IP rights that should be provided, the law should pay attention at least as much to production and distribution costs as it does to creation costs (Cohen, 2011).

Finally, IP rights impose restrictions on creators' opportunities to engage in the kinds of activities that produce flow. Drastic reductions in the costs of creative production, particularly in the form of digital technologies, have opened up opportunities for creative engagement to a larger proportion of the population. One of the principal ways in which creators engage with one another is through each other's works. Creative engagement make take the form of individuals producing separate, independent works that they then share with one another. Increasingly, however, creators engage with their cultures by explicitly manipulating works within their cultures (Lee, 2008; von Hippel, 2005). In many contexts, creativity involves reworking and remixing existing ideas and inventions (Banks and Deuze, 2009).

But IP laws, and copyright law's derivative works doctrine in particular, can put creators at risk when they interact with protected works. Although copyright and patent laws might not affect artists who draw for private consumption and pleasure or inventors who enjoy tinkering but have no interest in making and selling their inventions, the law may limit their abilities to share their efforts with others. For example, an aspiring musician may derive considerable happiness from manipulating and editing existing works and sharing them on the Internet as a way of demonstrating mastery and connecting with a community (Silbey, 2014). But when she posts her work online, she may have infringed one or more copyrights. By limiting the uses that others can make of creative and innovative works, IP laws impede the potential benefits that

follow-on creators experience from interacting with existing works and ideas. Weaker copyright laws thus might generate greater producer-side well-being, just as stronger patent laws might generate greater consumer-side well-being. A hedonic perspective makes clear that IP law should not and need not be one-size-fits-all. Just as the law needs to account for the pleasure that creators experience when generating new works, it needs to account for how IP laws potentially hinder the happiness of others who want to creatively engage with those works.

2. Employment Effects

Patent and copyright law's primary function is to redistribute surplus from the production of creative and innovative goods from consumers to producers. Instead of the goods being sold at the competitive price—which maximizes consumer surplus—patents and copyrights permit producers to sell at monopoly prices, which maximizes producer surplus at the expense of significant consumer surplus. This surplus is typically thought of in monetary terms, which reinforces the connection to a preference-based conception of welfare. For preference-satisfaction theories of welfare, patent and copyright law thus have significant first-order effects on welfare. If stronger IP laws enable producers—the owners (and employee-owners) of technology companies—to get rich from their inventions, this will increase their welfare significantly. As weaker IP rules diminish the returns from innovation and creativity, so too would producer-side welfare gains diminish. For this reason, IP scholars often describe stronger IP rules as benefitting large corporations (by which they mean the owners of those corporations) at the expense of individual consumers.

From a hedonic perspective, however, the picture is not so clear. As we explained above, even significant increases in wealth have only minor effects on subjective well-being. Thus, marginally greater returns on investment will do little to improve the happiness of those who are already well off. It might seem, then, that IP law will not substantially affect the welfare of innovators.

There is, however, one respect in which IP law could meaningfully affect producer-side welfare from a hedonic perspective. The mechanism is the role of IP rules, and innovation and creativity more generally, in promoting employment. Unemployment affects individual well-being dramatically (and negatively), above and beyond its effects on income and wealth (Bronsteen, Buccafusco, and Masur, 2013). That is, involuntary unemployment reduces an individual's wealth and income, often to the point at which those reductions begin to affect well-being. But this is not its only effect on well-being. Involuntary unemployment can also exact a psychological toll, lead to depression, and generally produce unhappiness. While patent and copyright laws that increase wealth will not have significant hedonic effects on people who are already relatively well off, laws that increase employment very well might.

Patent law can affect overall employment by influencing economic growth and development. Policymakers should endeavor to select patent rules that maximize economic growth, though of course this will be extremely difficult (United States Patent and Trademark Office, 2013). At a more administrable level, patent law can also be used to favor certain industries over others, as we described in the previous section. There, we explained that certain types of technologies might produce greater welfare gains than others among the consumer

population. Similarly, some technological industries might be more labor-intensive, and others might be more capital-intensive, either when compared with one another or compared with the rest of the economy writ large. A shift in R&D investment from a capital-intensive to a labor-intensive technology sector will increase overall technology-based employment, all other things being equal. Likewise, as IP rules make certain technology-based sectors more profitable, investment is likely to shift from non-technology-based sectors of the economy to those areas where greater profit is possible (Lunney, 2008). If the technology-based sectors are more labor-intensive, the result would be to increase employment opportunities.

There is now ample evidence that these types of investments can affect overall employment and that labor markets do not function and clear perfectly (Masur and Posner, 2012). Consequently, shifts in patent law that reroute R&D investment could conceivably increase employment at the margin and thus increase welfare, particularly when viewed from a hedonic perspective. Of course, it is difficult to know the magnitude of this effect. In addition, policymakers and courts would need detailed data on the relative labor intensity of various areas of technology and the economy at large. But the potential for beneficial policy intervention exists.

Similar effects are likely present with respect to production of creative works. Stronger copyright rules will likely increase the production of some types of works—blockbuster movies, or mass-market novels, for instance—but decrease the production of others, such as fan fiction or other types of derivative works. Some of these types of works might be more or less labor-intensive than others; some might also generate more full-time employment than others.⁵ We do not yet have enough data to offer any definitive prescriptions. But a hedonically-oriented policymaker would be well-advised to study the employment effects of various types of creative production and incorporate the welfare effects of employment and unemployment into the formulation of IP law and policy.

Conclusion

IP laws exist to improve the quality of people's lives by providing creations and innovations that make them better off. Although legal scholars have spent lots of time debating whether particular doctrines succeed in this goal, they have spent comparatively little time analyzing what it means to improve the quality of people's lives. IP law is committed to welfarism, but it has not grappled with what human welfare is. In this chapter, we have explained three competing conceptions of welfare and defended one of them—welfare as subjective well-being. Moreover, we have begun to suggest ways in which these different conceptions of welfare might affect IP law and policy. Definitions of welfare are not abstract philosophical questions; they have real-world significance that scholars should care about. Although sufficient data is still lacking to answer most IP law questions, new advances in data gathering and analysis will soon provide opportunities for rethinking many core doctrines.

⁵ To some extent, the suggestion above that copyright doctrine should consider slowing the pace of creativity to produce consumer-side benefits could conflict with the suggestion here about employment and producer-side benefits. As with most things, the devil will be in the details of data that we do not yet have.

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