

# Beyond the Incentive–Access Paradigm? Product Differentiation & Copyright Revisited

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## Introduction

There is a new kid on the block of copyright-policy analysis. The incorporation of insights from “product differentiation” theory is arguably the most important development in the economic analysis of copyright in recent years.<sup>1</sup> According to its most ambitious proponents, this approach provides a superior theoretical alternative to the traditional incentive–access framework, one that shows concerns over the “monopoly power” conferred by intellectual property rights are often misplaced.<sup>2</sup> Moreover, it is heralded as offering a resolution for what has heretofore been taken to be an intractable trade-off inherent in copyright—the tension between incentives and access. On this view, product differentiation theory recommends, counterintuitively, that both increased incentives *and* increased access can and should be achieved primarily by strengthening copyright protection.<sup>3</sup> More modestly, others suggest that product differentiation theory simply supplements the traditional economic analysis of copyright, by providing a better account of certain features of copyright doctrine. In particular, the theory is argued to provide a firmer foundation for a strong derivative works right, which has been difficult to explain or justify under traditional analysis.<sup>4</sup>

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1. See Michael Abramowicz, *A New Uneasy Case for Copyright*, 79 GEO. WASH. L. REV. 1644, 1647 (2011) [hereinafter Abramowicz, *Uneasy Case for Copyright*] (assessing “a wide range of copyright doctrines to determine how well they accord with the new insights learned from the economic literature on product differentiation”); Michael Abramowicz, *A Theory of Copyright’s Derivative Right and Related Doctrines*, 90 MINN. L. REV. 317, 324 (2005) [hereinafter Abramowicz, *Copyright’s Derivative Right*] (applying insights from product differentiation theory to derivative rights); Michael Abramowicz, *An Industrial Organization Approach to Copyright Law*, 46 WM. & MARY L. REV. 33, 38 (2004) [hereinafter Abramowicz, *An Industrial Organization Approach*] (using the economics of product differentiation to “elaborate[] the insight that marginal copyrighted works are not likely to produce large contributions to social welfare”); Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 221 (2004) (“The differentiated products approach provides a theoretical explanation for features of markets for copyrighted works that appeared to be internal contradictions under previous theories.”).

2. See Yoo, *supra* note 1, at 220 (suggesting that product differentiation theory is “a different approach to imperfect competition that . . . better captures the key characteristics of markets for copyrighted works”).

3. *Id.* at 251 (asserting that the insights of product differentiation theory “falsify the claim that simultaneous promotion of access and incentives is impossible and that copyright necessarily devolves into a tradeoff between the two”).

4. See Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 110 (asserting that “consideration of demand diversion and rent dissipation adds another wrinkle” to the standard incentive–access analysis).

That traditional analysis is grounded in a framework known as the incentive–access paradigm.<sup>5</sup> Within that framework, copyright is one possible solution to the public-policy problem generated by the fact that informational works are often costly to create but inexpensive to copy.<sup>6</sup> Where this is so, the creators of such works may not be able to appropriate enough of the works’ social value, through various competitive advantages from innovation often available in markets, to recoup their costs of development.<sup>7</sup> Copyright steps in to confer upon creators legal exclusionary entitlements, which empower them to charge a price for accessing the works sufficient to recover their innovation costs. These entitlements thus allow the copyright owner to internalize a substantial part of the social value of the work, thereby boosting the incentive for, or enabling recovery of the costs of, creation and publication. This social benefit of copyright comes, however, with a price tag. Legal exclusivity, at least in the absence of the unrealistic possibility of (marginally costless) perfect price discrimination,<sup>8</sup> leads to inefficient pricing strategies that generate deadweight

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5. See, e.g., William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989) (“Striking the correct balance between access and incentives is the central problem in copyright law.”); Glynn S. Lunney, Jr., *Reexamining Copyright’s Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 485–86 (1996) (labeling as the “incentives-access paradigm” the “enduring and widespread” reliance by “Congress, courts, and commentators . . . on [the] incentives-access balance in defining some of copyright’s most basic parameters, including the prerequisites for copyright protection, the general scope of protection, and specific limitations on protection” (citations omitted)).

6. For alternative solutions to the innovation policy problem raised by informational works, see WILLIAM W. FISHER III, *PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT 200–02* (2004).

7. See, e.g., Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 299–302 (1970) (explaining how various nonexclusionary competitive advantages from innovation may be available in certain markets to provide substantial returns for innovators).

8. Perfect price discrimination is the ability to charge each consumer exactly the price the consumer is willing and able to pay for the relevant good. Wendy J. Gordon, *Intellectual Property as Price Discrimination: Implications for Contract*, 73 CHI.-KENT L. REV. 1367, 1368 n.3 (1998). Were it possible, such price discrimination would eliminate the problem of deadweight loss by allowing all consumer demand above marginal cost to be satisfied. However, such a scheme is not currently a feasible option in real markets, due to prohibitive informational requirements and transaction and enforcement costs. Indeed, even if possible it still probably would not fully eliminate deadweight loss, since the costs of implementing the scheme would themselves need to be recouped. See Yochai Benkler, *An Unhurried View of Private Ordering in Information Transactions*, 53 VAND. L. REV. 2063, 2072–73 (2000) (describing the high costs of implementing price discrimination). And where such costs are recovered through unit markups, these may continue to price out some consumers who are nevertheless willing and able to pay the marginal cost of disseminating the informational work. It is, however, feasible in some contexts to employ various strategies of partial price discrimination, based on charging distinct uniform prices to different subgroups of consumers. Such partial schemes are becoming increasingly available and ever more fine-grained as technology reducing their costs of deployment develops. The economic and other social effects of various partial price discrimination schemes, their desirability as a matter of policy, and the extent to which legal doctrine should encourage or discourage their use is the subject of ongoing debate in legal scholarship. See generally, e.g.,

loss, meaning some consumers willing and able to pay the marginal cost of distributing the work are nevertheless excluded from accessing it.<sup>9</sup> Analyzed from this perspective, copyright policy becomes a complex and often elusive balancing act between the relative social costs and benefits of specific institutional details of copyright law.

This traditional understanding has provided the dominant framework for economic analysis of copyright during the past five decades and, in a looser form, has pervaded American copyright thought and practice for much longer.<sup>10</sup> It has supplied a method for coherent, structured thinking about copyright-policy questions, generated an abundance of scholarly literature, and left its mark on judicial opinions and other forms of legal

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James Boyle, *Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property*, 53 VAND. L. REV. 2007 (2000); Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799 (2000); William W. Fisher III, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203 (1998); William W. Fisher III, *When Should We Permit Differential Pricing of Information?*, 55 UCLA L. REV. 1 (2007); Gordon, *supra*; Glynn S. Lunney Jr., *Copyright's Price Discrimination Panacea*, 21 HARV. J.L. & TECH. 387 (2008); Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55 (2001). Our analysis brackets the possibility of partial price discrimination.

9. See, e.g., William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1702 (1988) (observing that “consumers who value the work at more than its marginal cost but less than its monopoly price will not buy it,” resulting in deadweight loss); Lunney, *supra* note 5, at 497–98 (“[B]roadening copyright imposes a ‘deadweight loss,’ measured by the combined loss in consumer and producer surplus associated with the sales lost as a result of the higher, more monopolistic price.”). Scholars typically divide the social cost of intellectual property protection into a static and a dynamic cost. The static cost refers to the allocative inefficiency of an informational work generated by supramarginal prices in a market for consumptive uses. The dynamic cost refers to the burdens imposed by copyright restrictions on the creation of future informational works, since existing works often serve as inputs for subsequent creation. See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 66–70 (2003) (describing copyright’s “cost of expression”); Christopher A. Cotropia & James Gibson, *The Upside of Intellectual Property’s Downside*, 57 UCLA L. REV. 921, 924 (2010) (distinguishing “the static cost of constricted production and the dynamic cost of constricted innovation”); Landes & Posner, *supra* note 5, at 332 (“Creating a new work typically involves borrowing or building on material from a prior body of works . . . .”); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEXAS L. REV. 989, 996–99 (1997) (describing the static and dynamic costs of intellectual property rights); Lunney, *supra* note 5, at 495 (suggesting that copyright “limits access to the resulting work in two senses”). To illustrate, copyright protection over a novel may generate two harmful effects: inefficient levels of access by potential readers of the novel, and inefficient levels of access by potential creators interested in using protected elements of the novel for creating their own subsequent works, resulting in reduced levels of expressive works. Distinguishing these two elements of the social cost of intellectual property rights is often useful. It highlights the fact that IP rights affect both consumption and subsequent creation, and draws attention to the possibly different ways this cost may be magnified or attenuated in each of these respects. For our purposes, however, it is sufficient to refer simply to “the” social cost of IP in the form of reduced access (or “deadweight loss”), without distinguishing between effects on consumptive uses and those on subsequent creation.

10. See Lunney, *supra* note 5, at 485–86 (noting that the incentives–access paradigm has been employed for the past three centuries, and detailing instances in the past fifty years where “Congress, courts, and commentators” have relied on that approach).

analysis.<sup>11</sup> At the same time, however, the framework has often proved hard to apply, generated somewhat conflicting theoretical arguments, and has been plagued by a host of empirical uncertainties requiring massive, and as yet unavailable, information for their resolution.<sup>12</sup>

Recently the economic analysis of copyright in legal scholarship has taken a new turn. Legal scholars—most notably Christopher Yoo and Michael Abramowicz in a series of pioneering articles<sup>13</sup>—have begun to apply to copyright insights from a well-established branch of economic analysis known as “monopolistic competition” or product differentiation theory.<sup>14</sup> While the underlying economic models may be complex, the gist of the theory as applied to copyright is straightforward: expressive works, even when protected by the legal exclusivity characteristic of copyright, are subject to competition from other expressive works which constitute partial substitutes for them. The latest James Bond film, for example, competes

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11. *See id.* (explaining that Congress, courts, and commentators have relied on the traditional understanding in defining “basic parameters” of copyright law, and noting that the understanding enjoys “enduring and widespread popularity”).

12. *See, e.g.*, William Fisher, *Theories of Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 168, 180–81 (Stephen R. Munzer ed., 2001) (“The truth is that we don’t have enough information . . . . Empirical work has . . . failed to answer the ultimate question of whether the stimulus to innovation is worth its costs. With respect to forms of intellectual-property protection other than patents, we know even less.”) (citation omitted); George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property: Comment on Cheung*, in *8 RESEARCH IN LAW AND ECONOMICS* 19, 21 (John Palmer & Richard O. Zerbe, Jr. eds., 1986) (“Cheung has demonstrated quite persuasively that, in the current state of knowledge, economists know almost nothing about the effect on social welfare of the patent system or of other systems of intellectual property.”).

13. *See supra* note 1. Earlier instances of the application of monopolistic competition theory to copyright can be found in the work of Glynn Lunney, Jr. and Michael Meurer. These, however, are mainly brief references, rather than full explorations of the implication of the economic theory to copyright law and policy. *See* Lunney, *supra* note 5, at 495 & n.32, 497 & n.43, 520, 582–83; Meurer, *supra* note 8, at 96–97.

14. Although the origins of the theory go further back, it is usually seen as having emerged in the 1920s and 1930s in the work of Edward Chamberlin, Joan Robinson, and Harold Hotelling. *See* EDWARD HASTINGS CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* 177–91 (8th ed. 1962) (introducing the theory of monopolistic competition, where sellers have an absolute monopoly over their own products, yet are subject to the competition of more or less imperfect substitutes); JOAN ROBINSON, *THE ECONOMICS OF IMPERFECT COMPETITION* 85–129 (2d ed. 1969) (laying out a model of competition between firms, each of which had some monopoly power); Harold Hotelling, *Stability in Competition*, 39 *ECON. J.* 41, 44 (1929) (“Between the perfect competition and monopoly of theory lie the actual cases.”). Since then, the theory has been developed and extended in a number of directions. *See generally* JOHN BEATH & YANNIS KATSOUACOS, *THE ECONOMIC THEORY OF PRODUCT DIFFERENTIATION* (1991) (discussing the implications of product differentiation for market structure and power); DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 200–44 (4th ed. 2005) (examining models of monopolistic competition and the effect of product differentiation on social welfare); B. Curtis Eaton & Richard G. Lipsey, *Product Differentiation*, in *1 HANDBOOK OF INDUSTRIAL ORGANIZATION* 723, 731 (Richard Schmalensee & Robert D. Willig eds., 1989) (exploring Chamberlin’s model). On the early origins of monopolistic competition theory, see generally JAN KEPPLER, *MONOPOLISTIC COMPETITION THEORY: ORIGINS, RESULTS, AND IMPLICATIONS* (1994).

with many other action–thriller films, and indeed with films of other genres and styles, that offer various viewers different levels of substitution for it. From this intuitive and simple premise follow a host of powerful implications for the economic analysis of copyright. The power of the theory is not simply in putting forth the insight of partial substitutions—an observation that is not new in copyright-policy analysis—but rather in offering a structured way for understanding the economic implications of this phenomenon. Copyright, the theory teaches us, creates neither a fully competitive market nor, as often assumed under the traditional model, a monopoly, but rather a market model significantly different from either.

Although still a relative newcomer, this approach is gathering force and influence within copyright scholarship. Product differentiation theory is cited frequently and often invoked to challenge deeply rooted assumptions about copyright law and its economic effects. Thus, the theory has been cited to support the proposition that, contrary to a common assumption, copyright does not necessarily confer market power.<sup>15</sup> Similarly, it has been invoked as the basis for the claim that copyright, except in rare cases, does not give rise to monopoly pricing and therefore does not create deadweight loss.<sup>16</sup>

This Article reevaluates product differentiation theory as applied to copyright law. Such a reassessment is timely as the theory works its way into the mainstream of copyright scholarship, with its premises and conclusions on their way to becoming part of the conventional wisdom. A reexamination of these premises and conclusions is particularly important in light of several drawbacks and worrying tendencies in existing theoretical discussions. First, the reception of product differentiation theory into

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15. See, e.g., Shubha Ghosh, *Decoding and Recoding Natural Monopoly, Deregulation, and Intellectual Property*, 2008 U. ILL. L. REV. 1125, 1171 (noting that “[t]he owner of intellectual property does not necessarily have market power”); John A. Rothchild, *Economic Analysis of Technological Protection Measures*, 84 OR. L. REV. 489, 540 (2005) (suggesting that occasionally copyrighted “goods will have such close substitutes that sellers will have no significant market power”); Sara K. Stadler, *Copyright as Trade Regulation*, 155 U. PA. L. REV. 899, 922 (2007) (explaining that readily available substitutes for copyrighted works means most “copyrights do not create market power at all”).

16. See Mark A. Lemley, *A Cautious Defense of Intellectual Oligopoly with Fringe Competition*, 5 REV. L. & ECON. 1025, 1026 (2009) (arguing that the availability of substitutions means “that we can’t assume that IP rights generally impose deadweight losses on society”). This may have been just careless phrasing by Lemley, who elsewhere acknowledges that IP rights enable owners “to raise the price of that work above the marginal cost of reproducing it.” Lemley, *supra* note 9, at 996. To say that IP rights work by enabling supramarginal pricing, but that in doing so they may create no deadweight loss, is contradictory because, in the absence of (marginally costless) perfect price discrimination, supramarginal pricing necessarily creates deadweight loss. Whether or not it is simply careless phrasing, however, it is illustrative of mistaken or misleading views—regarding the relationship between IP rights, market/monopoly power, and inefficiency—that have long circulated in both the IP and antitrust literature and which product differentiation theory, in its current state of reception, tends to reinforce. See *infra* notes 31–32, 54 and accompanying text.

copyright has been marred, to a considerable extent, by the lingering hold of persistent ambiguities and misunderstandings regarding the basic economics of copyright. These include: an erroneous or obscure concept of the roles played by the two public-goods features of information goods in the policy analysis of intellectual property rights; a misplaced emphasis on monopoly power (or the lack thereof); and a failure to see that the central intellectual property (IP) trade-offs take place not in regard to one innovation but across different innovations. Second, partly due to these misunderstandings of the basic economic framework, existing application of product differentiation theory to copyright contains both specific inaccuracies and erroneous, general sweeping conclusions. The latter include the claim that by strengthening certain aspects of copyright protection, both incentive and access could be increased costlessly, and the assumption that strengthening protection is an effective and desirable remedy to wasteful rent-dissipation problems in copyright. Third, these flaws in applying product differentiation theory to copyright have led to policy and doctrinal recommendations that are either implausible or far outstrip what the theory can plausibly be said to show.

Our goals in this Article match these concerns. Our first purpose, undertaken in Part I, is to develop an analytic framework of “inframarginal” and “supramarginal” parameters of copyright protection, which integrates disparate strands of economic analysis of copyright into a single coherent whole. In the course of doing so we also explicate the basis for clarifying or correcting the persistent ambiguities or misunderstandings mentioned above, pertaining to the role of public-goods features of information works, the significance of “monopoly” power in IP analysis and the character of, and variations in, the central IP trade-offs. We then incorporate the insights of product differentiation theory into the analysis, showing how it supplements, rather than substitutes for, the traditional analysis, with both best integrated into a single supramarginal–inframarginal framework.

In Part II, we evaluate the specific, somewhat conflicting, copyright-policy reforms or explanations that have to date been advanced on the basis of product differentiation theory. The two main sets of proposals in existing scholarship are that an ever-increasing level of copyright protection offers the prospect of boosting incentives with no countervailing costs, and that broad reproduction and derivative-works entitlements are justified as efficient measures against over-entry by duplicative close variants of the same expressive work. We argue that against the backdrop of a proper understanding of the economics of copyright, neither of these two proposals is warranted by product differentiation theory.

Finally, in Part III we offer our own assessment of what policy prescriptions most plausibly follow from product differentiation analysis. Specifically we argue that product differentiation theory, like the traditional incentive–access framework, shows that as IP protection becomes stronger

it is more likely to result in negative net results. The main contribution of product differentiation theory is identifying new sources for this result, the most important of which is rent dissipation caused by entry of increasingly similar variants of expressive works whose supramarginal positive value progressively declines, while their duplicative cost mounts. The straightforward solution to this problem, we argue, is not to apply more of the same remedy that causes the problem to begin with—i.e., strong copyright protection—but rather to exploit the nonrivalrousness of expressive works by ratcheting down copyright protection. We evaluate three alternative possible reforms to copyright law for targeting the concern of rent dissipation: abolishing or limiting the derivative works right, creating a meaningful novelty-threshold requirement for copyright protection, and an overall trimming of the strength of copyright protection.

#### I. The Economics of Copyright Policy and Monopolistic Competition

We set out in this Part a general analytical framework to structure the subsequent discussion of particular doctrinal and policy recommendations. Our purpose is to integrate product differentiation theory with central dimensions of existing, nondifferentiated economic analysis of IP. Specifically, we seek to develop two sets of points: first, to establish what a relatively comprehensive economic analysis identifies as the central trade-offs involved in providing IP protection, and second, to identify what the importation of the economic theory of monopolistic competition based on product differentiation adds to copyright-policy analysis in this regard.

##### A. *IP Policy: The Supramarginal–Inframarginal Framework*

The economic analysis of IP rights, such as copyrights and patents, begins with the observation that the information goods protected by such rights exhibit the two defining features of public goods: nonexcludability and nonrivalrousness.<sup>17</sup> Information goods are nonexcludable to the extent that once they are distributed to some, it is difficult to prevent access to them by others. And such goods are nonrivalrous to the extent that consumption of the work by one does not degrade the ability of others to consume and enjoy it. These observations and the analysis based on them are, by now, painfully familiar to anyone versed in the literature. And yet the basic analysis is often marred by mistakes or ambiguities which then continue to infect the analysis in its further elaborations. Here we restate

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17. On public goods, see generally Thomas E. Borchering, *Competition, Exclusion, and the Optimal Supply of Public Goods*, 21 J.L. & ECON. 111 (1978); J.G. Head, *Public Goods and Public Policy*, 17 PUB. FIN. 197 (1962); Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STAT. 387 (1954).

the fundamental economic framework of IP rights, corrected for the mistakes and ambiguities that frequently haunt it.

1. *The Problem: Nonexcludability, Not Public Goods.*—IP rights are commonly described as a solution to a “public goods problem” produced either by nonrivalrousness, or by the combined effect of the two features of such goods.<sup>18</sup> This description, however, is both incorrect and misleading. In fact, the two features of public goods do not combine to produce a single problem, but rather pull in opposite directions. The innovation policy problem posed by informational works—for which IP rights are one possible solution—is traceable to nonexcludability alone, with nonrivalrousness playing no part. Nonexcludability contributes to the problem by factoring into the gap between the costs of innovation (i.e., initially generating the information good), and the costs and speed of imitation (i.e., replicating a good generated by another). When the costs of imitation are substantially lower than those of creation and imitators cannot be excluded from accessing the work, prices may drop to a level that prevents the creators from appropriating enough of the social value of the work to recover their development costs. Under such conditions creators will be inefficiently discouraged from creating. Nonrivalrousness has nothing to do with this problem. The same problem may occur with nonexcludable goods that are rivalrous, such as in the case of the under-incentive to invest in a common pool (like a fishery) from which others cannot be excluded.<sup>19</sup> Conversely, the problem would not occur were information goods excludable, no matter how nonrivalrous they may be.

To solve this problem, IP rights confer on their holder entitlements to exclude others from using, without the holder’s permission, the covered informational work in certain ways for certain periods of time.<sup>20</sup> The grant

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18. See, e.g., JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS 41 (1996) (describing informational works as involving “public goods problems” related to nonrivalrousness); Fisher, *supra* note 12, at 169 (explaining that the two public good features of intellectual products “in combination create a danger that the creators of such products will be unable to recoup their ‘costs of expression’”); Fisher, *supra* note 9, at 1700 (“[Works of intellect] can be used and enjoyed by unlimited numbers of persons without being ‘used up.’ It is thus difficult to deny access to such works to persons who have not paid for the right to enjoy them.”); Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 947 (2005) (“At times, nonrivalry seems inextricably linked to nonexcludability and the associated risk of free riding.” (citation omitted)); Yoo, *supra* note 1, at 214–15 (attributing the difficulty of authors to recoup to nonrivalry). Related misunderstandings include attributing the gap between the costs of innovation and those of imitation to the public-goods features of informational works and attributing low marginal costs of producing informational works to their nonrival or nonexcludable characteristics. Fisher, *supra* note 12, at 169; Landes & Posner, *supra* note 5, at 326.

19. This is commonly referred to as “the tragedy of the commons.” See Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244–45 (1968).

20. E.g., 17 U.S.C. § 106 (2012) (granting certain exclusive rights to copyright owners).

of such rights converts what are relatively nonexcludable goods into relatively excludable ones.

It is only at this point that nonrivalrousness enters the picture, by pointing to a problem with the IP rights solution. For resources that are rivalrous in consumption, the grant of exclusionary or property rights is generally considered salutary, or at least not troubling, from an economic point of view, since preventing or excluding use by one is necessary for use by another. However, for goods that are nonrivalrous in consumption—of which informational works are a paradigm example—exclusionary rights may function inefficiently, wastefully preventing uses that would not detract from simultaneous use by others. The justification for incurring this potential inefficiency is, of course, that without it some informational works may fail to be developed in the first place. Nonrivalrousness, however, accounts for a basic imperfection or problem associated with the IP rights solution, namely its conversion of an information good from a “public” to a “toll” good.<sup>21</sup>

IP rights aim to address, then, not a “public goods problem” associated with informational works but an “appropriability problem.” Nonexcludability contributes to the appropriability problem for which IP rights are one possible solution, while nonrivalrousness points to a problem with that solution. And from an economic point of view, the core task for IP policy is to balance the need for appropriability with the costs of underuse.

*2. The Problem with the Solution: Property, Not Monopoly.*—At this stage of the analysis another persistent ambiguity, even confusion, commonly appears: namely, the somewhat misguided debate over whether IP rights create “monopoly” power or are “merely” property. As just explained, the basic economic function of copyright and patent protection is to enable the creator of an informational work to charge a price for accessing that work that recoups some of the sunk costs incurred in developing it.<sup>22</sup> Any such price will be higher than what, in static terms, is the economically efficient price, namely the marginal cost of disseminating the work (e.g., the cost of reproducing and distributing a physical or digital embodiment of the work). And the economic value represented by all the uses of all the consumers willing and able to pay the efficient price, but not the one charged by the copyright holder, constitutes the measure of “deadweight loss” associated with that degree of copyright protection.

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21. By contrast, one virtue of alternative innovation policies such as public funding, prizes, or commons-based approaches is that they retain the “public goods” character of informational works by using mechanisms other than excludability to enable generation of such works, thereby avoiding the deadweight loss associated with proprietizing a nonrival work.

22. See *supra* section I(A)(1).

This cost associated with IP rights has been traditionally described as stemming from the conferral of monopoly power on the rights owner.<sup>23</sup> Defenders of broad IP rights attack the premise that monopoly power is a necessary or even common feature of IP rights.<sup>24</sup> Information goods, they explain, often have substitutes.<sup>25</sup> A novel under copyright protection, for example, has to compete with many other novels in the market. If so, there is no reason to view IP rights owners as monopolists in the sense of “fac[ing] a demand curve with a negative slope” that allows them to raise prices above competitive level without losing all customers.<sup>26</sup> It follows that since IP rights do not, apart from exceptional cases, confer monopolies but rather ordinary property rights, they do not involve any special cost or policy problem.

The reply from commentators less sanguine of broad IP rights is to concede that IP rights do not always create monopolies, but then rejoin that monopoly power is a matter of degree and that in some cases, the exclusionary power created by IP rights does rise to the level of monopoly.<sup>27</sup>

This entire debate, however, is mostly beside the point. Proper understanding of the economic framework dispels the idea that the main question is “whether the patent as monopoly is an important case that occurs frequently.”<sup>28</sup> *Property*, not monopoly, is the heart of the problem.

23. See, e.g., Fisher, *supra* note 9, at 1700 (“Granting an artist or inventor a property right in his creation may make him a monopolist . . .”); S.J. Liebowitz, *Copyright Law, Photocopying, and Price Discrimination*, in RESEARCH IN LAW AND ECONOMICS, *supra* note 12, at 181, 184; Ian E. Novos & Michael Waldman, *The Effects of Increased Copyright Protection: An Analytic Approach*, 92 J. POL. ECON. 236, 243 (1984).

24. Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 249–50 (1994); Frank H. Easterbrook, *Intellectual Property is Still Property*, 13 HARV. J.L. & PUB. POL’Y 108, 109 (1990); Edmund Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1729–38 (2000) [hereinafter Kitch, *Elementary and Persistent Errors*]; Edmund Kitch, *Patents: Monopolies or Property Rights?*, in RESEARCH IN LAW AND ECONOMICS, *supra* note 12, at 31, 32 [hereinafter Kitch, *Monopolies or Property*]; Douglas A. Smith, *Collective Administration of Copyright*, in THE COLLECTIVE ADMINISTRATION OF PATENTS AND COPYRIGHTS 137, 139 (1986). See generally Sven Bostyn & Nicolas Petit, *Patent=Monopoly: A Legal Fiction* (Dec. 31, 2013) (unpublished manuscript), available at <http://ssrn.com/abstract=2373471>.

25. Kitch, *Monopolies or Property*, *supra* note 24, at 33; Yoo, *supra* note 1, at 217–19.

26. Kitch, *Monopolies or Property*, *supra* note 24, at 32.

27. See, e.g., Boyle, *supra* note 8, at 2018 (“The question of whether a monopoly exists is one that is determined by the availability of substitute goods, not the shape of the legal entitlement.”); Cohen, *supra* note 8 at 1811 (“Although a copyright does not necessarily guarantee market power, many information goods lack perfectly fungible substitutes.”); Fisher, *supra* note 9, at 1702–03 (stating that copyright holders’ market power “var[ies] considerably,” and stating that some copyright works are “considered irreplaceable,” while for others “there are readily available, nearly perfect substitutes”); Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1205 n.44 (1996) (“[C]opyright gives each author at least some monopoly power, and it gives greater power to some authors than to others.”).

28. Kitch, *Monopolies or Property*, *supra* note 24, at 33.

And what differentiates IP rights from other property rights in this respect is the fact that it covers nonrivalrous goods.

Two opposing but equally erroneous premises are worth identifying and disarming at this point. On the one hand, it is not necessary for their effective operation that the exclusionary rights granted by intellectual property over an informational work confer an economic “monopoly,” where that is taken to mean the kind of power over price and quantity that a firm enjoys when there exist no rival substitutes for its product on the market.<sup>29</sup> Monopoly power in this sense may be present in some cases of IP protection, but it is neither an inherent by-product of such protection nor a necessary or sufficient condition for this protection to provide effective incentives. On the other hand, it *is* necessary for IP protection, if it is to achieve its incentive function at all, to confer some supramarginal pricing power. In the absence of any degree of pricing power, there will be no added ability to recoup the fixed costs of development and no added incentive.<sup>30</sup> And the effect of such pricing power—in the absence of the unrealistic case of costless, perfect price discrimination—will be some deadweight loss.<sup>31</sup> Supramarginal pricing power and deadweight loss, then, are necessary effects of copyright (or patent) protection.<sup>32</sup> In the absence of

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29. The traditional formulation of “monopoly power” is itself a somewhat ill-defined concept, since any firm’s product will face some downward competitive pressure on its price from alternative uses of consumer resources, whether or not such uses are seen as “substitutes.” In other words, pricing power and substitutes are always best understood as matters of degree, as opposed to categorical distinctions of kind.

30. To be sure, in specific contexts efficiency will not require any added incentive. These involve cases where alternative mechanisms such as lead time, contractual arrangements, social norms, or alternative business models allow innovators to capture enough of the social value of their innovation to cover development costs (capitalized, risk-adjusted, and including expenditures on efficiently incurred failed efforts). In such cases, intellectual property rights are not justified on an incentive basis, and absent other possible justifications, there is no reason to incur any of the costs associated with them.

31. See Ariel Katz, *Making Sense of Nonsense: Intellectual Property, Antitrust, and Market Power*, 49 ARIZ. L. REV. 837, 873 (2007). As explained in the text, Katz is right to state that “under monopolistic competition there is always some degree of market power, in the sense of price above marginal cost” and therefore “deadweight loss always exists.” *Id.* However, it is not accurate to state, as he does, that this is so because “the fact that the products are differentiated means that they are not perfect substitutes.” *Id.* While the degree of differentiation may affect the level of market power, so long as the monopolistic competition model applies there is market power and deadweight loss, even if products are perfect substitutes. See *infra* text accompanying notes 30–33, 39. Similarly, the conferral of supramarginal pricing power by IP rights is not, as Katz’s discussion suggests, merely a contingent claim with plausible empirical support. See Katz, *supra*, at 873. Rather, it is a structurally necessary feature of IP rights, unavoidable if they are to achieve their incentive function.

32. It is a separate question whether such pricing power should be taken to constitute “market power” in a technical sense relevant for antitrust law. The conventional wisdom among antitrust scholars seems to be “no,” although they have remained vague as to what other sense of “market power” they have in mind, besides the common economic one of being able to raise prices above marginal cost. See 2B PHILLIP E. AREEDA, HERBERT HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION 138 (3rd ed. Supp. 2012) (“[M]arket power cannot be inferred, even presumptively, from the possession of

costless, perfect price discrimination, the notion of using IP rights to provide incentives without incurring deadweight loss is as conceivable as a perpetual motion machine.

To illustrate, consider the following three possible scenarios for a firm developing an expressive work—a book, a film, a song—that is potentially eligible for copyright protection:

*Scenario (1)*: The work does not receive any copyright protection, rendering it vulnerable to uncompensated “free riding” by consumers or “corrosive” competition by replicating producers that may undermine the firm’s ability to recoup its capitalized costs of development. The result: no static inefficiency from copyright barriers to access, but also no provision of the dynamic incentive to create.

*Scenario (2)*: The firm obtains copyright protection for its work, and the work has no, or at best very imperfect, substitutes, conferring on the firm “monopoly” power over the relevant market. The firm will use its pricing power to charge a profit-maximizing markup price over marginal cost. How much total revenue is generated by the marked-up price will depend on the size of the market and the elasticity of demand for this type of good. Where the revenues generated do not exceed the sunk costs of development, they are understood as only “quasi-rents” that simply go to cover the costs of development, with the firm ultimately not realizing any supernormal returns or “economic profit.” Where revenues do exceed the costs of development, then the firm realizes “rents” proper, or supernormal “monopoly” returns. Further, in the latter instance there is some amount of deadweight loss over and above that strictly necessary to generate the information work using copyright protection.

*Scenario (3)*: Finally, consider a third case, where the firm’s copyrighted work faces competition from the copyrighted product of a rival firm—suppose, for instance, that both are mystery novels competing for the summer beach-reading market. Assume that while consumers significantly prefer either novel to the next-best option vying for their entertainment dollar, between the two of them they are indifferent. Thus, neither firm enjoys a “monopoly” in the relevant market. The price effect of such a duopolistic situation is an ongoing subject of contention in economic

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intellectual property.”); HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 154 (4th ed. 2011) (“[T]o presume market power in a product simply because it is protected by intellectual property is nonsense.”); Nancy T. Gallini & Michael J. Trebilcock, *Intellectual Property Rights and Competition Policy: A Framework for the Analysis of Economic and Legal Issues*, in COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY 17, 22 (Robert D. Anderson & Nancy T. Gallini eds., 1998) (“There should not be a presumption that an intellectual property right creates market power. . . . [Because] most products and processes face a large number of substitutes.”); Lemley, *supra* note 9, 996 n.26 (1997) (clarifying that the pricing power created by intellectual property rights “does not mean that intellectual property rights automatically confer market power or create ‘monopolies’ in an economic or antitrust sense”).

models that we will turn to shortly.<sup>33</sup> For present purposes, assume that one possible (but by no means necessary) pricing outcome obtains: that prices will approach their competitive level.<sup>34</sup> The question for our purposes is what that competitive level will be. Consider two possibilities. In one, the firms compete on price all the way down to marginal cost, thereby undermining each other's ability to recover development costs, resulting in a net loss for both. In the other, the firms price compete again, but now down only to average cost, so that each firm is able to recoup development costs and thus realize a "normal profit," but no rents, while charging a price that will incur some deadweight loss.<sup>35</sup> Thus, the first possibility parallels scenario (1): no deadweight loss but also no incentive benefit. The second possibility illustrates how, even in the absence of *any* technical monopoly power or its corresponding supernormal returns, the grant of copyright can result in *some* deadweight loss, and indeed must, if it is to serve its incentive function. Whether or not this pricing power necessarily conferred by copyright is best termed "market power," it does come with deadweight loss.

3. *Trade-offs: Across, Not Within, Innovations.*—What, one might ask, is the problem in cases where IP rights generate only enough pricing power for the innovator to recoup, meaning they enjoy merely quasi-rents rather than supernormal rents? Said quasi-rents being necessary to induce the creation of the work in the first place, they arguably should not be described as a cost, since without them we would incur the greater loss of having to forego the work altogether. This objection betrays, however, another misunderstanding of the IP framework. It assumes that the policy trade-offs associated with IP rights are internal to a specific innovation.<sup>36</sup> Under this assumption, little could be improved over a situation where deadweight loss is limited to that necessary for incentivizing the creation of the work. A world with a work and the minimal deadweight loss necessary to incentivize its creation is better than a world with no work at all.<sup>37</sup> But the

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33. See *infra* note 62 and accompanying text.

34. In fact, most product differentiation models *do not* ordinarily assume that the competition between two entrants would suffice to bring prices down to competitive levels. Rather, the common assumption is that each additional entrant will bring about only a measure of price reduction. The number of entrants and the extent to which price at equilibrium will remain above the competitive level is a function of the ratio between the fixed cost of each entrant and the total available surplus in the market. See CARLTON & PERLOFF, *supra* note 14, at 211; Yoo, *supra* note 1, at 239.

35. We assume here, as a further simplification, that the development costs for each novel were the same.

36. See *infra* note 39 and accompanying text.

37. Sometimes an IP right that generates the minimal amount of deadweight loss required to incentivize creation could be improved upon. This happens when demand patterns allow reshaping the IP right to generate the same amount of revenue to the innovator while imposing a lower deadweight loss. Even in such cases, however, there is no tradeoff between incentive and

basic premise of this argument is misguided. The IP trade-off between incentive and access or between the value of new innovations and deadweight loss, takes place *across* different innovations, *not* internal to any one of them.

To see this, assume that the regime of IP rights at issue will, to a considerable extent, be universally or generically applicable, in the sense that a relatively standardized package of entitlements will be equivalently available for various distinct works or even classes of innovative works.<sup>38</sup> If so, at any given level of IP protection, some innovations or informational works will enjoy more protection than is needed for their generation, meaning that the revenues enabled by the IP-conferred pricing power will exceed the capitalized costs of development. Put another way, the share of these innovations' social value that that level of IP protection enables innovators to privately appropriate exceeds private costs of development. As a result, these innovators will enjoy supernormal returns, and there will be some unnecessary deadweight loss. Another category of innovations will enjoy (more or less) just enough protection for their generation. Finally, some socially valuable innovations may not be generated because not enough of their social value can be privately appropriated to justify the private costs of development. Although this point is often neglected or at least remains unspoken, the core trade-off at the heart of IP policy, then, is between the effect of IP rights across these different categories of innovation; the trade-off is *not* internal to a given innovation.<sup>39</sup>

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deadweight loss internal to a specific innovation. Rather, the same amount of incentive is attained for a lower level of deadweight loss. See *infra* text accompanying note 39.

38. In contrast to the theoretical possibility of a regime in which each IP right is tailored to each specific work, or perhaps classes or sectors of innovation. In reality, both the patent and copyright regimes are fairly, although not absolutely, universal, in that alongside generic rules they also include some arrangements that are industry or subject-matter specific. It is commonly observed that the copyright regime is somewhat less universal than the patent regime. For discussion of the policy trade-offs involved in setting the level of the intellectual property regime's universality or uniformity, compare Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1159–60 (2002) (discussing the drawbacks caused by the universality of the current intellectual property framework), Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845, 849–50 (2006) (explaining that uniform intellectual property rights necessarily impose deadweight loss), Michael W. Carroll, *One Size Does Not Fit All: A Framework for Tailoring Intellectual Property Rights*, 70 OHIO ST. L.J. 1361, 1389 (2009) (describing the “uniformity cost[s]” that “one-size-fits-all” intellectual property rules impose on society), and William Fisher III, *The Disaggregation of Intellectual Property*, HARV. L. BULL., Summer 2004, at 24, 29 (2004) (noting that the three fields of intellectual property have begun to fragment into more customized treatment), with ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS 203–05 (2004) (advocating for simple, uniform treatment of intellectual property as opposed to differential treatment), and R. Polk Wagner, *(Mostly) Against Exceptionalism, in PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT* 367, 379–82 (F. Scott Kieff ed., 2003) (cautioning against imposing formal, distinct legal rules across different technologies).

39. This belies, then, the view that it is an “internal paradox” of the incentive–access framework—one resulting in its indeterminacy—that “a work’s desirability will indicate both the

Specifically, the trade-off concerns whether the benefits of extending protection to enable the generation of some subset of the third category of innovations (those “supramarginal” to the current level of intellectual property protection) will be worth the costs of increasing the unnecessary deadweight loss incurred with respect to the first two categories of innovations (those “inframarginal” to the current level of intellectual property protection). Or, alternatively, whether the benefits of curbing protection to decrease the unnecessary deadweight loss associated with the first category are worth the cost of foregoing the generation of innovations in the latter two.

This, then, is the incentive–access paradigm, corrected for certain potential infelicities of formulation or understanding: there is a necessary trade-off between increasing incentives for creating supramarginal innovations and decreasing access to inframarginal ones. Somewhat more precisely, we are to ask whether the benefits of increased protection—as measured by the present discounted market value of supramarginal innovations that are thereby generated—will outweigh its costs—in terms of the increased deadweight loss associated with inframarginal innovations.

4. *Refining the Trade-offs.*—Traditional copyright analysis has tended to remain at this level of framing the trade-off. Patent scholarship, however, has added a further layer of analysis with respect to the inframarginal effects of IP protection. This added layer makes the introduction of product differentiation theory (to be elaborated shortly) much less of a radical novelty in the analysis of patent as compared to copyright. The basic additional insight is that the supernormal returns over inframarginal innovations that will be held out by increased levels of protection will likely result in at least two kinds of “rent-seeking” activity by innovators. One involves races to be the first to come up with the rent-generating innovation and capture the prize it offers.<sup>40</sup> The second activity, pertaining to post-invention efforts, divides into two subsets. One involves “improvement” or “follow-on” efforts oriented toward building upon a pioneering invention; for example, by creating further innovations that incorporate or improve upon it, or by extending its range of applications. Another group involves “invent-around” activity by rivals, who seek to “cannibalize” some portion of the revenues enjoyed by existing incumbents,

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need to ensure the work’s creation *and* the need to secure its widespread distribution,” because greater desirability of a work means a greater need for both its creation and its wide dissemination, and “[therefore] incentive and access will always oppose each other with exactly equal force.” Lunney, *supra* note 5, at 486; *see also* Landes & Posner, *supra* note 5, at 326 (“Copyright protection . . . trades off the costs of limiting access to a work against the benefits of providing incentives to create the work in the first place.”); Lunney, *supra* note 5, at 554–61 (discussing the paradox whereby the copyright system provides the most protection for the works least “necessary”).

40. *See* Muerer, *supra* note 8, at 97.

by offering their own patent-protected, functional substitute to satisfy the relevant market demand. All of these activities will tend to involve high degrees of overlapping innovative activity on the part of firms, and thus result in wasteful duplication or “rent dissipation.”<sup>41</sup> This is because the “pot of gold” of rents that spurs the activity consists of revenues from satisfying a specific market need or set of consumer demands, and those racing to do so will likely come up with variants that, while differing in some respects relevant to consumer preferences, will also share many relevant features.

Where IP rights are generic in application, meaning roughly similar for all qualifying innovations irrespective of type (i.e., “pioneer,” “improvement,” “design-around”), stronger rights of this sort will tend to exacerbate each of these forms of rent dissipation, adding a further set of inframarginal costs.<sup>42</sup> If, however, IP rights can be configured in a more fine-tuned way, so as to tailor protection to different types of innovation, we then face a complex trade-off between effects in opposing directions: A stronger right in the pioneering innovation tends (for better or worse) to depress follow-on—and perhaps invent-around activity at the secondary level—but fuels the race for the primary innovation. A weaker pioneer right is likely to result in less duplicative activity at the primary level but also in greater follow-on and invent-around duplication.

A final wrinkle is that where the rent-seeking activity successfully leads to additional entrants into the market for a product, two potential positive effects may follow. First, to the extent that the competing products are not perfect substitutes but rather variants tailored for specific segments of the market, the innovative activity is not completely duplicative. By better satisfying the preferences of subgroups of consumers, added variety increases total demand satisfaction.<sup>43</sup> Second, added entry, by decreasing the degree of market power enjoyed by the earlier entrant, may result in driving down prices.<sup>44</sup> If such price competition does take place, then the

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41. See Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 317–18 (1992) (discussing various types of rent dissipation); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 265–66, 268 (1977) (explaining prospect theory—specifically, the idea that multiple firms may commit resources to developing a prospect in the hopes of being the one firm that obtains the patent).

42. Subject to one qualification, which is that stronger rights over pioneer innovations may empower the pioneer to increase their control over follow-on improvement activity, and thereby potentially offset the enhanced incentives provided by stronger rights to others to engage in such activity.

43. See *infra* section I(B)(3).

44. Perhaps the patent context where this point has been most clearly understood is pharmaceutical innovation and, in particular, the debate around “me-too” drugs. Ironically, the existence of significant price competition among various IP-protected substitutes is perhaps most fiercely contested in this context. See, e.g., Joseph A. DiMasi & Cherie Paquette, *The Economics of Follow-on Drug Research and Development*, 22 PHARMACOECONOMICS 1, 2–3 (Supp. Oct. 2004) (examining trends in the speed of me-too drug competitive entry); Aidan Hollis, *Me-Too*

rent-seeking duplication is not simply to be added to deadweight losses as a further inframarginal cost, but rather should be understood as a substitute form of inframarginal cost from increased incentives—reducing deadweight loss, but at a price.

While rent dissipation analysis is sometimes classified as a theoretical alternative to incentive-access analysis,<sup>45</sup> it is best understood as a refinement of the standard IP framework, with both analyses integrated into a single supramarginal-inframarginal framework. In other words, the effects of the various rent-seeking activities by entrants should be incorporated as additional, or alternative, supramarginal and inframarginal effects to the familiar ones of incentive and limitations on access. New varieties of existing works are a supramarginal benefit, a diluted form of incentivizing the creation of completely new works. Rent dissipation through duplicative entry is an inframarginal cost, which in some cases may have a tempering effect on the standard inframarginal cost of deadweight loss. And the dynamics driving each of these stem from the same underlying source: the grant of exclusionary rights over nonrival goods to enable their generation.

5. *Summary.*—To sum up, the innovation-policy problem presented by informational works stems from the fact that, due in part to their non-excludability, the gap between the costs of innovation and those of imitation may be too high to be recoverable from the pecuniary benefits of innovative activity that are appropriable through nonexclusionary means, such as first-mover advantages. The IP solution to this problem—to increase appropriability by conferring exclusionary rights—faces a drawback on account of the nonrival character of informational works. In order to incent their generation, IP rights will necessarily be accompanied by inefficient restrictions on access to informational works (absent marginally costless perfect price discrimination). Whether or not such exclusionary rights are deemed to confer “monopoly power,” they must, to achieve their incentive function, confer supramarginal pricing power that results in deadweight loss. This trade-off between providing incentives and curbing access does not, however, operate internally to a given innovation but rather across different classes of innovations, which vary in their ratios of private costs to social surplus appropriability at any given generic level of IP protection. With each increase in such protection, we may induce the creation of heretofore “supramarginal” works, but at the risk of possibly increasing costs of unnecessary curbed access of “inframarginal” ones.

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*Drugs: Is There a Problem?*, COMMISSION ON INTELLECTUAL PROPERTY RIGHTS, INNOVATION AND PUBLIC HEALTH (Dec. 13, 2004), available at [http://www.who.int/intellectualproperty/topics/ip/Me-tooDrugs\\_Hollis1.pdf](http://www.who.int/intellectualproperty/topics/ip/Me-tooDrugs_Hollis1.pdf) (discussing the economic impact of “me-too” drugs).

45. Fisher, *supra* note 12, at 178–79 (describing “rivalrous invention” as an approach distinct from “incentive theory”).

Moreover, increased incentives risk additional inframarginal costs, namely those of duplicative and distortive rent-seeking activity. At the same time, however, such rent-seeking activity may have two offsetting benefits: the inframarginal one of reducing prices and associated deadweight loss for existing works, and the supramarginal one of spurring the creation of distinct variations of existing works that better satisfy consumer demand—variety which would not have been introduced at the lower level of protection.

*B. The Impact of Product Differentiation on Copyright-Policy Analysis*

Enter the economic theory of monopolistic competition between differentiated products. The main insight of the theory—originally developed by E.H. Chamberlin—is that alongside the standard economic models of pure competition and monopoly, there exists a third that possesses one element of each, forming a distinctive blend with dynamics of its own.<sup>46</sup> In monopolistic competition, each firm faces entry and competition from others (the competitive element), but also enjoys a measure of market power—or insulation from competition—over a subset of consumers (the monopolistic element).<sup>47</sup> The insulation from competition may derive from the fact that each firm offers a differentiated product.<sup>48</sup> “Differentiation” stands in contrast to “homogeneity”: rather than each firm’s product being indistinguishable from rival offerings from the perspective of all consumers, there is “heterogeneity” in product features and consumer preferences such that various rival wares are only imperfect substitutes for various subsets of consumers. A classic example of differentiation is along the dimension of spatial location, with different consumers preferring different sellers depending on their travel costs to the various locations.<sup>49</sup> Products may, however, be differentiated by varying in any feature relevant to consumer preferences. The fact that such differentiated products compete with one another means that prices will be lower and number of units sold higher than in a purely monopolistic market.<sup>50</sup> But the real, if limited, market power enjoyed by each firm over some segment of consumer demand results in higher prices and a lower number of units sold compared to a purely competitive market.

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46. CHAMBERLIN, *supra* note 14, at 3–5.

47. CARLTON & PERLOFF, *supra* note 14, at 233–34.

48. But it need not. Monopolistic competition may also occur in markets where products are perfect substitutes, so long as: (1) the fixed costs of entry, shared by all entrants, are high enough in proportion to the overall market as to limit entry and price competition; and (2) Cournot competition is assumed. *See id.* at 206–14 (discussing a basic monopolistic competition model with undifferentiated products).

49. For a discussion of spatial models, see CARLTON & PERLOFF, *supra* note 14, at 220–30; Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 45–67; Yoo, *supra* note 1, at 241–46.

50. CARLTON & PERLOFF, *supra* note 14, at 211, 215.

Later models have developed this basic insight and modeled differentiated product competition in various ways. On standard assumptions, the pricing power enjoyed by incumbent firms will continue to draw newly differentiated entrants into the market, so long as such prices promise supernormal returns (or “economic profit” or rent). In long-run equilibrium, however, firms in monopolistic competition will tend not to reap supernormal returns (unlike monopoly, but like pure competition), despite the fact that their prices remain above marginal cost (unlike pure competition, but like monopoly). This is because of the higher average costs associated with differentiated entry.<sup>51</sup> Debate continues over whether, and under what circumstances, such dynamics will result in socially wasteful over-entry by competing firms.<sup>52</sup>

What does this model add to the analysis of copyright policy? Essentially, it brings into sharper focus the distinct implications that flow from the fact that a work enjoying copyright protection may nevertheless face competition from rivals that also enjoy such protection. The market conditions facing a copyrighted work, that is, are best analyzed as those of a product competing with other differentiated, copyrighted products.<sup>53</sup> The basic point that works protected by IP rights may still face competition in the relevant market has of course often been made before, in the context of the familiar debate over whether such rights create a monopoly.<sup>54</sup> Product differentiation theory, however, supplies a coherent model for analyzing such competition, by specifying the relevant market more precisely, as a product space along a continuum—one marked by differences of degree between partial substitutes, rather than being either wholly occupied by a single monopolist or completely open to competition between undifferentiated rivals. Several implications follow from this model.

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51. See *id.* at 212–13 (noting that firms in monopolistic competition operate at a smaller output than the output that would minimize their average costs).

52. See *id.* at 233–34 (discussing entry under different models); Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 58–59 (“[S]ome models predict excessive entry while others predict inadequate entry . . .”).

53. Chamberlin himself used copyrighted and patented goods as paradigmatic examples of monopolistic competition, an analysis that went largely unnoticed in patent and copyright scholarship. See CHAMBERLIN, *supra* note 14, at 57–59.

54. See, e.g., Paul Goldstein, *Copyright*, L. & CONTEMP. PROBS., Summer 1992, at 79, 84 (“Patent protection may well confer market share and effectively result in monopoly pricing. In copyright, however, a high degree of substitutability invariably obtains.”); Kitch, *Elementary and Persistent Errors*, *supra* note 24, at 1729 (criticizing the assumption that “intellectual property rights . . . confer an economic monopoly”); Lemley, *supra* note 9, at 996 n.26 (clarifying that intellectual property rights do not “automatically . . . create ‘monopolies’”). It bears emphasizing that the implication often drawn in this literature from the existence of competitive substitutes—namely, that in such cases we needn’t be concerned about the effects of IP rights on pricing power and deadweight loss—is in error. As discussed above, IP rights must, as a necessary correlative of providing innovation incentives, confer pricing power that will result in deadweight loss (absent costless price discrimination). This remains the case whether or not such pricing power is labeled a “monopoly” or “market power.” See *supra* section I(A)(2).

1. *Price and Deadweight Loss.*—The first implication goes straight to the heart of the traditional incentive–access paradigm, and concerns the effect of copyright protection on price and, hence, access and deadweight loss. In a monopolistic–competitive market where an incumbent enjoys rents, new firms offering substitute products will be attracted and will continue to enter so long as there remains a surplus in the market sufficient to enable each newcomer to recoup its fixed costs of entry.<sup>55</sup> This entry will tend to cause the price charged by each firm to decrease.<sup>56</sup> Note that product differentiation models do not assume pricing strategies under which any degree of competitive entry will bring prices down to average- or marginal-cost pricing. Rather, the assumption is that each entry brings about only an incremental decrease in price (and concomitant reduction in deadweight loss), which reflects both the increase in competition and the fact that each firm continues to enjoy a measure of market power.<sup>57</sup> Equilibrium is reached when all rents are dissipated and price equals average cost.<sup>58</sup>

To illustrate, consider an example of a firm that creates and sells a copyrighted teenage-vampire comic book. Assume that the total consumer demand for the comic book is \$720,000 over a linear demand curve, where 60,000 units will be sold at the midpoint price of \$6. Further assume that the development costs of the comic are \$160,000<sup>59</sup> and (to simplify) that the marginal cost of producing and distributing copies of the book is \$0.<sup>60</sup> At time 1 the firm faces no competition. Under these conditions the firm will charge the profit-maximizing price of \$6, sell 60,000 units, and collect total revenue of \$360,000. The result is a rent (i.e., a net surplus of revenue over capitalized costs) of \$200,000 enjoyed by the firm and a deadweight loss of \$180,000. The rent, however, is bound to attract new entrants. Thus, at time 2, a second firm enters the market with its own independently developed competing product (i.e., its own take on the teenage-vampire

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55. CARLTON & PERLOFF, *supra* note 14, at 209; Yoo, *supra* note 1, at 239.

56. CARLTON & PERLOFF, *supra* note 14, at 211; Yoo, *supra* note 1, at 238.

57. CARLTON & PERLOFF, *supra* note 14, at 207–10; Yoo, *supra* note 1, at 238.

58. This is subject to what is known as the “integer problem” (i.e., a situation in which the “lumpiness” of fixed cost allows each firm to earn a small profit at equilibrium). Nicholas Kaldor, *Market Imperfection and Excess Capacity*, 2 *ECONOMICA* 33, 42–43 (1935); Christopher S. Yoo, *Rethinking the Commitment to Free, Local Television*, 52 *EMORY L.J.* 1579, 1607–08 (2003).

59. These include costs incurred in the efficient pursuit of failed efforts, diversified project portfolios, or both, all capitalized at the appropriate risk-adjusted rate.

60. For ease of exposition, all specific examples in this Article assume Chamberlin’s basic model of monopolistic competition—often referred to as a “representative consumer model”—in which all firms compete for all consumers in the market. CARLTON & PERLOFF, *supra* note 14, at 201. Other models, especially those within the categories of location models or hybrid models, may produce different analyses and results in specific cases. The choice of models does not change, however, our general observations about product differentiation theory and its application to copyright. Some further assumptions of this basic Chamberlin model include: free entry by firms, equal fixed costs, and negligible effects of the behavior of any one firm on any other.

comic genre). Assume, for now, that the two products are perfect substitutes for each other and that each firm incurs an identical development cost (i.e., \$160,000).<sup>61</sup> What will be the effects of the entry in time 2 when each firm faces competition from the other? The first effect will be a decrease in price. The extent of the price decrease is a matter of some disagreement in economic theory,<sup>62</sup> but under one common set of assumptions, each firm will optimize its output on the basis of residual demand available to it given the output decisions of its rival, until an equilibrium is reached where no firm has an incentive to change output levels.<sup>63</sup> The corresponding price charged by each firm will be the profit-maximizing one given the residual demand available to it in equilibrium. Here, this scenario would result in each firm producing 40,000 units at \$4 for \$160,000 revenue each. At this point there would be no further entry since each firm is pricing at average cost, so as to exactly recoup its investment, leaving no rents to attract additional entry (entry which would likely result in a loss to all firms). We see, then, how differentiated product competition brings with it a reduction in price and in deadweight loss. In time 1 (which represents monopolistic conditions), 60,000 units were sold for \$6 each, resulting in deadweight loss of \$180,000. In time 2, a total of 80,000 units were sold (40,000 by each firm) for a price of \$4, resulting in a decreased total deadweight loss of \$80,000.<sup>64</sup>

Two features of the effects of differentiated product competition on deadweight loss bear emphasis at this stage. First, the degree of entry and of resultant reduction in deadweight loss depends on the ratio between the fixed cost of each firm and the size of the surplus.<sup>65</sup> The smaller the costs in proportion to demand, the greater the number of firms that we can expect will enter the market and cause additional decreases in price.

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61. Assume, that is, that we have a case of undifferentiated monopolistic competition. See *supra* note 42.

62. See CARLTON & PERLOFF, *supra* note 14, at 160–92 (reviewing the disagreement among economists “about the best way to model [oligopolistic] markets,” with the existence of a number of plausible models that “make very different assumptions about how firms behave,” resulting in “very different predictions about the nature of the equilibrium”).

63. This model is known as Cournot pricing. *Id.* at 161–70. For its application to monopolistic competitions, see *id.* at 207–09.

64. Actual pricing schemes in some copyright industries may differ greatly from the one assumed in this stylized example. Thus, in many sectors, such as film and recorded music, products are ostensibly priced more or less uniformly irrespective of demand or development cost, with greater popularity seemingly reflected mainly in the volume of sales. Any concrete application of the abstract product differentiation model to specific industries will have to account for such practices. The crucial point for our purposes here—that increased copyright protection will create more pricing power, which will attract entry by competitors offering substitutes—applies, however, even if prices are relatively uniform across goods.

65. Yoo, *supra* note 1, at 239.

A second point is that while differentiated competition reduces deadweight loss, it can never eliminate it altogether. Recall *Scenario 3* discussed above.<sup>66</sup> To recoup its fixed cost each firm must price its product above marginal cost. In the absence of marginally costless perfect price discrimination, this necessarily involves some deadweight loss. The idea of providing incentives via IP rights without deadweight loss remains just as illusory as before the incorporation of product differentiation analysis. As explained, as the ratio between market size and fixed cost increases, deadweight loss will tend to decrease. But it can never disappear altogether. The theoretical exception is the limit case in which the size of the market is infinite relative to the fixed cost.<sup>67</sup> At this point differentiated competition collapses into a standard pure competitive model: the number of firms is infinite, price equals marginal cost, and there is no deadweight loss.<sup>68</sup>

Notice, however, that in this limit case, any IP protection provided does not in fact perform any incentive function. Where the IP right does not facilitate firms' ability to charge above marginal cost, it does not provide any added incentive. Indeed, the lesson from the theoretical limit case would be that when conditions approach such a situation—that is, when the ratio between market size and fixed cost is very large—the incentive-based justification for providing IP protection becomes very weak. Where firms are able to recoup their fixed costs with even a negligible markup above marginal cost, then it becomes increasingly likely that the quasi-rents required for covering development costs could be generated by some of the many alternatives to IP protection commonly understood to mitigate the suboptimal incentive problem associated with information goods, such as first-mover advantages, contractual arrangements, social norms, indirectly leveraging the reputation associated with creative activity through various business models, and so forth.<sup>69</sup> And when this obtains, there is no reason to incur the costs associated with providing IP rights.<sup>70</sup>

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66. See *supra* section I(A)(2).

67. Yoo, *supra* note 1, at 239–40.

68. CARLTON & PERLOFF, *supra* note 14, at 211.

69. For a discussion of alternative means for recouping development cost, see LANDES & POSNER, *supra* note 9, at 43; Breyer, *supra* note 7, at 290–91.

70. Apart from the deadweight loss (a modest amount in this case), there are other costs associated with an IP-rights regime, such as costs of granting, enforcing, and bargaining over the rights. See LANDES & POSNER, *supra* note 9, at 16–21 (discussing transaction costs, rent seeking, and protection costs); James Bessen & Michael J. Meurer, Essay, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 388–89 (2014) (discussing the costs from “non-practicing entities”); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEXAS L. REV. 1031, 1058–59 (2005) (listing five “categories” of costs from “overbroad intellectual property rights”).

2. *Total Fixed Cost.*—Effects on price and deadweight loss comprise just one element of differentiated-product competition, just as they are only one set of parameters in a supramarginal–inframarginal analysis of IP trade-offs. Another element is the effect on total fixed costs incurred by the competing firms in combination. A basic assumption of product differentiation models is that all entrants incur similar costs (the common, but not necessary, assumption is identical cost curves for all firms).<sup>71</sup> The upshot is that each entry entails an additional cost in the form of the fixed cost invested by each entrant. The fiercer the competition and the greater the number of entrants, the larger the total fixed cost of all firms combined. In our example, each of the entering firms creates its own teenage-vampire comic book and thus incurs the full costs involved in developing such a product, so that if the development cost for one firm is \$160,000, then the total cost with two entrants is \$320,000.

Notice that, to the extent that each competing product is identical to the others, from the vantage of consumer preferences all fixed costs over and above the first firm's are duplicative and wasteful. That is, assuming as we have until now that each of the comic books in our example is a perfect substitute for the others (an assumption that will be modified shortly), then in a two-entrant scenario, the second firm's development costs are completely wasteful in the sense that twice the amount was spent to create what was, in terms of consumer demand, the same product. Differentiated competition creates, then, alongside its potential price benefits, social costs in the form of additional or duplicative fixed or development costs. Applying this insight to copyright creates an analogue to what, to a large extent, was already recognized in the patent literature. Specifically, it mirrors the discussion of the effects of race-to-invent, invent-around, and race-to-improve activity: namely how the existence of IP-enabled rents may spur the entry of multiple firms, each seeking with their own IP-protected product to “divert” or “steal” (or, in the patent context, “cannibalize”) the sales of other rival variants, with its respective social costs and benefits.<sup>72</sup>

3. *Variety.*—A final effect of product differentiation is that implied by the term “differentiation”: the positive impact on consumer welfare of new product variants that do not constitute perfect substitutes. Contrary to our simplifying assumption up to now of monopolistic competition taking place in a homogenous product space, recall that the standard assumption of product differentiation models is that for some subset of consumers, each

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71. See CHAMBERLIN, *supra* note 14, at 82 (making “the heroic assumption that both demand and cost curves for all the ‘products’ are uniform throughout the group”); see also Kaldor, *supra* note 58, at 43 (observing that the objection to the assumption of “identical cost and demand curves” as unrealistic is “no valid criticism” of monopolistic competition theory (internal quotation marks omitted)).

72. See *supra* notes 38–39 and accompanying text.

product is only an imperfect substitute for the others.<sup>73</sup> To the extent that segments of consumers differ in their preferences for the varying features of competitors in a given product space, the existence of a greater number of variants will tend to improve consumer welfare as a whole, by achieving a more fine-tuned satisfaction of consumer tastes.<sup>74</sup> If some readers of the first teenage-vampire comic book (say “Buffy the Vampire Slayer”) prefer a different variant in the genre (say “Ruffy the Vampire Eater”), then even if they like Buffy enough to be willing to buy it, the greater satisfaction they would derive from Ruffy would be a greater addition to overall social surplus.

Consequently, although the fixed cost incurred by additional entrants is always a real cost, the extent to which it is completely duplicative or wasteful (in the sense of not adding to social surplus) depends on the degree to which the variant satisfies a somewhat different set of consumer demands. Located at one extreme is the case of complete “demand diversion,” in which a new entrant offers a complete substitute that does not satisfy any new demand, resulting in completely duplicative development costs.<sup>75</sup> By contrast, in the case of “demand creation,” new product variants provide more refined satisfaction of consumer tastes, and thus their entry adds to overall social surplus (and perhaps to net social benefit, depending on the difference between their development costs and added demand satisfaction).<sup>76</sup> Thus, the third possible effect of differentiated competition is the variety benefit of demand creation through better tailoring of products to consumer preferences.

4. *Copyright as a Differentiated-Competition Lever.*—The extent and character of copyright may directly influence the market conditions that determine the character and extent of differentiated competition. Thus, copyright law’s contours may be consciously shaped with an eye to influencing such conditions. Most importantly, copyright can influence the

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73. Won’t variations in consumer preference for the offered products confer upon some firms market power over their differentiated competitors? Certainly this may happen in some real-world markets, but we adopt here the idealizing assumption of “symmetric preferences” that is common to many monopolistic competition models. See Yoo, *supra* note 1, at 225 (explaining and adopting “the symmetric preferences branch” of monopolistic competition theory (internal quotation marks omitted)). On this assumption, variations among a subset of consumers for one, rather than another, of the offered products balance out, so as to confer on no firm an advantage over its rivals across the class of consumers as a whole. See *id.* at 237 (“The primary effect of this [symmetric preferences] assumption is to place each work in equal competition with all other works in the group.”).

74. See CARLTON & PERLOFF, *supra* note 14, at 216 (“[V]ariety is desirable . . .”); Yoo, *supra* note 1, at 252–53 (referring to “welfare gains resulting from product variety”).

75. See Abramowicz, *An Industrial Organizational Approach*, *supra* note 1, at 39 (describing demand diversion); Yoo, *supra* note 1, at 253 (“[E]ntry appears to be a waste of resources when products are homogenous . . .”).

76. Yoo, *supra* note 1, at 260–61.

size of market surplus available to competing firms, thereby affecting entry levels and its related effects on deadweight loss, fixed cost, and variety.<sup>77</sup> To take our example, lengthening the copyright term for books and expanding its scope to cover a wider spectrum of activities involving the use of such books would increase the market surplus available for firms offering rival copyrighted books.<sup>78</sup> Holding constant the fixed costs involved in generating such books, more firms offering their own variants will enter the market, with the resultant economic effects just adduced. IP rights offer, then, an important lever for adjusting (in either direction) a central set of parameters associated with differentiated competition in informational works.

The analyses of the two main scholars who have written about copyright and product differentiation—Professors Yoo and Abramowicz—largely share the basic understanding of the three effects of product-differentiated competition described above. They also share a common recognition that various features of copyright law can serve as levers to shape the character and extent of competition between copyrighted, differentiated goods and the effects of such competition. From that common platform, however, the two move in sharply divergent directions. For Yoo, although the duplicative costs of differentiated competition are not completely overlooked, pride of place is given to its price-reducing and variety-increasing benefits.<sup>79</sup> Abramowicz, however, foregrounds its duplicative costs (and associated distortion in the allocation of overall social resources).<sup>80</sup> As a result, they offer strikingly different (indeed, virtually polar opposite) doctrinal recommendations, to which we turn next.

## II. Product Differentiation and the Parameters of Copyright Protection

Assuming that our sole normative beacon is economic efficiency,<sup>81</sup> what guidance can product differentiation theory offer in shaping copyright doctrines in pursuit of that aim? We approach this question in two stages: first by critically evaluating the existing doctrinal proposals offered in this vein by Professors Yoo and Abramowicz (this Part); and then by offering our own alternatives (Part III).

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77. *Id.* at 261.

78. The duration example is theoretical. Given the current baseline of a very long copyright duration and the declining *ex ante* value of any additional increment of duration, any additional extension is likely to produce only negligible effect on the value of a copyright. Accordingly, in current practice, duration is a very poor means for increasing market surplus at the *ex ante* point at which firms decide whether to enter a market with competing works. On the declining value of longer copyright protection, see *infra* note 130 and accompanying text.

79. See *infra* subpart II(A).

80. See *infra* subpart II(B).

81. The implications of product differentiation theory for values other than efficiency are explored by us in other work. See generally Oren Bracha & Talha Syed, *Beyond Efficiency: Consequence-Sensitive Theories of Copyright*, 29 BERKELEY TECH. L.J. (forthcoming 2014).

The existing prescriptions intriguingly form an almost exact mirror image of each other. In broad terms, Yoo emphasizes price and variety benefits of differentiated competition and recommends making copyright protection very strong, but also relatively narrow in the sense of reaching works that bear only high degrees of similarity to the original. By contrast, Abramowicz foregrounds the duplicative costs of such competition, and suggests that certain aspects of copyright protection should be made weaker than traditionally assumed, while also commending doctrines to increase the breadth of the (now overall weaker) protection, in the sense of covering works with much lower degrees of similarity to the original. We take up each set of proposals in turn, distilling the gist of their doctrinal recommendations and then evaluating them along the following respects: the plausibility of their legal analysis of how specific copyright doctrines do or can work; the economic desirability of their prescriptions for how the doctrines should work; and, where relevant, considerations of institutional administrability.

A. *Inclusive, Intense, & Narrow*

1. *Summary.*—The central thrust of Yoo’s approach is to promote access to copyrighted works by *strengthening* protection, so as to stimulate the competitive entry of differentiated substitutes and thereby bring down prices.<sup>82</sup> Stronger copyright promotes entry by increasing the surplus in the relevant market available for private appropriation, which attracts newcomers, competition from which should have a salutary effect on prices.<sup>83</sup> Moreover, with these entrants comes another social gain, in the form of increased tailoring of their differentiated wares’ features to consumers’ preferences.<sup>84</sup> Thus, increased entry produces both a reduction of deadweight loss and a beneficial increase in product diversity. On this view, then, the tension deemed inherent to copyright under the traditional incentive–access paradigm is taken to be a false dilemma: the ostensibly intractable trade-off between access and incentives is belied by the possibility of simultaneously promoting both.<sup>85</sup> Although deadweight loss can never be eliminated altogether, ideally it will be reduced to the minimal level predicted by the monopolistic competition model, in which each firm prices its product at average cost (so that overall returns are just enough to

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82. Yoo, *supra* note 1, at 251 (arguing that access “may be promoted by stimulating entry, which in turn requires the strengthening of copyright protection”).

83. *Id.* at 254–55.

84. *Id.* at 252–53, 267.

85. *Id.* at 251 (“[I]nsights [of product differentiation theory] falsify the claim that simultaneous promotion of access and incentives is impossible and that copyright necessarily devolves into a tradeoff between the two.”); *id.* at 264 (arguing that “by identifying remedies that can promote access and incentives simultaneously,” the differentiated-products approach “reveals the supposed tension between those two considerations to be something of a false conflict”).

recover the sunk capitalized costs of innovation or development).<sup>86</sup> The bottom line? Exactly in those cases where traditional theory prescribes cutting back protection—i.e., when there is concern over excessive price and deadweight loss—product differentiation theory counsels boosting protection up.<sup>87</sup>

However, the model does not indiscriminately advocate increased protection. Rather, Yoo distinguishes between three elements of copyright protection: “scope,” “intensity,” and “breadth.”<sup>88</sup> Scope is measured by the number of wealth-generating activities using a particular work that may fall under the sway of copyright protection.<sup>89</sup> It determines, that is, the size of the market over which various differentiated works, each protected by copyright, compete.<sup>90</sup> The doctrinal levers shaping scope in this sense include the term of protection and the bundle of exclusive entitlements given to the copyright owner. Intensity refers to the degree to which copyright owners can “appropriate the surplus created by [the uses of] their works” that fall within the encompassed scope.<sup>91</sup> Intensity, too, may be affected by various doctrinal features, such as the many exemptions, limitations, and compulsory licenses that exist in the Copyright Act,<sup>92</sup> or the extent to which certain uses are exempted under the fair use doctrine.<sup>93</sup> Intensity, like scope, affects the size of market surplus available to competitors.<sup>94</sup>

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86. *Id.* at 244, 253–54.

87. *Id.* at 259.

88. *Id.* at 264–65.

89. *Id.* at 265–66.

90. *Id.* at 266.

91. *Id.* at 267.

92. *See, e.g.*, 17 U.S.C. §§ 107–112, 121 (2012) (imposing certain statutory exemptions, limitations, and compulsory licenses on copyright owners).

93. Yoo, *supra* note 1, at 267–70.

94. The boundary between Yoo’s “scope” and “intensity” of protection can be somewhat blurry. The question of whether a particular activity—such as copying by libraries—should be covered by copyright will often be plausibly framed as pertaining either to “the size of the right” that the holder receives as a matter of the “scope” of copyright entitlements, or to the “intensity” of said entitlements. *Id.* at 267. Examples such as this point to a disjunction between the economic categories Yoo seeks to mark out with his distinction and the doctrinal tools identified to track them. From an economic point of view, the analytical distinction being emphasized—between the “sweep of surplus-generating activit[ies]” associated with an informational work that copyright protection may reach and the proportion of the surplus from such activities that the copyright holder is empowered to appropriate—seems, although not watertight, clear enough. *Id.* at 265. However, some of the doctrines discussed under the second category of intensity—such as fair use—seem on the whole more appropriate to slot under the first, that of scope. More fitting under intensity would seem to be doctrines (some of which may lie outside copyright proper) that affect, for example, a copyright holder’s ability to engage in fine-grained forms of per-use charges (e.g., one price for (each) reading of a book, a different price if also lending the book to a friend, etc.) and price discrimination among groups of users (which Yoo does place under this rubric). *Id.* at 270–71. Given, however, that Yoo’s policy prescriptions for the two categories converge, we leave aside the question of how to doctrinally and functionally distinguish between them.

The third dimension, breadth, refers to the degree of similarity to a copyrighted work that a second work must display to be found infringing.<sup>95</sup> Wide breadth will encompass remote and abstract levels of similarity, while narrow breadth will be limited to adjacent, concretely specified similarity in expressive elements. Breadth operates as a legal constraint on the degree of substitutability of competing differentiated works—the broader the protection, the less finely differentiated or more imperfect as substitutes the rival works will be.<sup>96</sup> And this constraint is affected by several distinct doctrinal levers, including the test for copyright infringement, the idea–expression dichotomy,<sup>97</sup> the *scène à faire* doctrine,<sup>98</sup> and the merger doctrine.<sup>99</sup>

The interaction of these three dimensions of copyright protection with the dynamics of differentiated-product competition issues in as a strong default: the prescription of strengthening the first two dimensions (scope and intensity) while weakening the third (breadth).<sup>100</sup> Wider scope and

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95. *Id.* at 265.

96. *Id.* at 271–72.

97. See 17 U.S.C. § 102(b) (denying protection to any “idea”); *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930) (explaining that apart from their expression, a playwright is never extended property rights for his “ideas”).

98. See *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 535 (6th Cir. 2004) (utilizing the doctrine to ascertain the “elusive boundary line” between idea and expression); *Schwarz v. Universal Pictures Co.*, 85 F. Supp. 270, 275–78 (S.D. Cal. 1945) (illustrating the French *scènes à faire* to make its decision); 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.03[B][4] (2013) [hereinafter NIMMER ON COPYRIGHT] (explaining the doctrine).

99. See 17 U.S.C. § 102(b) (denying protection to any “procedure, process, system, [or] method of operation”); *Baker v. Selden*, 101 U.S. 99, 104 (1879) (ruling that while one has the right to print or publish a book that describes a “useful art,” others may practice that art without violating copyright); NIMMER ON COPYRIGHT, *supra* note 98, § 2.18 (discussing “Limitations on Copyrightability by Reason of Utilitarian Function”); Pamela Samuelson, *Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection*, 85 TEXAS L. REV. 1921, 1976 (2007) (“Some courts have employed the scenes a faire or merger doctrines in order to limit the scope of copyright protection in cases involving complex functional designs in copyrighted works.”); see also *BUC Int’l Corp. v. Int’l Yacht Council Ltd.*, 489 F.3d 1129, 1143 (11th Cir. 2007) (describing the merger doctrine); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 13.03[B](3) (explaining merger).

100. See Edward Lee, *Digital Originality*, 14 VAND. J. ENT. & TECH. L. 919, 938 (2012) (explaining how two identical works can each obtain copyrights or other protection). The distinction between scope and breadth is in fact quite unstable and difficult to pin down, even conceptually, and this significantly complicates the prescription that we should, on the one hand, strengthen the former while, on the other hand, weaken the latter. The difficulty is that it is unclear what precisely are the criteria for distinguishing variations in surplus-generating activities relating to the same work (i.e., scope) from variations in the level of similarity between the original and subsequent works (i.e., breadth). Consider the case of a film adaptation of a novel or a translation which sticks as closely to the original as possible. Is each of these yet another surplus-generating use of the original that we should include within the scope of copyright protection, or is it an imperfect substitute that we should tend to allow under the guideline of narrow breadth? There is a clear and intuitive sense in which the film and the translation are surplus-generating uses of the same original work. But for a substantial number of consumers of the novel they may also be imperfect substitutes of the original. The translation is an imperfect

higher intensity of protection will give rise to a larger market, with more uses of the informational work being covered by copyright and holders being empowered to appropriate a larger share of the surplus from this market.<sup>101</sup> This increase in potential revenues from expressive works will attract new entrants, resulting in the two beneficial effects of enhanced competition (leading to lower prices for incumbents' works and thus decreased deadweight loss), and greater differentiation or variety in the expressive works on offer (and thus more finely tailored satisfaction of the preferences of subsets of consumers).<sup>102</sup> Meanwhile, narrowing the breadth of protection will minimize the legal hurdle for entry by close, but imperfect, substitutes.<sup>103</sup>

Moreover, transcending the traditional assumption of an inherent trade-off between access and incentives also yields gains, on this account, in the administrability of an efficient copyright regime.<sup>104</sup> Under the incentive-access paradigm, the governmental institutions that make and apply the law should attempt to "calibrate the level of copyright protection to the lowest level possible that still supports the production of creative works."<sup>105</sup> More precisely, they should shape copyright so that protection is only extended in those cases where the social benefits from added or supramarginal innovations outweigh the social cost of decreased access over inframarginal ones. Such calibration requires massive amounts of information and a high degree of skill,<sup>106</sup> both of which are expensive or perhaps simply unavailable. Additionally, a governmental process of such complexity and uncertainty may be especially vulnerable to intensive levels of rent-seeking activity by private parties seeking to divert its results in their favor.<sup>107</sup> By contrast, the doctrinal recommendations flowing from product differentiation radically simplify the task facing governmental agencies. All they have to do is to turn the three doctrinal knobs identified above, in the clear and consistent directions specified, so as to facilitate differentiated-competitive entry, after which they can just rely "on the market to calibrate prices at the levels that ensure that authors do not earn

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substitute of the original for those who fluently read both languages. The film is an imperfect substitute of the original for those who would answer the question "Have you read *Pride and Prejudice*?" with the response "No, but I've seen the movie." This ambiguity encompasses more than a limited number of cases along a fuzzy conceptual borderline. Many of the derivative uses that are potentially covered by modern copyright law seem to trigger the same conceptual difficulty. This substantially muddles the neat distinction between scope and breadth and the distinct doctrinal recommendations applicable to each category.

101. Yoo, *supra* note 1, at 266–67.

102. *Id.*

103. *Id.* at 271–72.

104. *Id.* at 224–25, 258–59.

105. *Id.* at 258.

106. *See id.* at 224, 258–59 (noting that informational demands of the traditional approach "border on the prohibitive" and "threaten to exceed the government's institutional capability").

107. *Id.* at 259 n.147.

supracompetitive profits.”<sup>108</sup> Such an enterprise, given its comparatively clear and categorical character, is far less demanding of information and skill and, presumably, less susceptible to rent-seeking activity.

If the position described above seems somewhat rosy, it is not completely panglossian. Yoo acknowledges that “an important qualification” to the foregoing is the potentially duplicative and, hence, wasteful character of differentiated competition.<sup>109</sup> That is, when much of the surplus appropriated by an entrant comes not from new surplus generated by more tailored satisfaction of consumer preferences (demand creation), but from transfers of existing surplus siphoned from incumbent products (demand diversion), there is the danger that such entry may remain privately profitable even when its added social benefits are outweighed by its costs.<sup>110</sup> The danger is closely related to the level of substitutability between competing products: the more perfect a substitute of an existing product that a new entrant is, the higher the level of demand diversion and possibility of a net social loss.<sup>111</sup> To be sure, in less cautious moments Yoo claims that the potential problem of wastefully duplicative entry that “disappear[s] when viewed through the lens of product differentiation.”<sup>112</sup> However, in general he does recognize that high levels of “demand diversion” may result in a net social loss.<sup>113</sup>

To address this countervailing consideration, Yoo recommends refining his prescriptions in the direction of even stronger protection, by now increasing the one so far weaker dimension, that of breadth.<sup>114</sup> Lawmakers, he suggests, can pursue the optimal level of competition by calibrating breadth as follows. When the volume or similarity of expressive works in a given product space seems too high—i.e., when there is crowding of a genre with increasingly substitutable variants—then the danger of demand diversion is strong and should be addressed by fine-tuning the test for infringement so as to cover works at lower levels of similarity, thereby “increas[ing] the distance between adjacent works.”<sup>115</sup> When substitutability seems low, and hence the danger of much demand diversion remote, we keep to the default view of a narrow approach that requires high levels of similarity for infringement.

Although on first blush Yoo’s recommendations may seem both coherent and substantively attractive, on closer scrutiny neither conclusion can be sustained. In the following section we identify a number of

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108. *Id.* at 259.

109. *Id.* at 222 n.33, 260–64.

110. *Id.* at 261.

111. *Id.* at 272.

112. *Id.* at 253–54.

113. *Id.* at 263.

114. *Id.* at 263, 271–72.

115. *Id.* at 272.

theoretical difficulties facing the model and its policy prescriptions. We then turn, in sections II(A)(3) and (4), to doctrinal and administrability hurdles to implementing those prescriptions even if they were theoretically sound.

2. *Policy Gaps and Conflicts.*—The central thrust of this model, of simultaneously promoting incentives and access by strengthening protection to increase competitive entry by differentiated expressive works, is flawed in three fundamental respects. First, its primary claim of somehow transcending the intractable character of the incentive–access trade-off lying at the heart of traditional copyright-policy analysis is belied once we realize that to a large extent it just replaces this with another equivalently inescapable trade-off, that between deadweight loss and duplicative wastes. Second, the analysis significantly underestimates the costs of reducing deadweight loss using the mechanism of increased competitive entry by differentiated substitutes. Finally, and relatedly, it also significantly exaggerates the incentive benefits represented by such differentiated substitutes.

These flaws are significantly connected to an important underlying analytic weakness, which is the model’s failure to fully integrate the distinct components of the supramarginal–inframarginal framework laid out in subpart I(B) above. As specified there, the basic policy dilemma at the heart of copyright is between realizing supramarginal benefits of increased levels of protection—in terms of enabling the creation of otherwise-foregone innovations—and incurring its negative inframarginal effects in terms of barriers to access and duplicative wastes.<sup>116</sup> These benefits and costs result from the exercise of exclusionary rights over nonrival goods. Yoo’s analysis, however, fails to recognize the centrality of nonrivalrousness (indeed its importance is explicitly downplayed<sup>117</sup>), and correspondingly it understates the intractability of deadweight loss as well as the costliness of any attempt to reduce it that does not take advantage of the nonrival character of expressive works.

a. *Price Competition: How Much Benefit at What Cost?*—We begin by considering a basic case under the traditional incentive–access framework. Suppose that at current level of copyright protection  $X$ , we have exactly the incentive needed to attract the creation of comedy film  $A$ . At this level of protection, that is, the film’s creators will be able to realize revenues—by pricing the film (and “windowing” its release, etc.), in a certain way for a certain duration—that are just enough to recoup their development costs (capitalized, adjusted for risk, and factoring in failed

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116. See *supra* text accompanying notes 38–39.

117. See Yoo, *supra* note 1, at 246–48 (discussing “the noncentrality of nonrivalry”).

efforts). In the absence of the unrealistic option of costless perfect price discrimination, film *A* will be made available at prices that are to a large extent uniform across customers, involving markups that incur some deadweight loss. However, on the assumption that the level of protection *X* is just enough to enable the creation of the film, the flat prices charged will be the minimal ones needed for the creators to recoup their investment and, thus, for the film to be created at all. Accordingly, while there is deadweight, it is at a level below which the creation of the film would be jeopardized.

Focusing solely on the market for this single film *A*, traditional economic analysis discloses two sets of insights regarding how outcomes in such a case may be improved within the framework of copyright. First, no improvement would come from a simple “increase” or “decrease” in overall protection by itself. Any reduction in the level of protection would cause the film not to be created at all. Any increase in the level of protection would result in a higher price and greater deadweight loss, with no corresponding social benefit. However, and second, there are nevertheless possibilities for improvement by tweaking various levers so as to provide the same incentive with smaller corresponding deadweight loss.<sup>118</sup> For example, we might adjust copyright exemptions or damages to increase access to some users via lowered or eliminated restrictions, while offsetting any decrease in producer returns through increased protection over other uses that come with lower per-unit deadweight loss.<sup>119</sup> Or we might increase overall copyright protection but then supplement it with compulsory licenses or administered royalty rates, so as to provide revenues over a larger or longer market, but at a lower per-unit markup. In such cases, the trade-off is not between “incentives” versus “access,” but between different types of “access” or “loss” accompanying the same amount of “incentive.”

On Yoo’s account, however, product differentiation theory suggests that a simple increase in the overall level of protection could be a net improvement by itself.<sup>120</sup> Suppose that by adjusting some of its parameters (those corresponding to scope and intensity), copyright protection is boosted from *X* to *5X*; that is, the beefed-up protection level increases by fivefold the market size or amount of surplus from market demand that is made available to sellers.<sup>121</sup> Initially, the effect would likely be either an expansion of price restrictions over a larger set of uses, or a substantially

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118. See Fisher, *supra* note 9, at 1668–86 (1988) (developing incentive–loss ratio analysis); Louis Kaplow, *The Patent-Antitrust Intersection*, 97 HARV. L. REV. 1813, 1829–38 (1984) (same).

119. See Fisher, *supra* note 9, at 1767–79 (discussing possible ways a judge could alter the fair use doctrine to allow greater amounts of access without discouraging producers).

120. Yoo, *supra* note 1, at 254–55.

121. Obviously, achieving this is much more complicated than we make out here.

higher price charged for already-protected uses, of film *A*, resulting in larger producer revenues or surpluses and greater deadweight loss. Over time, however, the increased surplus available in the market would attract entrants offering close substitutes of film *A* (meaning only slightly different comedy films *A1*, *A2*, *A3*, etc.). Eventually the market would reach an equilibrium with a large number of slightly differentiated comedies, each sold for a price just sufficient for each film to cover its capitalized development costs, with corresponding levels of deadweight loss. In this sense, looking only at the market of film *A* and its close substitutes, both incentive and access seem to have been promoted. Increased copyright created additional available surplus, which attracted greater entry and thereby incentivized the creation of close substitutes. At the same time, the competitive dynamic between the substitutes promotes access by bringing price and deadweight loss levels down, at least *by comparison to the initial situation created by the increased level of copyright protection*.

We will soon expand our focus to examine the effects of this increase in general copyright protection on markets for other copyrighted works besides film *A* and its close substitutes. But first we must notice that even within the market for film *A*, our assessment of the foregoing effects depends on what we take to be our comparative baseline. Specifically, the above “access” and “incentive” gains seem more impressive when the baseline is taken to be the situation immediately after the increase in protection; they are much less likely to be a net improvement over the *initial situation prior to the increase in the level of protection*.

Consider first the issue of reduced deadweight loss. How, it might be asked, could there be any improvement in access over a situation where, prior to the increase in protection, the pricing power conferred by copyright was only just enough to recover development costs (and hence the corresponding deadweight loss was that just necessary to enable creation)? The answer is that strengthening protection as above not only increases pricing power but also expands the market size/surplus over which that power is exercised.<sup>122</sup> If that increased power is then somehow disciplined or diffused over a larger volume, there is the potential for it to be less distortive, by resulting in a smaller per-unit markup. A variation of this point was already understood with the traditional framework, which, as discussed above, recognized that one way to improve outcomes is to reshape protection so that the same amount of incentive can be realized with a different amount, or composition, of loss.<sup>123</sup> Applied here, this would mean that alongside expanding copyright over more uses (or for longer periods), we would impose measures to discipline its per-use pricing power, such as with reduced damages for infringement or compulsory licenses.

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122. Yoo, *supra* note 1, at 254.

123. See *supra* notes 118–19 and accompanying text.

This would provide the same incentive with a smaller corresponding loss in access. Yoo’s model, however, proposes to expand copyright pricing power without any accompanying administrative attempts to curb it; rather, it prefers to rely on market competition to discipline the expanded power, in the form of differentiated entry. The trouble with this approach, however, is twofold: there is no assurance that overall deadweight loss will indeed decrease, and any decrease that is realized in this manner will be achieved at a very high cost, incurring unnecessary wastes from duplicative entry.

When copyright protection is strengthened to increase the market surplus available to firms, there is no guarantee that any ensuing competitive entry will result in a net decrease in deadweight loss. Two countervailing effects are at work in such a case. The first, emphasized by Yoo, is the decrease in price that results from expanding market size/surplus, which results in increased entry and competition over a larger base of consumer sales.<sup>124</sup> Countervailing that, however, is the extension of the negative effect of supracompetitive pricing over an additional segment of consumer demand, whether expanded copyright is achieved by term extensions or by alternatives, such as including within the scope of protection uses of the work that were previously exempted. If, for example, the copyright term is extended from ten years to thirty, those consumers who previously could have accessed the work free and clear of protection after ten years, under fully competitive conditions, will now endure an additional twenty years of copyright-protected prices, generating additional deadweight loss. Which of these two countervailing effects dominates will depend on a host of conditions pertaining to demand patterns in different submarkets that will likely vary from case to case, with net deadweight loss potentially increasing, decreasing, or remaining unchanged. There is no particular reason to think that in most cases the prevailing effect will be a net decrease.

Moreover, the effect on deadweight loss is never isolated. Whether positive, negative, or nonexistent, it is always “purchased” at a substantial cost: that of additional fixed costs incurred by each new entrant. Each new product variant—in our example, each new comedy film—requires expenditure on the fixed costs of its development. These total costs steadily accumulate with each entrant attracted by higher levels of available surplus, and do so at a roughly constant rate. Meanwhile, the intensity of price competition, and hence the magnitude of the positive effect of decreased deadweight loss, if any, will tend to fall steadily with each new entrant.<sup>125</sup> As a result, it becomes increasingly unlikely that the net result of increased

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124. See Yoo, *supra* note 1, at 254 (predicting the increased competition from strengthened copyright protections will drive prices closer to the marginal cost of works).

125. See *supra* notes 56–57 and accompanying text.

protection in the market for the inframarginal innovation—in our example, the market for comedy films ( $A1$ – $An$ )—will be positive.

To recap, then, the inframarginal effects of this model's proposal on the market for film  $A$  and its close substitutes will be an increase in deadweight loss for some segment of consumer demand, which may (but also may not) be ultimately compensated by a decrease in deadweight loss for some other segment, but which decrease will in any case be purchased at the considerable cost of increased duplicative wastes. But, it might be asked, what about the fact that films  $A1$ – $An$  will not be identical to film  $A$ , and hence not purely duplicative? Does this not mean that their entry potentially adds valuable variety, which must then be added to the benefits side of the ledger? Indeed it does, but on our view this is better analyzed as a supramarginal rather than inframarginal effect, and doing so allows us to bring into the analysis another, related but distinct, supramarginal effect that Yoo's model tends to obscure.

*b. The Declining Benefits of Added Variety.*—At stake in adjustments to copyright protection, as elaborated in subpart I(A), are effects not just on inframarginal innovations but also on supramarginal ones. To return to our example, level  $X$  of copyright protection was just enough to incent the creation of comedy film  $A$ . But what about sci-fi film  $B$ ? Assume that the total demand for film  $B$  is roughly the same as for film  $A$ , but due to its reliance on expensive special effects,  $B$ 's development costs are much higher. Given these conditions, Film  $B$  will not be created under level of protection  $X$ . If, however, we increase the level of copyright protection to  $5X$ , this will be just enough to enable its creation. At the same time, the increased level of protection—which, we are assuming, will be provided in a general manner applicable to both these innovations—will create additional surplus in the market for film  $A$  and will trigger the dynamic of differentiated entry described above. The costs and benefits that have to be taken into account include the effects both in the market for film  $A$  and in the market for film  $B$ .

Within that dynamic, comedies  $A1$ – $An$  are, seen solely in terms of their added variety value, supramarginal to level  $X$  of copyright protection just like film  $B$ . If, as we have been supposing, each of these comedies is no more expensive to make than the first film  $A$ , a question arises as to why  $A$  was privately profitable to develop under protection level  $X$  but the others were not. The answer is that enough of the general market demand for comedies was satisfied by  $A$ , with the remainder that would have preferred, say, the differentiated substitute  $A1$  not providing sufficient added sales under  $X$  level of IP to recover development costs. So when viewed in terms of its added variety value,  $A1$  is supramarginal to  $X$  level of copyright.

The costs and benefits that have to be taken into account include, then, not only the effects in the market for film  $A$ , the focus of Yoo's analysis,

but also those in the market for film *B*, unanalyzed in the model. The inframarginal effects of increased protection are as described above.<sup>126</sup> To these we need to add in the supramarginal benefits from added variety and works in new markets. How does the model's prescriptions fare when the entire set of inframarginal and supramarginal effects is kept in view?

The default assumption adopted by Yoo seems to be that typically the net result of increased protection will be positive.<sup>127</sup> Yet the basis for this is unclear, since it is not evident why the benefits from increased entry—reduced prices and deadweight loss for some segment of demand along with increased variety—should necessarily outweigh the costs of duplicative wastes and increased prices for other segments. As explained, a decrease in deadweight loss cannot be assumed and, as will be explained shortly, the value of increased entry progressively declines. Thus, as the base level of differentiated competition increases, the positive inframarginal effect of inducing further competition decreases and the negative inframarginal one continues to accumulate at a steady rate. And similar tendencies toward declining benefit are likely to set in with respect to the two supramarginal effects of added variety and new works in distinct product spaces.

Assume that in the next iteration of our example we consider whether to further increase the level of copyright protection in order to attract the next supramarginal innovation film *C*. Film *C* is an action–fantasy film requiring expensive locations, the most advanced special effects, and a concentration of stars who must be paid stars' salaries. It will only be created if the level of copyright protection is  $8X$ . Increasing the level of protection from  $5X$  to  $8X$  will create new available surplus in the market for film *B*, causing differentiated product competition along the lines described above. The same is true of the market for film *A* that will undergo a second wave of entry by differentiated products. At the starting point for this second iteration, however, the market for *A* is already relatively saturated with imperfect substitutes  $A1$ – $An$ .

As this dynamic unfolds, with every additional increment of copyright protection the likelihood of a net positive effect drops. On the inframarginal side, the positive effect, if any, of increased competition on deadweight loss progressively declines while duplicative fixed cost of entry accumulates at a steady rate. Meanwhile, both kinds of supramarginal

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126. It may be asked whether, just as the model misses out on supramarginal effects in markets other than for film *A* and its substitutes, may it also miss out on inframarginal effects in other such markets? The answer is that with respect to supramarginal effects, there are two distinct dynamics that need to be analyzed, as our following discussion explicates. The market for film *A* and its substitutes captures only one of these; hence the need to bring in the additional market. Regarding inframarginal effects, however, the dynamics in the market for film *A* and its substitutes can be taken to be representative of general inframarginal effects.

127. See Yoo, *supra* note 1, at 256 (suggesting that “economic welfare might be better promoted” by increasing copyright protection in certain circumstances).

benefits decline as the level of copyright necessary to attract them rises. New variety benefits decline as product space becomes more crowded because new entering films offer ever finer and therefore less valuable degrees of variety.<sup>128</sup> And for completely new supramarginal innovations, stronger copyright tends to have diminishing returns for a somewhat distinct reason.<sup>129</sup> The reason why certain innovations are supramarginal at relatively high levels of intellectual property protection is their high development cost. It is possible, of course, that a new innovation is so valuable that despite its large cost, its net value is at least as high as that of other innovations created at a much smaller cost. But it seems plausible to assume that in many cases within the realm of copyright, as costs increase, at least beyond a certain threshold, social value will not increase at a similar rate.<sup>130</sup> In those cases, while the net value of the innovation may still be positive, a larger part of the value is consumed by the mounting cost. The net result of this dynamic is that each increment of copyright protection purchases smaller supramarginal benefits for greater inframarginal costs.

In response to some (but not other) of these concerns, Yoo's model supplements its default stance with a precautionary measure aimed at curbing the costs of wasteful duplication. The measure: increase copyright protection along the dimension of breadth.<sup>131</sup> Whenever a product space seems so crowded as to raise significant demand diversion concerns, the model proposes broadening the substantial-similarity test to find more competitor works infringing and thereby push imperfect substitutes further away from each other. Quite apart from the significant doctrinal and administrability hurdles this faces,<sup>132</sup> this response seems unavailing on the substantive level. Forcing larger differences between differentiated products comes with the cost of reducing the intensity of their competition and thus foregoing their claimed beneficial effects on price and deadweight

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128. In real markets for copyrighted goods, the value of increased variety is often expressed in more complex patterns than a choice by each consumer of one best tailored variant. In the real world, a consumer who is offered several songs or films may choose to consume many or even all of them. The basic dynamics of diminishing value to variety in increasingly crowded product space persists, however, even in the presence of such consumption patterns for two reasons. First, even when consumers consume numerous information goods, many of them don't consume all substitutes and therefore they are still making choices among groups of preferred variants. Second, even when many or all substitutes are consumed by a particular consumer, additional variants have a diminishing value, as evidenced by the higher marginal value of adding one song to a collection of ten compared to adding it to a collection of one thousand.

129. See Lemley, *supra* note 70, at 1057 (“[I]ncreasing the strength of intellectual property rights has diminishing returns in terms of encouraging marginal inventions of any value to society . . .”).

130. See Alan V. Deardorff, *Should Patent Protection Be Extended to All Developing Countries?*, 13 *WORLD ECON.* 497, 504–05 (1990) (providing a formal argument for this point in the patent context).

131. Yoo, *supra* note 1, at 263–64.

132. See *infra* sections II(A)(3)–(4).

loss. Yoo seems to recognize the inescapability of some trade-off here between his chosen levers: namely, that we either pursue the price–competition benefits of diversion-driven entry and then live with the cost of some duplication waste, or we seek to curb the latter and live with higher prices.<sup>133</sup> His response is for policymakers to pursue “a delicate balance” between these competing considerations, using the substantial-similarity test typically to narrow but sometimes to expand breadth, so as to “strike a difficult balance” between prohibiting too close substitutes and allowing substitutes that are close enough.<sup>134</sup> It is important to be clear that such a balance would not somehow finesse the trade-off by identifying circumstances in which gains from price competition may be realized without the costs of duplication waste; rather, the aim would be to pursue a joint level of price-reduction benefits and duplication costs that result in the highest net gain.<sup>135</sup> It is not clear, however, why a stronger level of copyright protection so optimized will tend to lead to a better result than a lower level, similarly optimized.

3. *Doctrinal Difficulties.*—A final set of problems facing the model relate to its proposals for how to calibrate the breadth of copyright protection. A number of crucial doctrinal ambiguities attend these prescriptions, and resolving them requires confronting precisely the sorts of policy trade-offs that the model hopes to transcend with the product differentiation framework. The model’s proposals are that lawmakers should, as a default, adopt a narrow approach—so that only closely similar works are deemed infringing—while retaining the option, in certain instances, to an expansive view when that is necessary for reducing duplication wastes from demand diversion. These face the following conundrums: (1) to apply the narrow approach to copied works threatens copyright’s basic incentive function, while restricting the prescription to independently created works renders it superfluous; (2) meanwhile, an expansive approach to breadth—whether applied solely to works involving copying or also (through reform) to independently created works—is likely not very doctrinally feasible and, in any case, would considerably undercut the price-competition benefits sought elsewhere in the model.

Consider first the default prescription of narrow breadth: is this to apply to cases of independent creation or to copying (or to both)? Applied to the former, so that independently created works should be deemed non-infringing even when they are quite similar to the original, the recommendation would seem to be inert, as American copyright law is

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133. Yoo, *supra* note 1, at 272.

134. *Id.*

135. Unfortunately, no factors are identified in the model for how to pursue that joint optimum.

already there. Indeed, a fundamental feature of copyright law (one that distinguishes it from patents) is that independent creation is *never* an infringement. Copying is an essential element of an infringement claim, without which there is no relief, even against the unlikely case of an exact identical work.<sup>136</sup> In this sense, American copyright law has zero “breadth”: in principle, it allows not only close, but indeed perfect, substitutions of protected works so long as they are independently created.

Perhaps, then, the prescription is meant to apply not to independently created works but to those works whose similarity to the original is attributable to copying. That is, the close substitutes to be allowed entry under a narrow approach are simply copies of the original that fall short of being verbatim (with the requisite distance to be determined by the breadth standard). This approach, however, raises difficulties of its own. Where an expressive work’s close similarity is attributable to copying, that will often mean that the copier incurred substantially lower fixed cost of development or entry. This points to an important distinction between information and non-information goods with respect to differentiated competition. If I open a coffee shop that competes with yours and “copies” most of the features of your product, nevertheless my fixed costs of entry will likely remain quite similar to yours. However, for information goods, where a very substantial part of the fixed cost is attributable to developing the informational content of the product, a subsequent competitor who offers a very similar work due to copying is likely to incur a much lower entry cost. Copying is typically much cheaper than creating.<sup>137</sup> The implications of this for how differentiated-product models work in the copyright context are likely to be considerable. Although such models do not require precisely equal fixed costs being incurred by all entrants, substantial differences between the costs of the creator/incumbent and those of the imperfect copiers/latecomers will produce a very different competitive equilibrium than one premised on roughly equivalent fixed costs. Most importantly, copiers who incur significantly lower fixed costs can recoup their investments at much lower prices than the original creator, and thus competitive entry will result in a much lower equilibrium price than if all entrants incur fixed costs similar to that of the incumbent/creator. Given fierce enough competition, the price may drop to a level that does not enable the creator to recoup its original fixed costs, robbing copyright of its basic incentive function.

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136. See *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 54 (2d Cir. 1936) (explaining that the unlikely independent creation of John Keats’s “Ode on a Grecian Urn” would merit separate copyright protection).

137. Cf. Rufus Pollock, *Innovation and Imitation With and Without Intellectual Property Rights* 7 (Jan. 2008) (unpublished manuscript), available at [http://rufuspollock.org/papers/innovation\\_and\\_imitation.pdf](http://rufuspollock.org/papers/innovation_and_imitation.pdf) (modelling imitation as being costly, but still significantly less costly than innovation).

A different set of conundrums faces the secondary proposal, that we may sometimes wish to expand breadth when it seems advisable in order to curb a high likelihood of demand diversion by dampening the entry of substitute works. Here again, we face a threshold question: is such an expansive approach to be applied only to disallowed copied works or also to find even independently created works infringing? The latter would require, of course, a far-reaching reform of existing doctrine which, as just stated, currently takes the non-infringing character of noncopied works to be a fundamental principle.

Restricting the proposal to copied works faces a significant doctrinal hurdle: namely, that it would seem to involve quite a far-reaching reworking of current rules for them to serve this policy function. Existing tests for substantial similarity are accompanied by rules that prevent finding the use of stock characters, situations, and plot devices as infringing.<sup>138</sup> Yet it is precisely those sorts of similarities in stock patterns—patterns adapted and transformed in various ways to respond to evolving changes in style and taste—that make, for instance, different mystery novels or action films overlap enough to compete for the summer beach reading and blockbuster markets. Ratcheting up breadth to curb such diversion-driven duplication—as opposed, say, to dampening the overall incentives provided for such activity to begin through lower general levels of protection—would likely require going further up Learned Hand’s “series of abstractions” than most courts would feel comfortable with.<sup>139</sup>

4. *Administrability Considerations.*—As may be apparent by now, the informational burden on lawmakers seeking to follow the prescriptions flowing from product differentiation theory is not likely to be less onerous than that imposed by a more traditional incentive–access analysis. Far from being able to follow a more or less simple and stable set of doctrinal guidelines, and then leaving it to the market to calibrate prices to achieve efficient results, the agencies making and applying copyright law will be required to engage in a complex, demanding, and perhaps constantly shifting balancing act. Consider for instance the proposal of adjusting the

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138. Two main doctrines prevent protection for stock characters and other expressive elements: *scènes à faire* and the idea–expression dichotomy. The *scènes à faire* doctrine denies copyright protection to expressive elements that are indispensable or standard within a particular genre or subject. See, e.g., *Incredible Techs., Inc. v. Virtual Techs., Inc.*, 400 F.3d 1007, 1011–12 (7th Cir. 2005); *Cavalier v. Random House, Inc.*, 297 F.3d 815, 822–23 (9th Cir. 2002); *Computer Assocs. Int’l Inc. v. Altai, Inc.*, 982 F.2d 693, 709 (2d Cir. 1992); *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 979 (2d Cir. 1980); *Schwarz v. Universal Pictures Co.*, 85 F. Supp. 270, 275 (S.D. Cal. 1945). The idea–expression dichotomy denies protection to expressive elements on a high level of abstraction such as general plot lines, concepts, or types of characters. See *Holmes v. Hurst*, 174 U.S. 82, 86 (1899); *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930).

139. *Nichols*, 45 F.2d at 121.

substantial-similarity test to achieve an optimal balance between allowing competition, to realize its price and variety benefits, and limiting it, to curb undue levels of demand diversion. The substantial-similarity test is one of the more elusive and harder to predict areas of copyright doctrine,<sup>140</sup> with a variety of different approaches deployed by the courts,<sup>141</sup> including vague formulations such as comparing the “total concept and feel”<sup>142</sup> of the relevant works. It is difficult to imagine judges or juries finely calibrating such amorphous guidelines in order to track the optimal balance between product density and competitive fierceness in a particular market. Such adjustments demand very high, perhaps prohibitive, levels of empirical information and skill; likely no less and perhaps more than under the traditional incentive–access approach.

The task assigned to courts in the case of substantial-similarity analysis is an especially salient example, but the point holds more generally for attempts to adjust copyright in light of the lessons of product differentiation theory, once we see that these lessons cannot persuasively be reduced to relatively simple and uniform guidelines. Calibrating copyright on the basis of the trade-offs involved along the various supramarginal and inframarginal parameters requires predicting a host of complex effects in multiple markets and then attempting to fine-tune doctrines that are not always well-suited to the task. By comparison, evaluating costs and benefits under only the two parameters of the traditional incentive–access framework appears a somewhat more manageable enterprise.

We do not mean to suggest, of course, that the complexity of a theory’s doctrinal and policy implications in itself serves as a criticism of said theory’s substantive merits, in terms of either explanation or evaluation. Rather, our point is simply that such complexity should give pause when it comes to embracing the theory’s prescriptive relevance, and should motivate further reflection on second-best, comparative considerations regarding what kinds of necessarily rough judgments or imprecise proxies are most plausible to distill and implement as the theory’s take-home lessons. In any case, the point of complexity is of particular salience where, as here, among the main merits touted for the theory are its advantages over alternative frameworks in providing simple, tractable guidelines for legal-policy decisions.<sup>143</sup>

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140. *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960) (“The test for infringement of a copyright is of necessity vague.”); NIMMER ON COPYRIGHT, *supra* note 98, § 13.03[A], at 13-37 (explaining that determining substantial similarity “presents one of the most difficult questions in copyright law”).

141. For a survey of the different tests, see NIMMER ON COPYRIGHT, *supra* note 98, § 13.03[A][1].

142. *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1167 (9th Cir. 1977); *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106, 1110 (9th Cir. 1970).

143. See Yoo, *supra* note 1, at 223–24, 258–59.

Similar considerations apply to the theory's implications for the public-choice aspects of the copyright system. The more complex and information-demanding the model upon which decisions about shaping and applying the law are based, the more vulnerable such decisions may be to manipulation by private rent-seeking efforts to tilt such decisions in their favor. Moreover, product differentiation theory itself helps explain why copyright policy, especially when oriented toward increasing the scope and intensity of protection, is likely to attract high levels of rent seeking. Increased protection offers early entrants in inframarginal markets the lure of short-term supernormal returns. To be sure, as explained above, such rents are assumed to dissipate in the long run, as a result of differentiated entry (at least if they follow the more optimistic predictions about price effects).<sup>144</sup> Nevertheless, each increase in protection will leave behind a larger number of early incumbents, who now have an entrenched interest in extending their advantages through further rounds of protection increases and the additional short-term rents they hold out.

*B. Weak(er) and Broad*

*1. Summary.*—Two sets of doctrinal proposals lie at the heart of this model. First, the strength of copyright protection should generally be weaker than that assumed optimal under traditional economic analysis.<sup>145</sup> Second, the breadth of protection should be wide, to enable owners of existing works to control the creation of subsequent works even where their similarity to the original is fairly remote and abstract.<sup>146</sup> While the two principles may appear to conflict, they both stem from the same theoretical lesson drawn from product differentiation. Here, the model's principal takeaway is not the price-reducing benefits of differentiated competition, but rather the demand-diversionary drawbacks of such competition. Focusing on these drawbacks results in a mirror-image prescription to the foregoing: weak and broad versus strong and narrow copyright.

Given the centrality of demand diversion to the analysis that follows, it is worth briefly further explicating its basic logic and elaborating on its core implications. There exists a misalignment between private-firm incentives and social welfare in the context of differentiated competition, one enhanced by IP protection. Firms are indifferent as to whether their sales are generated through new satisfaction of consumer demand (demand creation) or through the siphoning of demand already met by other firms

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144. See *supra* note 77 and accompanying text.

145. Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 41. Abramowicz does not employ Yoo's distinction between scope and intensity, and so the strength of copyright is indiscriminately understood as the combined effect of both dimensions.

146. See Abramowicz, *Copyright's Derivative Right*, *supra* note 1, at 329–31.

(demand diversion).<sup>147</sup> So long as the available surplus in a particular market can cover its capitalized costs, a firm will enter irrespective of whether revenues come from demand creation or diversion. But only when the social benefit from increased demand satisfaction outweighs the firm's costs will entry be socially efficient. Consider, for example, a firm that faces the decision of whether to enter the market for this summer's silly teenage comedy. Assume that the market is already saturated with films, so that any new film created will be very similar to others already on offer, and thus generate only miniscule added social value in the form of satisfying tastes of a subset of consumers that the others won't to the same extent. Nevertheless, if the size of the appropriable market for silly teenage comedies (something strongly shaped by the strength and size of copyright entitlements) is large enough that the firm will be able to cover its costs by diverting consumers from existing films, it will choose to enter. Where the firm's costs are greater than the social value of the small new demand satisfied by its film, we have a case of over-entry, with net social loss.

Demand diversion bears two overlapping but distinct implications for copyright trade-offs. The most straightforward are cases of "over-entry" proper, when the new variant costs more than its added social value. These represent instances where providing an incentive, standing on its own, results in a net social loss. Thus, the added incentive should be avoided even before we consider any of its detrimental by-products, such as decreased access for other works. In the second case, even when demand diversion falls short of producing a net loss, it still reduces the social value of added entry. As a market becomes saturated with close substitutes, the added value of each further entry declines progressively, even prior to the point where the next entry would constitute an actual net social loss. Consequently, although there remains some value in providing incentives for such entry, that value should be discounted when evaluating it against the access costs over other inframarginal works.<sup>148</sup> Demand diversion sensitizes us, that is, to the prospect that incenting the creation of another multi-million dollar film in a crowded product space may be of possibly much less value than that indicated by its sales, due to the availability of many other, similar films.

From these implications, a first set of doctrinal recommendations directly follows: copyright protection, especially for markets that seem crowded with close substitutes, should be made weaker than previously assumed. As the social value of works resulting from additional increments of protection declines, the incentive benefits of heightened protection will be outweighed sooner by its mounting social costs from curtailed access, something missed by a traditional view that assesses incentive benefits

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147. Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 39.

148. *Id.* at 40–43.

without factoring in demand diversion.<sup>149</sup> The upshot: where entry is significantly diluted by demand diversion, weaker protection, with its associated levels of increased access, finds greater support. This conclusion may be pursued in several doctrinal contexts. It urges a relative willingness to excuse certain subsets of potentially infringing activity, or to tolerate nonenforcement against them.<sup>150</sup> Similarly, the fair use doctrine should be applied liberally, allowing many secondary uses of copyrighted works to escape liability,<sup>151</sup> especially if certain fair use factors can be calibrated to capture cases in which demand diversion is likely to be high.<sup>152</sup> Finally, this view provides a more robust justification for the various exemptions and limitations on protection in the Copyright Act,<sup>153</sup> by highlighting the possibility that their total social cost, in the form of decreased incentive for entry, is not as high as previously thought.

In addition to simply scaling back copyright protection to reduce incentives for demand-diversionary activity, a proposed second set of adjustments take a very different tack. These aim to *enhance* certain aspects of protection, so as to provide tools for actively blocking, rather than simply reducing the incentives for, over-entry. Certain doctrinal levers, that is, may be used to legally constrain duplicative and wasteful entry to markets that are likely to involve high “density” of product space.

The most important such doctrinal lever is copyright’s expansive entitlement over preparing derivative works.<sup>154</sup> On a standard incentive rationale, the case for an expansive derivative-works right seems tenuous.<sup>155</sup> The entitlement allows creators to capture a larger chunk of the social value traceable to their works. And these higher returns may, of course, enable the creation of some works that otherwise would not have recouped their costs of development. This possible incentive benefit comes, however, with concerns over potentially high transaction costs and deadweight loss in the markets for secondary uses of works that would have been created even in the absence of the entitlement. Whether the social value of the supra-marginal works generated by the entitlement outweighs the costs over inframarginal ones is highly uncertain.<sup>156</sup> Product differentiation theory, however, offers an additional rationale, one that may justify the entitlement even in the face of indeterminacy or outright skepticism from a standard

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149. *Id.* at 41.

150. *Id.* at 100.

151. *Id.* at 37, 41.

152. *Id.* at 108–09.

153. *See, e.g.*, 17 U.S.C. §§ 108, 110, 121 (2012).

154. *Id.* § 106(2).

155. *See* Abramowicz, *Copyright’s Derivative Right*, *supra* note 1, at 326–32 (“The incentives justification for the derivative right thus rests on an enthymematic and uncertain empirical claim, that the increase in the number and quality of original works that the derivative right effects more than offsets any decrease in the number of derivative works.”).

156. *Id.* at 329.

incentive–access point of view. The derivative-works right can help address the problem of demand diversion, by serving to prevent wasteful excessive entry in the derivative market.<sup>157</sup> Since derivative works are rarely close substitutes of the original work, the main concern addressed by the doctrine is that of wasteful competition in each of the derivative markets.<sup>158</sup> It addresses, that is, not demand diversion between a flurry of *Dune* computer games and the original Frank Herbert novel, but rather that of demand diversion across the various *Dune*-based computer games themselves. By placing in the hands of the copyright owner a centralized right to control entry to all derivative markets, the entitlement thus prevents this specter of wasteful excessive entry in these markets.<sup>159</sup>

A similar logic supports a broad breadth for copyright's reproduction entitlement.<sup>160</sup> Independent of the derivative-works entitlement, copyright's basic prohibition on unauthorized copying of the original encompasses a large area. This area stretches to include levels of similarity that go well beyond the ordinary meaning of the term "copy," and covers elements such as characters, plot lines, and well-delineated general themes.<sup>161</sup> Once again, justification for this extensive breadth under traditional economic analysis hinges on the somewhat precarious and hard-to-verify assumption that the value of increased incentives generated by broader protection outweighs the concomitant costs. And once again, a stronger and clearer rationale may be found in the fact that this wide breadth of protection guards against wasteful excessive entry. Excessive entry in which market? The argument seems to be that, given the current reluctance of many courts to demarcate clearly the borderline between the reproduction and derivative-works entitlements, the reproduction entitlement performs this role in regard both to competition between the original and works that are close substitutes for it, and to competition between derivative works that are close substitutes for each other.<sup>162</sup> A more coherent doctrine, however, would create a division of labor, with the derivative-works entitlements applying to the latter situation (e.g., the competition between various computer games based on the film *Lord of the Rings*) and the reproduction entitlement applying to the former (e.g., the competition between the original *Superman* and *Wonderman* comic books).<sup>163</sup>

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157. *Id.* at 357–59.

158. *Id.* at 358.

159. *Id.* at 359.

160. *Id.* at 363.

161. *See id.* at 332–33 (noting that copyright protection in general extends beyond whole works and also encompasses characters, plots, and themes).

162. *Id.* at 334–35.

163. *See id.* at 373 (using demand diversion as a tool to determine whether the reproduction right or derivative right is infringed once it is established that the works are substantially similar).

To summarize, Abramowicz derives two central doctrinal guidelines from product differentiation theory. Both of these justify outcomes that may diverge significantly from those supported by the traditional incentive–access framework. First, due to the dilutive effect of wasteful competition between close substitutes on the social value of incentives created by copyright protection, the strength of this protection should be weaker than conventionally assumed. This supports doctrinal features such as a liberal fair use defense, various other statutory exemptions and limitations, and a readiness to tolerate certain levels of possibly infringing activity. Second, an extensive derivative-works right and a capacious reproduction right may serve the function of directly limiting wasteful competition between close substitutes by creating centralized entitlements to control entry to markets vulnerable to such a dynamic. Copyright protection, in sum, should be made relatively weak but broad.

How does this model hold up? The claim for discounting the incentive benefit of copyright protection is correct on its own terms. It obscures, however, the fact that other parts of the analysis potentially change when the insights of product differentiation theory are applied. The upshot of applying product differentiation theory, that is, may not be simply the traditional model with a discounted incentive value, but rather a completely different framework for analysis. This same framework should then also guide assessment of the second argument—for broad copyright as an active restraint on harmful demand diversion—which suffers from more serious difficulties. The prescribed means for achieving this goal—broad protection with regard to derivatives and partial reproductions—involve a host of other implications brought to light once we adopt the more appropriate framework, including the prospect of fueling a wasteful race for the initial innovation, costs within the markets of the secondary works, and effects of centralized control over the rate and quality of subsequent innovation. When these implications are considered, the case for broad copyright based on product differentiation theory becomes precarious.

2. *Discounting the Benefit of Increased Incentives.*—In markets featuring a high degree of differentiated competition, the basic insight that the value of new works should be discounted at an increasing rate as product density rises is correct, for reasons elaborated above.<sup>164</sup> The ninety-fifth variation of a Hungarian cookbook provides less added value, diverting more existing demand, than the first central European cookbook. To understand its full implications, however, the point needs to be put in broader context.

Consider first the relevance of the distinction between inframarginal and supramarginal innovations. The need to discount the value of new

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164. See *supra* text accompanying notes 120–30.

works applies mainly to inframarginal markets, since it is in these that a new work will serve predominantly as substitute for existing ones.<sup>165</sup> The distinction between inframarginal and supramarginal *works* versus *markets*, briefly alluded to above, is a nuanced one that we now flesh out. Under the traditional framework, the distinction is not operative: all works not enabled by a certain level of protection are simply understood as supramarginal *works* simpliciter. Within the product differentiation framework, however, such a supramarginal work may be close enough to one or more existing works to serve as a partial substitute, and thus be taken to serve an inframarginal *market*. This may lead one, then, to the opposite conclusion from the traditional framework, that all works operate in inframarginal *markets*. That, however, would be hasty: *works* not enabled by a certain level of protection are most usefully termed “supramarginal” to that level of protection, while it remains a further question the extent to which such supramarginal works are best understood to be operating in inframarginal or supramarginal *markets*. And regarding this latter point, although not all expressive works are partial substitutes for each other,<sup>166</sup> it is likely that every expressive work is, at least to some extent, a partial substitute for some others. The high-budget, action–sci-fi film and the detective television drama are likely partial substitutes in the sense that, depending on price levels, some consumers may be willing to buy and consume one instead of the other. The same may hold, even if to a lesser extent, for the sci-fi film and a Civil War documentary. Nevertheless, a relative distinction between those supramarginal works operating in inframarginal markets versus those operating in supramarginal markets does seem plausible and useful. At each level of copyright protection, some works that remain under-incentivized may be so remote from existing works that their effects as (very) imperfect substitutes are negligible. And thus from an analytic point of view, it makes sense to ignore the negligible effect of these works in inframarginal markets as partial substitutes of existing works and focus entirely on their character of serving new supramarginal markets.

Understood within this frame, the claim of demand diversion takes on a dual significance. First, as additional increments of copyright are added and product density rises, the value of each new work within existing inframarginal markets decreases due to increased demand diversion. Second, as this process unfolds more generally, more and more *markets* themselves may come to be classified as inframarginal, in the sense that new innovations in them are predominantly imperfect substitutes for existing works rather than entirely new ones. The distinction between these

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165. Although the same dynamic may apply to supramarginal markets where an increase in protection is large enough to attract not only one heretofore under-incentivized supramarginal work, but multiple, differentiated variants.

166. For example, a computer operating system written in object code is not usefully taken, for purposes of this analysis, to be a substitute for a bronze sculpture even to a minor extent.

matters, to the extent that the factors helping us determine whether an existing product space or market is crowded, differ from those helping us identify the existence or lack thereof of relatively embryonic or new product spaces/markets. Analyzing innovations as product variants in inframarginal markets alerts us to their progressively declining net social value as product space becomes crowded. To be sure, a similar tendency toward declining net value attends supramarginal innovations in general, due to rising development costs.<sup>167</sup> And from one perspective, the dynamic driving both tendencies is the same: namely, that innovations supramarginal to a given level of protection are those for which the ratio of added value to development costs is lower than for inframarginal ones, and innovations with such lower ratios will tend to provide lower overall net benefit.<sup>168</sup> Nevertheless, maintaining a distinction between works in inframarginal and supramarginal markets helps us track two distinct sources for this dynamic: innovation from which the added gross benefit is increasingly small (product variants) and those from which the added gross benefit may well be large but for which development costs are also increasingly high.

This has important implications for how the discounted value of incentives should be located within the more general scheme of product differentiation. Take for example the “performance of a nondramatic . . . musical work . . . in the course of services at a place of worship or other religious assembly”—an activity currently exempted by the Copyright Act.<sup>169</sup> Assume (perhaps implausibly) that the inability of copyright owners to internalize the value of their works in such activities reduces to a non-negligible extent the incentive to create musical works. As explained, this negative incentive effect should be discounted to the extent that the market is already crowded with many variants of musical works. Under such conditions, a substantial part of the potential market value of the works not being created is attributable to demand diversion. One may be tempted to incorporate this insight into the traditional incentive–access framework, namely by comparing this discounted incentive benefit of abolishing the statutory exemption to the traditional corresponding gain of reduced copyright protection—lower deadweight loss in the same market.<sup>170</sup>

That, however, would be too quick. Taking product differentiation seriously requires revising the analysis in two ways. First, the discounted incentive benefit should be compared to deadweight loss effects under conditions of differentiated competition, not to those predicted by the

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167. See *supra* text accompanying notes 123–24.

168. See *supra* text accompanying notes 123–24.

169. 17 U.S.C. § 110(3) (2012).

170. See Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 37, 41 (arguing that “[t]he importance of incentives to produce new works” decreases as the number of existing works increases, because “the proportional increase in the size of the market attributable to a new work generally will be greater than the proportional increase in social welfare”).

traditional model. Recall that depending on assumptions about the effect of entry on price, deadweight loss may increase if protection is strengthened (e.g., by removing the exemption), but contrary to the traditional model, it may also decrease or even remain constant.<sup>171</sup> Second, similar to Yoo, Abramowicz seems to assume that both the incentive benefit and deadweight loss effects occur in a single inframarginal market.<sup>172</sup> But the effects of a particular doctrinal feature take place in what is conveniently understood as an array of markets with different characteristics. Some new works may be incentivized by the relevant increment of protection in markets that are best understood as supramarginal. In our example, in the absence of the exemption, some otherwise nonexistent musical works that have no close substitutes in inframarginal markets may be created. In regard to those works, a high baseline of copyright protection should cause us to discount the incentive value only in the sense that such works are likely to generate relatively low net benefits due to rising development costs. Other new works may be created in inframarginal markets that are only moderately crowded. In our example, these would be otherwise nonexistent musical works that are partial substitutes for existing ones but better satisfy the tastes of some consumers in a nontrivial way. Here, the incentive value is likely to be positive but discounted relative to the traditional model due to the fact that some of the value of the new works represents demand diversion. Other works still would be created in already highly crowded inframarginal markets. Thus, the occurrence of some new musical variants in the absence of the exemption in highly dense markets would only trivially improve the satisfaction of specific consumer tastes. In regard to these works the net incentive value would be negative. The small fraction of the value of these works representing demand creation would be outweighed by their development cost. The relevant doctrinal feature should be assessed by aggregating its effect over this entire array of markets: deadweight loss effects as well as discounted and negative incentive effects in different inframarginal markets, combined with net incentive effects in supramarginal markets.

The net effect, then, is not a cost-benefit analysis carried out under the traditional framework, only now with a discounted incentive value on the benefit side, but rather a totally different framework. This new framework may not only generate different results in specific cases but also identifies a distinct set of parameters relevant to estimating the effects of any particular feature of copyright law.

3. *Copyright as a Restraint on Demand Diversion.*—What of the second main conclusion, endorsing broad copyright protection as an active

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171. See *supra* section II(A)(1).

172. See Abramowicz, *An Industrial Organization Approach*, *supra* note 1, at 39–42.

restraint on wasteful duplicative entry in primary and derivative markets? The claim here, recall, is that product differentiation theory can provide a firm justification for a broad infringement test and a robust derivative-work entitlement, even when the case for such doctrines under the traditional framework is at best inconclusive and perhaps precarious.<sup>173</sup>

This position is, of course, a variant of an argument famously made by Edmund Kitch in the patent context many years ago.<sup>174</sup> In his prospect theory, Kitch explained that a primary benefit of patents (especially early and broad patents) is their restraining effect on the potential inefficiencies and wastes associated with the innovation process.<sup>175</sup> Prospect theory's main insight was that innovation is often a continuous and long process,<sup>176</sup> one that, as previously observed by Yoram Barzel, constitutes a common pool open to all.<sup>177</sup> The upshot of this insight is that in the absence of a coordinating authority, the activities of competing private actors may generate much waste.<sup>178</sup> While Kitch enumerated many possible wasteful effects of an uncontrolled rivalrous innovation process,<sup>179</sup> the one that later scholarship has identified most closely with his theory is the very cost that underlies Abramowicz's argument: the duplicative development costs invested by competing parties who strive to develop or perfect the same invention. Patents, Kitch explained, prevent such waste by installing the patentee as a single actor who internalizes all the costs and benefits of the process of innovation and who has centralized power to control and coordinate that process.<sup>180</sup> Occupying this position, patentees have the incentive and legal power to optimize the innovation process, whether through their own activities or the licensing of others. Abramowicz's characterization of broad copyright as a means for restraining over-entry is

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173. See *supra* section II(B)(1).

174. See Kitch, *supra* note 41, at 265–66, 268 (summarizing prospect theory of the patent system).

175. *Id.* at 266.

176. See *id.* at 276 (“In the case of many patents, extensive development is required before any commercial application is possible . . .”).

177. Yoram Barzel, *Optimal Timing of Innovations*, 50 REV. ECON. & STAT. 348, 348–49 (1968).

178. See Kitch, *supra* note 41, at 266 (asserting that the process of technological development “can be undertaken efficiently only if there is a system” in place to manage competing concerns and “assure efficient allocation of . . . resources”).

179. *Id.* at 276–79. Indeed, Barzel in his earlier article was not even concerned with the duplicative efforts of rival innovators. His main concern was that rivalry may lead an innovator to invent and patent too early, at the point when expected returns outweigh the costs of innovation, rather than when such returns are maximized. See Barzel, *supra* note 177, at 349 (expressing concern that “competition among potential innovators” prompts such innovators to introduce innovations “when they become profitable” rather than “at their optimal dates”).

180. Kitch, *supra* note 41, at 276 (“[Exclusive ownership] puts the patent owner in a position to coordinate the search for technological and market enhancement of the patent’s value so that duplicative investments are not made and so that information is exchanged among the searchers.”).

thus a reincarnation of this theory in the copyright context. The owner of copyright in an initial innovation is Kitch's prospect owner. He serves as the coordinating actor who is vested with the incentive and power to ensure optimal further innovation and avoid waste, both in the market for the initial innovation and its close substitutes (through a capacious reproduction entitlement) and in markets for follow-up innovations (through a broad derivative-works entitlement).<sup>181</sup>

The close resemblance of the argument for broad copyright as restraint on over-entry to prospect theory exposes its vulnerability. Although far from defunct, prospect theory has been subject to substantial criticisms.<sup>182</sup> And many of these are equivalently applicable to the copyright variant of the theory. Further, in our view the copyright version also faces additional concerns, stemming from considerations specific to creativity in expressive works.

Scholarship in the wake of Kitch pointed out that once we fully internalize the point that innovative processes are continuous in character, endowing a private party with centralized control over the process is hardly a flawless solution.<sup>183</sup> To reduce waste by creating strong coordination power at one point along the process (even a relatively early one) may simply exacerbate the problem at other junctures. A broad patent right allowing the owner to control future innovation, it has been pointed out, substantially increases the value of the "prospect" embodied in such a

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181. Arguably prospect theory fits copyright even better than patents. One of the main critiques of prospect theory was that patents, in fact, do not create exclusive power broad enough to allow the patentee to control and coordinate future innovation. See Roger L. Beck, *The Prospect Theory of the Patent System and Unproductive Competition*, in 5 RESEARCH IN LAW AND ECONOMICS 193, 195 (Richard O. Zerbe, Jr. ed., 1983) ("[A] patent legally may protect only what the inventor actually invented *prior* to applying for the patent, which fails to support the assertion of the prospect theory that a patent monopolizes future invention."); John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439, 445–46 (2004) (propounding that "the partial property rights actually conferred by a patent" may not be "sufficient in scope to permit a patentee to coordinate further development" in the way contemplated by prospect theory).

182. See F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 446 (2d ed. 1980) (arguing that prospect theory may be "oversimplifying complex relationships"); Beck, *supra* note 181, at 207 (finding results that "support[] rejection of the prospect theory"); Duffy, *supra* note 181, at 441–43 (noting the controversy surrounding the prospect theory and specifically highlighting issues regarding the theory's conception of rivalry); Grady & Alexander, *supra* note 41, at 313–16 (claiming that prospect theory "understated the benefits of the patent system"); Donald G. McFetridge & Douglas A. Smith, *Patents, Prospects, and Economic Surplus: A Comment*, 23 J.L. & ECON. 197, 198 (1980) (criticizing that prospect theory "do[es] not preserve economic surplus"); A. Samuel Oddi, *Un-unified Economic Theories of Patents—The Not-Quite-Holy Grail*, 71 NOTRE DAME L. REV. 267, 269 (1996) (explaining that prospect theory "has been highly controversial and criticized by various commentators").

183. See Grady & Alexander, *supra* note 41, at 317 ("Central coordination theory neither dispenses with all rent dissipation concerns nor explains many patent decisions."); McFetridge & Smith, *supra* note 182, at 198 ("The prospect characteristics of [patents] do not preserve economic surplus because they do not extend the domain of exclusivity to cover the entire innovative process.").

right.<sup>184</sup> Consequently, we lure more entrants into the contest to acquire the prospect, catalyzing a race to develop the initial innovation, one coming with its own duplicative wastes.<sup>185</sup> Whether it is better to deter wastes, or conversely fuel patent races, at earlier or later stages of technological innovation cannot be determined a priori or in general, but rather requires an inquiry into specific features of the innovation context.

The exact same dilemma applies to the copyright context. Consider the derivative-works entitlement. The control power of the copyright owner over innovation in all derivative markets prevents wasteful duplicative development and over-entry of close substitutes in these markets. Thanks to this power, the hit adventure movie of the summer results in only one rather than five computer games, one rather than four manufacturers of action figures, and two rather than eight comic books. But the revenue derived by the copyright owner from exploiting the derivative markets, or licensing others to do so, substantially increases the surplus available in the primary market, thereby luring more entrants at that stage. For example, in the absence of the extra value created by the derivative-works entitlement, there might be ten variants contending for the spot of the hit adventure movie of the summer. Given the existence of the entitlement, however, there might be eighteen such contenders, each constituting a close substitute for the others and representing a high degree of demand diversion. It is impossible to determine in the abstract which effect is more costly: the over-entry in the derivative markets depressed by the derivative-works entitlement or the over-entry in the primary market fueled by it.

*a. Doctrinal Obstacles.*—The argument for a broad derivative-works right would be stronger if copyright doctrine could be plausibly calibrated to follow rent dissipation concerns. Unfortunately, copyright doctrine tracks such concerns in an inconsistent and weak manner at best.<sup>186</sup> And reform of the relevant doctrines—to make them more pliable tools for addressing rent dissipation—is highly unlikely given their deeply entrenched status in our copyright system, with roots in concerns quite removed from rent dissipation analysis.

Consider first whether the doctrine could be used to roughly identify those cases where the cost of wasteful over-entry will tend to be clearly higher in secondary markets, and then limit a broad derivative-works right

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184. See McFetridge & Smith, *supra* note 182, at 202 (“[T]he prospect features of the patent can bring about a surplus-increasing postponement of commercialization . . .”).

185. See Grady & Alexander, *supra* note 41, at 316–17 (arguing that a pure prospect patent system “would maximize rent dissipation among pioneer inventors”); McFetridge & Smith, *supra* note 182, at 198 (“[T]he award of an exclusive right to commercialize relatively early in the innovative process can result in a surplus-increasing postponement of commercialization but . . . this is dissipated in a resource-using rivalry for the patent itself.”).

186. *But see* Abramowicz, *Uneasy Case for Copyright*, *supra* note 1, at 1667 (suggesting the fair use doctrine “tends to excuse infringement where the otherwise infringing activity is less likely to result in rent dissipation associated with the production of redundant works”).

to these.<sup>187</sup> Thus, in the patent context Mark Grady and Jay Alexander have suggested that works of modest value that signal great potential for follow-on derivatives merit broad rights—to prevent the more likely secondary-stage races—while highly valuable works with limited potential for follow-ons should get weaker protection—so as to discourage entry at the primary level.<sup>188</sup> To the extent that copyright considers the value of a primary innovation at all, however, it tends to provide stronger protection to more valuable innovations. And it does so irrespective of any signal for many or few follow-on derivatives. The most relevant doctrine—originality—sets a low bar for copyrightability<sup>189</sup> that does not distinguish between works on the basis of their social value.<sup>190</sup> Indeed, to the limited extent that the scope of protection is influenced by the value of the work, no connection to the recommendations of rent dissipation concerns is discernable. Thus, under the concept of “thin protection,”<sup>191</sup> works that exhibit only a meager amount of the creativity required to satisfy the originality bar receive a small amount of protection, while highly creative works enjoy a broader scope of protection.<sup>192</sup> A similar logic underlies the “nature of the copyrighted

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187. Grady & Alexander, *supra* note 41, at 318 (“Broad patent protection avoids a rush to develop and patent trivial improvements, but, by creating extremely valuable monopolies for inventors, broad protection can induce a rush to patent original concepts. Courts have managed to reconcile these apparently divergent effects by adjusting patent scope on a case-by-case basis.”). Others have questioned whether patent doctrine optimally distinguishes cases that merit broad patents from others that do not. See Fisher, *supra* note 12, at 183 (“[The Grady and Alexander] typology, though intriguing, has many defects, both practical and theoretical.”).

188. Grady & Alexander, *supra* note 41, at 320–21. Grady and Alexander also suggest that “valuable innovation[s] that cannot be improved upon” should get no patents at all, a treatment that would avoid waste at both levels. *Id.* at 321.

189. See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991) (explaining that originality requires “only that the work was independently created by the author (as opposed to copied from other works),” and a “minimal degree of creativity” that can be met with “even a slight amount” of creativity); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 2.01[B], at 2-12 (“[T]he line to be drawn includes almost any independent effort on the side of sufficient originality.”).

190. *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (“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 of the narrowest and most obvious limits.”); *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 103 (2d Cir. 1951) (citing *Bleistein*, 188 U.S. at 250) (“No matter how poor artistically the ‘author’s’ addition, it is enough if it be his own.”); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 2.01[B], at 2-13 (“The *Bleistein* doctrine that judges may not properly assay artistic merit has found expression in many succeeding cases where the author’s creative contribution was of a much humbler and more minimal nature than in the *Bleistein* poster.”).

191. The source of the term “thin protection” is in the Supreme Court’s description in *Feist* of the scope of copyright in factual compilations as “thin.” 499 U.S. at 349.

192. *Satava v. Lowry*, 323 F.3d 805, 812 (9th Cir. 2003) (stating that where the original elements are limited, the copyright owner “possesses a thin copyright that protects against only virtually identical copying”); *Beaudin v. Ben & Jerry’s Homemade, Inc.*, 95 F.3d 1, 2 (2d Cir. 1996) (“Where the quantum of originality is slight and the resulting copyright is ‘thin,’ infringement will be established only by very close copying . . .”); *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1439 (9th Cir. 1994) (“When the range of protectable . . . expression is narrow, the appropriate standard for illicit copying is virtual identity.”). In contrast

work” factor of the fair use doctrine.<sup>193</sup> Under the prevailing application of this factor, a higher degree of creativity of the protected work militates against a finding of fair use.<sup>194</sup> Note that both rules apply even when the relatively noncreative work is likely to be used in many secondary works, as in the case of a map or other factual compilations useful for secondary uses.

More generally, several existing copyright doctrines greatly limit the efficacy of broad reproduction and derivative-works entitlements as restraints on over-entry. There exist a host of rules that often allow the creation of close market substitutes without infringing those entitlements, including: the idea–expression dichotomy that denies protection to general themes, abstract concepts, and generic plot lines or characters;<sup>195</sup> the *scène à faire* doctrine that allows the use of any expression considered to be a stock element within a genre;<sup>196</sup> the rule that copyright does not extend to any factual information;<sup>197</sup> and the denial of protection to any method or system of operation or any expression that merges with them.<sup>198</sup> The reuse

to some of the formulations in these cases, Patry explains that “regardless of the relative creativity of the work, the test for all works is substantial similarity.” He further explains, however, that “[w]hile works having a ‘thin’ copyright due to a minimal amount of creative material may indeed only be infringed by close copying, this is because the majority of the work is unprotectible.” 3 WILLIAM F. PATRY, *PATRY ON COPYRIGHT*, § 9:166 n.9 (2007).

193. 17 U.S.C. § 107(2) (2012).

194. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 586 (1994) (“This factor calls for recognition that some works are closer to the core of intended copyright protection than others, with the consequence that fair use is more difficult to establish when the former works are copied.”); NIMMER ON COPYRIGHT, *supra* note 98, § 13.05[A][2][a] (“Under this factor, the more creative a work, the more protection it should be accorded from copying . . . .”); Pierre N. Leval, *Commentary, Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1117 (1990).

195. *See supra* note 92.

196. *See supra* note 93.

197. *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 547 (1985) (“[N]o author may copyright facts or ideas.”); *Financial Info., Inc. v. Moody’s Investors Serv., Inc.*, 751 F.2d 501, 504 (2d Cir. 1984); *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365, 1368 (5th Cir. 1981); *Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 974 (2d Cir. 1980); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 2.11[A].

198. *See* 17 U.S.C. § 102(b) (denying protection to any “procedure, process, system, [or] method of operation”); *Baker v. Selden*, 101 U.S. 99, 101–02 (1879) (clarifying that while a work about a book-keeping system can be copyrighted, the book-keeping system itself cannot); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 2.18[A], at 2-198 (stating that copyright protection does not extend to cover the use of the copyrighted work). *See generally* Samuelson, *supra* note 99 (discussing the exclusion of processes from copyright law in 17 U.S.C. § 102(b)). For more on the merger doctrine, see *BUC Int’l Corp. v. Int’l Yacht Council Ltd.*, 489 F.3d 1129, 1143 (11th Cir. 2007) and NIMMER ON COPYRIGHT, *supra* note 98, § 13.03[B][3]. Sometimes the merger doctrine can prevent rent dissipation by allowing later entrants to copy the merged expression and thus minimize the duplicative development cost incurred by them. *Abramowicz, Uneasy Case for Copyright*, *supra* note 1, at 1657–58. When the development cost of the merged elements accounts for only a portion of the work’s total development cost, however, the doctrine is likely to facilitate rent dissipation. In such cases the merger doctrine, while preventing the waste of the duplicative development of the merged elements, facilitates the creation of close functional substitutes and the waste associated with developing the non-merged parts of such substitutes.

of preexisting expressive elements made available by these doctrines can give rise to new works that are by no means close substitutes for the originals from which the elements are derived. At the same time, however, reliance on these rules allows the creation of works that in terms of market demand are very close substitutes to many others. It is this set of rules that allows the production of yet another disaster movie that follows the well-known formula and feels very much like 500 others, the writing of a cookie-cutter detective novel, and the publication of a cookbook with a collection of recipes very similar to those of others (although with different background material and perhaps with the recipes somewhat differently arranged). Added to the ability of creating noninfringing, close substitutes is the incentive to do so, in the form of available copyright protection for the substitute. This is the result of a very low originality bar that requires no novelty,<sup>199</sup> and only a meager modicum of creativity.<sup>200</sup> Any of the above-mentioned works very likely would clear the originality bar and qualify for copyright protection, no matter how close they are as economic substitutes for other works in terms of satisfying overlapping consumer preferences.

Some aspects of the fair use doctrine that exempts certain otherwise infringing uses<sup>201</sup> do a somewhat better job in capturing close substitutes for existing works. Of particular importance is the rise to prominence in recent decades within the fair use analysis of the question of whether the secondary use is transformative.<sup>202</sup> The transformative character of the purportedly infringing use is examined under the “purpose and character of the use” factor of a fair use analysis,<sup>203</sup> and a strongly transformative use is

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Consider for example a computer program. The merger doctrine may allow copying the portions of the code that are essential for certain functional aspects of the program. *See generally* Computer Assocs. Int’l, Inc. v. Altai, Inc., 982 F.2d 693 (2d Cir. 1992) (analyzing copyright protection of a computer program). Developing competing computer programs that, in part owing to this privilege, constitute close substitutes of the original may still involve substantial costs. The net effect in many cases would be facilitating rather than restraining rent dissipation. A similar logic applies to the other limiting subject-matter rules mentioned in the text: they prevent some waste by permitting copying of the unprotected element, but the substitution effect they enable is likely to fuel waste whenever other development costs are significant.

199. *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345–46 (1991); *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 102 (2d Cir. 1951).

200. *See supra* note 181 and accompanying text.

201. *See* 17 U.S.C. § 107 (2012) (establishing the fair use doctrine).

202. *See, e.g.*, *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569, 578–79 (1994) (asking whether a use was transformative as part of determining fair use); *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605, 608 (2d Cir. 2006) (analyzing whether or not a use was transformative); *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818 (9th Cir. 2003) (noting that the more transformative a use is, the less important other factors are in determining fair use); *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1269 (11th Cir. 2001) (noting the importance of transformative value in determining fair use); *Fisher, supra* note 9, at 1768–69 (discussing transformative fair use); *Leval, supra* note 194, at 1111 (asserting that justification of a fair use turns largely on whether the use is transformative).

203. 17 U.S.C. § 107(1).

given heavy weight,<sup>204</sup> potentially overshadowing all the other factors.<sup>205</sup> The Supreme Court’s definition of this feature seems to track directly the issue of market substitutes and demand diversion. The court, following an 1841 decision by Justice Story, described a nontransformative use as one that “merely ‘supersede[s] the objects’ of the original creation.”<sup>206</sup> By contrast, a work is transformative to the extent that it “adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message.”<sup>207</sup> Thus, the fair use doctrine with a robust transformative-use factor helps, to an extent, to orient the broad entitlements toward cases of duplicative and potentially wasteful substitutes.<sup>208</sup>

For several reasons, however, the extent of this effect should not be overstated. First, there are the general well-known shortcomings of fair use as a limitation on overbroad copyright entitlements. Fair use is treated by the courts as an affirmative defense, with the burden lying on defendants.<sup>209</sup> Additionally, the doctrine is notoriously open-ended and hard to predict, with its case-specific nature frequently requiring full, costly litigation.<sup>210</sup> This creates a chilling effect of uncertainty and too often, in the words of Lawrence Lessig, reserves fair use to the “presumably rich.”<sup>211</sup> Second, courts vary greatly in their understanding of what constitutes a

204. *Campbell*, 510 U.S. at 579 (“[Transformative works] lie at the heart of the fair use doctrine’s guarantee of breathing space within the confines of copyright.”).

205. *See id.* (“[T]he more transformative the new work, the less will be the significance of other factors . . .”).

206. *Id.* (citing *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841) (No. 4901)).

207. *Id.*

208. *See Abramowicz, Uneasy Case for Copyright*, *supra* note 1, at 1668 (describing the transformative use analysis as central to determining whether the works are unique enough to satisfy the tenants of rent dissipation theory). Similarly, the fourth fair use factor inquiry—about the effect of the use on the market for the original—helps orient fair use toward rent dissipation concerns. *See* 17 U.S.C. § 107(4). To the extent the copying work and others like it are likely to have a significant effect on the market for the original or for derivatives potentially licensed by the copyright owner, the higher the likelihood of substantial demand diversion. *See Abramowicz, Uneasy Case for Copyright*, *supra* note 1, at 1671.

209. *See Campbell*, 510 U.S. at 590 (“[F]air use is an affirmative defense . . .”); *cf.* Glynn S. Lunney, Jr., *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975, 989 (2002) (criticizing the courts’ treatment of fair use as an affirmative defense); Ned Snow, *Proving Fair Use: Burden of Proof as Burden of Speech*, 31 CARDOZO L. REV. 1781, 1803 (2010) (same).

210. *See, e.g.,* Michael W. Carroll, *Fixing Fair Use*, 85 N.C. L. REV. 1087, 1106 (2007) (acknowledging that the test for fair use provides little predictability); Fisher, *supra* note 9, at 1693–94 (discussing situations in which the fair use doctrine is open-ended); Leval, *supra* note 194, at 1105–07 (opining that fair use decisions are guided by intuitive reactions to individual fact patterns rather than by a set of consistent principles); Jessica Litman, *Reforming Information Law in Copyright’s Image*, 22 U. DAYTON L. REV. 587, 612–13 (1997) (describing the chilling effect of costly litigation on fair use); John Tehranian, *Whither Copyright? Transformative Use, Free Speech, and an Intermediate Liability Proposal*, 2005 BYU L. REV. 1201, 1215–16 (pointing out how the fair use doctrine has led to “[w]ildly disparate outcomes on similar fact patterns”).

211. LAWRENCE LESSIG, *FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* 107 (2004).

transformative use and in their tolerance toward appropriative forms of expression. Some of the approaches circulating in the case law do not recognize as transformative secondary uses that clearly do not involve a high degree of substitution in terms of market demand.<sup>212</sup> Third, and most relevant here, in a large subset of cases the current meaning of “transformative” is misaligned with the way in which broad copyright is supposed to restrain demand diversion. Recall that the derivative-works entitlement ostensibly restrains duplicative over-entry in secondary markets, not by preventing close substitutes of the primary work, but rather by preventing many substitute variants on the secondary level (e.g., the question is not whether the computer game is a substitute of the movie but rather whether the movie is likely to result in many computer games each of which is a close substitute for the other).<sup>213</sup> Courts that conduct a fair use analysis, however, uniformly inquire not into whether a derivative work is transformative by comparison to other potential derivatives, but rather into whether it is transformative vis-à-vis the primary work.<sup>214</sup>

In sum, existing copyright doctrine does not orient the broad reproduction and derivative-works entitlements toward rent dissipation concerns. No mechanism exists for limiting the entitlements to cases where the magnitude of wasteful races is likely to be higher on the secondary level than on the primary one. And, more generally, the rules seem only weakly suitable for preventing close substitutes. Perhaps some of the relevant doctrinal features, such as the meaning of transformative uses for the purpose of fair use, could be recalibrated with this purpose in mind. Many others, however, such as the idea-expression dichotomy, are unlikely to change, both because they are deeply entrenched features of copyright law and because they serve other important purposes distinct from concerns with excessive entry.

*b. Theoretical Concerns.*—Quite apart from doctrinal difficulties, theoretical considerations raise serious doubts about the wisdom of broad copyright with respect to the secondary level of follow-on activity. The reasons lie, broadly speaking, in both incentive and information concerns with centralizing control over follow-on innovation in the hands of one or a few firms, especially in the context of expressive works.

A first important consideration is that a copyright owner’s interest is not perfectly aligned with the social-welfare calculus. Economics textbooks usually present the first-best solution for over-entry in

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212. See, e.g., *Castle Rock Entm’t v. Carol Publ’g Grp. Inc.*, 150 F.3d 132, 142 (2d Cir. 1998) (finding the transformative nature of a book containing trivia questions and answers about the television show *Seinfeld* to be “slight to non-existent”).

213. See *supra* notes 157–59 and accompanying text.

214. See, e.g., *Campbell*, 510 U.S. at 578–79 (stating that the central purpose of a fair use investigation is to see if the work adds something new to the original creation).

differentiated product markets as a monopoly with a regulated price.<sup>215</sup> Recognizing that this will often be infeasible, the second-best solution typically put forth is governmental regulation of the number of entrants to the market.<sup>216</sup> Nowhere to be found is the solution represented by the derivative-works right, namely to delegate the power to regulate entry to a private firm (without regulating prices). A private firm takes into account only producer surplus (and the factors shaping its private costs and revenues). It has no incentive to consider other effects relevant to total social welfare, most importantly uncaptured consumer surplus.<sup>217</sup> As a result, a private firm with the power to regulate entry is likely to mandate under-entry from a social-welfare standpoint. Indeed, ignoring the possibility of non-identical products, a firm with an absolute control over-entry will usually dictate a monopoly irrespective of whether it operates within the relevant market or licenses to another the right to do so.<sup>218</sup> Thus, private power to regulate entry levels as the remedy for over-entry brings about the possible malady of under-entry.

To be sure, in many derivative markets the extreme scenario of a strict monopoly is unlikely. Broad though it may be, the derivative-work right will still fail to encompass a host of works that may serve as somewhat more remote substitutes for the relevant derivative work. The copyright owner in an action movie (say *Godzilla*) may decide to license the computer game rights to only one developer. The resultant computer game (say *The Adventures of Godzilla*) may be free from competition by other games very similar to it, but it will still face competition from many other action games not derivative of the movie (for example *King Kong*, *Smog*, and *Medusa*). To the extent that these nonderivative games are nontrivial substitutes, for the derivative some of the positive effects of differentiated-product competition will remain. To the extent that these nonderivative games, however, are substantially less perfect substitutes, these effects may be weak and therefore suboptimal by comparison to the optimal level of entry by closer substitutes—i.e., other games derivative of the movie. In short, even with competition from relatively remote substitutes, the derivative-works right as a private power to regulate entry may prevent over-entry only at the cost of some under-entry. It is unclear that we can say a priori which effect will be greater. Moreover, even in cases when the benefit of

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215. See, e.g., CARLTON & PERLOFF, *supra* note 14, at 211–13 (“[S]ociety’s optimal solution is to subsidize one firm to produce all the output and to require that price be set equal to marginal cost.”).

216. See *id.* at 213–14 (explaining that “[t]ypically, the government cannot regulate an industry so as to achieve a first-best solution,” but “[b]y restricting entry, the government obtains the second-best optimum”).

217. See *supra* note 147 and accompanying text.

218. See CARLTON & PERLOFF, *supra* note 14, at 77 (illustrating how a long-term absolute barrier to entry, like a patent, gives the patent owner a monopoly).

prevented over-entry outweighs the cost of resultant under-entry, it will be a diluted benefit.

Finally, consider a set of implications flowing from plenary coordination power over follow-on innovation, relating to the rate and quality of such innovation. Prospect theory's assumption that coordination power concentrated in the hands of a single IP-rights holder would optimize follow-on innovation has been subject to powerful critical pushback. Robert Merges and Richard Nelson famously argued that decentralized, competitive development, in which many independent parties work simultaneously along the same stretch of the innovation frontier—i.e., toward the same, or a small set of similar, innovation solution(s) in face of a commonly known problem—while somewhat wasteful, is nevertheless preferable to centralized coordination.<sup>219</sup> Although abstract economic theory predicts that a coordinating patentee who fully internalizes the value of future innovation will have optimal incentives to maximize this value, additional theoretical and empirical considerations, they argued, suggest otherwise.<sup>220</sup> A number of psychological tendencies and cognitive limitations of individuals and organizations make the centrally controlled innovation inferior: the tendency to “rest on [one's] laurels” and engage in “satisficing” behavior geared toward the acceptable rather than the optimal in the absence of an external threat,<sup>221</sup> the phenomenon of innovators focusing on directions that involve established capacities or familiarity,<sup>222</sup> and the general uncertainty and unpredictability typically involved with the process of innovation.<sup>223</sup> Moreover, given the high costs often associated with transacting over future innovation in information goods, licensing by the coordinating owner is unlikely to significantly alleviate these difficulties by mimicking the favorable conditions of open and diverse innovation.<sup>224</sup> The upshot? A preference for having many minds at work, over one or a few: “[M]any independent inventors will generate a much wider and diverse set of explorations than when the development is under the control of one

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219. Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 877–78 (1990).

220. *Id.* at 872.

221. *Id.*

222. *Id.* at 873.

223. *Id.* at 873–74.

224. *Id.* at 874–75. Mark Lemley has since elaborated on the conditions that often impede harnessing the power of decentralized innovation through licensing. These include, among other things, the high costs of identifying implicated IP rights and their owners and of negotiating, dividing, and pricing rights under conditions of uncertainty and various bargaining failures characteristic of information goods. See Lemley, *supra* note 9, at 1052–64 (arguing that these obstacles can best be overcome by a scheme of divided entitlements similar to that which currently exists in patent law). See also Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698, 698–99 (1998) (describing the consequences of an anticommons, when multiple owners each have a right to exclude others from a scarce resource).

mind or organization. . . . The only way to find out what works . . . is to let a variety of minds try.”<sup>225</sup>

Merges and Nelson’s argument focused on the rate of innovation and relied on the assumption that “faster is better.”<sup>226</sup> At least in the copyright context, this assumption must be qualified. Putting aside the theoretical possibility that an innovation can be introduced suboptimally early,<sup>227</sup> the more significant practical complication derives from the interaction between speed and quality. In the context of expressive works, rather than holding constant the output of an innovation and inquiring only about the speed of its introduction, often more realistic is the view that speed affects the content or quality of the innovation.<sup>228</sup> Consider the motion-picture adaptation of a novel, the sequel movie, or the movie-spin-off computer game that were rushed to market just in order to beat possible competitors in the race to capture an awaiting audience. These works are likely to be substantially different than what they would have been in the absence of the time pressures. At least in many cases, the quality and value of such hurried works will presumably be lower.<sup>229</sup> It is often better to be the first in the market with a third-rate sequel than second with a first-rate one.<sup>230</sup> In such cases faster is not clearly better, and will often result in lower net social value. Here, broad copyright control over secondary innovations may prevent waste of a different sort than discussed so far. Such a right allows the copyright owner (or her licensee) the breathing space required for optimizing the quality of secondary creations, without the fear of being preempted on the market and its resultant inefficient compromises of

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225. Merges & Nelson, *supra* note 219, at 873.

226. *Id.* at 878.

227. Barzel, *supra* note 177, at 349. Another speed-related argument that cuts in the opposite direction in the patent context can be bracketed in regards to copyright. John Duffy has argued that one important advantage of a prospect patent that is granted early in the process of innovation is creating a race to patent. An earlier patent has the socially beneficial outcome of an earlier expiration of the patent and of the social costs associated with it. Duffy, *supra* note 181, at 446. This consideration is rarely significant for modern copyright, with its much longer duration than patents. Compare 17 U.S.C. § 302 (2012) (listing the term of copyright generally to be until the end of life plus 70 years), with 35 U.S.C. § 154 (2012) (creating a 20-year term for patents). Only a tiny fraction of the works protected by copyright retain commercial viability at the time of expiration, rendering the possibility of a somewhat earlier expiration date generated by a race insignificant in most cases.

228. See Landes & Posner, *supra* note 5, at 332 (discussing the effect of copyright on the incentives of “authors, publishers, and copiers” with regard to “the timing of various decisions”).

229. Landes and Posner discuss the possible harmful effects of incentives to rush to the market on quality in a somewhat different context: a system that relies on first movers’ advantages instead of copyright protection. Such incentives may result in “increased incentives to create faddish, ephemeral, and otherwise transitory works.” *Id.*

230. To be sure, it may sometimes be the lack of an external threat by potential competitors over secondary innovations that adversely affects quality. Consider, for example, a decision to break up a movie into several installments that sacrifices the film’s quality for the prospect of squeezing the relevant market, a strategy profiting from the insulation from any competing works.

quality.<sup>231</sup> This justification for broad copyright, however, is limited. At most it supports a reasonable period of time of exclusivity during which it is plausible to assume that a race to be first may adversely affect quality. Even if generously crafted, such a period would be only a fraction of the present copyright term (which currently extends to derivative works).

The effect of copyright on quality extends beyond the element of speed. Often the question is not just whether and when society will be provided with a particular secondary innovation, but also its quality as an expressive work. Not all screen adaptations or literary sequels are the same, and there is no guarantee that the “authorized” version will be the superior one (even when quality is measured in pure market-demand terms). Here, in contrast to the issue of speed, the argument from many minds applies even more forcefully. Given the realities of the creative process and the uncertainties involved with many expressive information goods, it seems plausible that open and decentralized models will often produce better quality than ones based on central control.<sup>232</sup> In exploring a possibility frontier, the value of many minds would seem to be greater the more variability there is regarding what counts as a successful exploration. And it seems reasonable to surmise that innovations involving high levels of expression and communication of meaning will tend to be more variable in this sense than innovations that primarily provide functional solutions to discrete problems.

Compare the existing motion picture adaptations based on the 1936 novel *Gone with the Wind*, which is still under (broad) copyright protection,<sup>233</sup> to those based on another classic which has long been in the public domain, *Pride and Prejudice*. There are two such adaptations of *Gone with the Wind*, both of which were authorized by the copyright owners: the classic, hugely successful 1939 film and a 1994 mini-series

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231. See Abramowicz, *Copyright's Derivative Right*, *supra* note 1, at 319–20.

232. See Tim Wu, Essay, *Intellectual Property, Innovation, and Decentralized Decisions*, 92 VA. L. REV. 123, 126 (2006). Discussing different types of decision-making structures, Professor Wu observes:

“[T]he economic literature strongly favors decentralized decision structures in economic systems, based on the observation that free-market economies perform better than planned, centralized economies. . . . The danger [of broad intellectual property rights] is that centralization of investment decisionmaking may block the best or most innovative ideas from coming to market.”)

*Id.* The foundational work for this line of argument is, of course, F.A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945).

233. *Gone with the Wind* was originally registered in 1936. 33 LIBRARY OF CONGRESS, COPYRIGHT OFFICE, CATALOG OF COPYRIGHT ENTRIES pt. 1, at 1957 (New Series 1936). The copyright was then renewed in 1963. 17 LIBRARY OF CONGRESS, COPYRIGHT OFFICE, CATALOG OF COPYRIGHT ENTRIES pt. 1, at 2209 (3d Series 1963). Under § 304, the term of a copyright under renewal in 1978 was limited to 95 years from the date of publication; thus, *Gone with the Wind*'s copyright extends until 2031. See 17 U.S.C. § 304 (2012).

*Scarlett* based on the authorized sequel novel of the same title.<sup>234</sup> This paucity is particularly conspicuous when contrasted with the abundance of *Pride and Prejudice* adaptations. A partial list of such motion-picture adaptations includes: a 1940 Hollywood film; two (very different) BBC television miniseries versions; a more popular film version from 2005; *Bride and Prejudice*, which is a Bollywood-inspired adaptation; the *Bridget Jones* movies, a modern version of the story loosely based on the original; the miniseries *Lost in Austen* that ventures into the realm of the fantastic by telling the story of a young woman who, through a portal in her bathroom, swaps places with Elizabeth Bennett; and a 2008 Israeli television series that locates the story in modern-day Israel.<sup>235</sup> The point is neither that all of these numerous variants are of exceptional quality nor that there is no duplication among them. It is, rather, that allowing this kind of open and uncontrolled experimentation is more likely to produce the most qualitative value, both in the sense of particular versions that exhibit high creativity and innovation and in the sense of maximizing the aggregate value measured in terms of appeal to a variety of consumer tastes and preferences.<sup>236</sup> As for the duplicative waste necessarily involved with such a large variety, it is by no means clear that in most of these instances it exceeds that which is generated by repetitive, formulaic, and imitative creation of the kind which is squarely allowed by copyright law under the standard rules described above.<sup>237</sup> Is it really the case, for example, that many of the *Pride and Prejudice* versions are more duplicative of each other than two different romantic novels that follow standard formulas, themes, and conventions? In short, when it comes to creativity, notwithstanding a degree of wasteful duplication necessarily associated with uncoordinated secondary innovation, the notion that the best way is “to let a variety of minds try”<sup>238</sup> rings truer than ever.

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234. GONE WITH THE WIND (Selznick International Pictures & Metro-Goldwyn-Mayer 1939); *Scarlett* (TF1 et al. 1994).

235. PRIDE AND PREJUDICE (Loew’s 1940); *Pride and Prejudice* (British Broadcasting Corp. & Chestermead 1995); *Pride and Prejudice* (British Broadcasting Corp. & Australian Broadcasting Corp. 1980); PRIDE & PREJUDICE (Focus Features 2005); BRIDE & PREJUDICE (Pathé Pictures International 2004); BRIDGET JONES’S DIARY (Miramax Films 2001); *Lost in Austen* (Mammoth Screen 2008); *What a Bachelor Needs* (HOT 2009). See generally DEBORAH CARTMELL, SCREEN ADAPTATIONS: JANE AUSTEN’S PRIDE AND PREJUDICE: THE RELATIONSHIP BETWEEN TEXT AND FILM (2010).

236. See Wu, *supra* note 232, at 140 (“It is, for example, rare to see multiple film versions of a given copyrighted novel, even though one might expect that decentralized competition among films might serve the public interest.”).

237. See *supra* notes 195–200 and accompanying text.

238. Merges & Nelson, *supra* note 219, at 873.

C. *Taking Stock*

Where does all this leave us? Properly understood, product differentiation theory is best understood not as a substitute for the incentive–access framework, but as a valuable supplement that needs to be integrated into a more comprehensive framework that identifies a series of relevant parameters of inframarginal and supramarginal costs and benefits of IP protection.

When so integrated, it becomes clear that product differentiation does not, contrary to some receptions, offer any sweeping conclusions on either the descriptive or the prescriptive level. Significantly, some of the general propositions for which the theory is increasingly cited in intellectual property scholarship—such as the claim that copyright may work without conferring market power<sup>239</sup>—are either incorrect or misleading and should be laid to rest. Even in the presence of fierce competition by differentiated products, copyrights (or patents) cannot provide incentive without deadweight loss. Firms in monopolistic competition, if they are to recover their development costs, will tend to charge some price (or schedule of prices) above marginal cost, resulting in deadweight loss. Similarly, the notion that we can promote simultaneously *both* access and incentives, by costlessly ratcheting up copyright protection, is a mirage.<sup>240</sup> Under conditions of differentiated competition, strengthening copyright has an indeterminate effect on overall deadweight loss (i.e., access) and it always results in the additional costs of accumulating duplicative development costs incurred by new entrants.

More generally, the theory does not provide strong substantive support for a uniform set of doctrinal recommendations in favor of strong—inclusive, intense, and narrow—copyright protection. Such protection produces complex effects in different markets on incentives to create, deadweight loss, duplicative development costs, and satisfaction of consumer demand through increased variety. As the baseline of copyright protection increases, each additional increment of protection is less likely to result in net benefit since, as in dense product spaces, new variants of inframarginal innovations satisfy less new demand, duplicative costs continue to accumulate at a steady rate, and the net value of new supramarginal innovations is likely to drop.

Product differentiation also fails to supply a firm justification for broad copyright as an active restraint on wasteful demand diversion in primary or secondary markets. A host of related effects—including a possible wasteful race for the primary innovation, the prospect of under-entry by close substitutes for the secondary innovation, and influences on the speed and

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239. See *supra* note 15 and accompanying text.

240. See *supra* notes 82–85 and accompanying text.

quality of innovation—may very well outweigh the efficiency gains of the centralized coordination power created by such broad copyright.

### III. Some Modest Proposals

When product differentiation theory is properly understood within the supramarginal–inframarginal framework, we can identify and diagnose more clearly the ways that existing applications of the theory to copyright law falter. Unilateral focus on the benefits of entry encouraged by copyright protection misses the facts that there are no free lunches and that the different effects of legal levers on markets for expressive works are always interdependent. Copyright’s supramarginal benefits are always bought with inframarginal costs, under both the traditional and the product differentiation frameworks. There is no escaping this trade-off. The difference between the two theoretical perspectives lies in the identification of somewhat distinct supramarginal benefits and inframarginal costs.

Similarly, when the application of product differentiation theory to expressive works is fully understood, the idea of using copyright’s exclusive entitlements as a means for dampening rent dissipation appears patently misguided. The unique feature of IP rights compared to the standard dynamics of product differentiation is that IP rights are the legal lever that generates both the need of entrants to incur the wasteful fixed cost and their incentive to do so. In a standard product differentiation scenario, it is the availability of rents in the market that attracts the entry, which in turn inevitably requires duplicative fixed costs of entry.<sup>241</sup> The only way to restrict entry, if deemed wasteful, is a direct legal constraint on it (perhaps accompanied by a regulated price). In the copyright context, it is the legal right to exclude others that generates the rents that attract entry. And it is also the source of the need to incur duplicative fixed cost: since we are dealing with a nonrivalrous resource, we could have entry and its price benefits without the need for entrants to reinvest the fixed cost. To an extent, we are willing to suffer the cost of wasteful entry as an unfortunate side effect of exclusion needed for receiving the supramarginal benefits of copyright. But using the costly and unnecessary technique of legal exclusion as a means for reducing wasteful entry, beyond what is necessary for capturing new innovation benefits, seems perverse. When the very cause for duplicative cost entry is used as a means for its reduction, it is a small wonder that the exercise has the quality of squeezing a balloon: one depresses one form of rent dissipation only to watch another swell up as a result.

The value of product differentiation theory, then, is in highlighting some effects of copyright that are neglected by the traditional framework:

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241. *See supra* section I(B)(2).

rent dissipation on the side of inframarginal cost (perhaps overshadowing in some cases the salience of deadweight loss as the main cost), and that the benefit of supramarginal innovation is often diluted due to the fact that many new works are substitutes that only partly serve new demand in already existing markets.

Assuming that product differentiation theory captures the dynamics of many markets for expressive works better than the traditional monopoly model, what implications follow for justifying or reforming copyright law? One implication, briefly explored below, already follows from the foregoing discussion: product differentiation theory offers new reasons for the current widespread skepticism of the existing, broad derivative-works entitlement and therefore counsels for the abolition or dramatic roll back of this entitlement.

Reining in the derivative-work entitlement, however, still leaves mostly unresolved the problem of rent dissipation highlighted by product differentiation theory. Assuming, again, that that model is correct in underlining the seriousness of this concern, what might be more effective ways to adjust copyright law to ameliorate the problem?

We discuss three main further possibilities: beefing up the originality requirement to deny protection to nonnovel works; trimming the level of copyright protection afforded derivative works; and an overall decrease in the strength of copyright protection. These are different institutional means for pursuing the same underlying aim: reducing rent dissipation by removing copyright-generated rents that lure the entrance of duplicative substitutes. As explained, reducing rent dissipation by removing its cause in the form of a too-strong copyright exclusionary power seems rather more plausible than pursuing the same goal by amplifying the effects of this cause. Each of these alternatives suffers from some disadvantages and faces serious difficulties. Each, however, offers a real prospect of dealing effectively with the problem of rent dissipation that, from the perspective of product differentiation, is one of the main sources of the social cost created by copyright.

#### *A. Reining in the Derivative-Works Right*

The existence and proper scope of the derivative-works right is the subject of ongoing scholarly debate. While some commentators support a broad entitlement,<sup>242</sup> the trend of recent scholarship has been toward

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242. See Zechariah Chafee, Jr., *Reflections on the Law of Copyright: I*, 45 COLUM. L. REV. 503, 505 (1945) (“The essential principle is the author’s right to control all the channels through which his work or any fragments of his work reach the market.”); Paul Goldstein, *Derivative Rights and Derivative Works in Copyright*, 30 J. COPYRIGHT SOC’Y U.S.A. 209, 252 (1983) (arguing for a broad derivative-works entitlement on the basis of incentivization).

advocating its abolition or at least a significant narrowing of its scope.<sup>243</sup> Under traditional efficiency analysis, this skepticism stems from an assessment of the relatively low incentive-to-cost ratio held out by the entitlement.<sup>244</sup> Exclusive control over derivative markets, while imposing a substantial cost on secondary innovation, is typically ineffective in creating incentives for the primary work.<sup>245</sup> In the case of works highly successful in their primary market, the additional value internalized by the copyright owner is likely to be unnecessary to recoup investment; whereas for less successful primary works, their typically smaller earning potential in derivative markets means the entitlement is unlikely to generate substantial additional profits.<sup>246</sup> Either way, the incentive “bang” earned for the access “buck” seems small. Continued debate within the traditional incentive–access frame revolves, then, on how typical such profitability conditions are, and on related questions,<sup>247</sup> including the extent to which the prospect of monetary gains plays a significant role in incentivizing creation in many of the relevant contexts.<sup>248</sup>

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243. See, e.g., Christina Bohannon, *Taming the Derivative Works Right: A Modest Proposal for Reducing Overbreadth and Vagueness in Copyright*, 12 VAND. J. ENT. & TECH. L. 669, 692–94 (2010) (comparing constitutional and interpretative techniques to limit derivative-works protection); Lunney, *supra* note 5, at 650–53 (proposing a narrower standard for derivative-works rights); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 378–79 (1996) (advocating for narrower but not completely eliminated protections for derivative works); Christopher M. Newman, *Transformation in Property and Copyright*, 56 VILL. L. REV. 251, 254–55 (2011) (arguing for a more consistent reading of copyright to place objective limits on the bounds of the derivative-works right); Tyler T. Ochoa, *Copyright, Derivative Works and Fixation: Is Galoob a Mirage, or Does the Form(Gen) of the Alleged Derivative Work Matter?*, 20 SANTA CLARA COMPUTER & HIGH TECH. L.J. 991, 1020 (2004) (proposing an alternative interpretation of the right to prepare derivative works that narrows protections); Pamela Samuelson, *The Quest for a Sound Conception of Copyright's Derivative Work Right*, 101 GEO. L.J. 1505, 1511 (2013) (proposing that derivative-works rights are narrower in actuality than other commentators fear and advocating continued constraint); Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1215–17 (1996) (finding arguments for exclusive rights in derivative works unpersuasive); Naomi Abe Voegtli, *Rethinking Derivative Rights*, 63 BROOK. L. REV. 1213, 1268 (1997) (proposing narrower rights for derivative works to incentivize engagement in technological and postmodern art activities).

244. See LANDES & POSNER, *supra* note 9, at 109–10 (“The case for giving the owner of a copyrighted work control over derivative works is a subtle [and speculative] one.”); Sterk, *supra* note 243, at 1215–16 (explaining the limited situations in which the prospect of profits from derivative works is necessary to incentivize production of original works).

245. See Sterk, *supra* note 243, at 1216 (questioning the need, for instance, of giving the author of a book the exclusive right to prepare a movie version).

246. See *id.* at 1215–16 (suggesting the existence of only a limited type of work, such as an extraordinarily high-budget movie, whose derivative returns would justify the cost of production when original returns would not); Voegtli, *supra* note 243, at 1241–42 (arguing that an author who earns millions of dollars per book “does not need [derivative] income . . . to cover her original cost of production”).

247. See Samuelson, *supra* note 243, at 1527–33 (discussing three justifications for granting derivative work rights).

248. *Id.* at 1530. For general skepticism about the role of monetary gain as an incentive for creation, see, e.g., Julie E. Cohen, *Creativity and Culture in Copyright Theory*, 40 U.C. DAVIS L. REV. 1151, 1152 (2007) (“[T]heorists offer no particular reason to think that marketable

Product differentiation theory reframes the debate. The focus here shifts away from the traditional trade-off between incenting new supramarginal primary works and restricting access in secondary markets for existing, or inframarginal, ones. Instead, the main factors now driving the analysis are the magnitude of wasteful rent dissipation in both primary and secondary markets and the effects of centralized control on the nature and quality of secondary innovation. As we have seen, however, this shift in focus does not quell skepticism regarding the desirability of a broad derivative-works entitlement.<sup>249</sup> In particular, there is little reason to believe that any rent dissipation that the entitlement helps dampen at the secondary level will be greater than what it likely fuels at the primary level. When this is coupled with the troubling effects that centralizing control over secondary markets may have on the rate, direction, and character of cumulative innovation in the context of expressive creativity, product differentiation theory points in the same direction as traditional incentive–access analysis, albeit on distinct grounds, suggesting that on balance the entitlement does more harm than good.

The doctrinal upshot of this analysis is either complete abolition or a significant scaling back of the derivative-works right in its current broad form. Abolition would be relatively straightforward: simply removing this stick from the current bundle provided by copyright protection. Scaling back could take several forms. The most modest would be to reverse the current judicial tendency of construing the entitlement broadly, by limiting its scope to the precise categories of derivative works enumerated in the statute<sup>250</sup> and only very close analogues.<sup>251</sup> A more dramatic scaling back would be to reserve the entitlement for only those exceptional categories of derivatives where a high likelihood exists that, on average, the supra-marginal incentive generated by control of secondary markets is both necessary and effective.<sup>252</sup> There is little reason to believe that such

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byproducts are . . . an effective stimulus for creativity . . .”); Lydia Pallas Loren, *The Pope’s Copyright? Aligning Incentives with Reality by Using Creative Motivation to Shape Copyright Protection*, 69 LA. L. REV. 1, 8 (2008) (noting that there appears to be little risk, without copyright protection, of underproduction and underdissemination of papal texts); Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513, 526 (2009) (discussing that many creators experience creativity as an “automatic function” that brings them pleasure); Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQUIRIES L. 29, 30–31 (2011) (doubting that authors would otherwise lack motivation to create without copyright’s reservation of future profits from their work).

249. See *supra* section II(B)(3).

250. The categories explicitly mentioned in the statutory definition of derivative works are: translation, musical arrangement, dramatization, fictionalization, motion-picture version, sound recording, art reproduction, abridgment, and condensation. 17 U.S.C. § 101 (2012).

251. See Samuelson, *supra* note 243, at 1523–25 (discussing the final clause of the derivative-work definition, which can be read to cover derivatives analogous to the ones listed in the statute).

252. See William W. Fisher III, *The Implications for Law of User Innovation*, 94 MINN. L. REV. 1417, 1448 (2010) (considering whether copyright holders would probably not face reduced

categories would strongly overlap with the existing statutory list. A different limitation, one that could be combined with either the existing or a narrowed scope of covered categories, would be to reduce the entitlement's term to an extremely short duration.<sup>253</sup> The main advantage of this approach is that it would restrict centralized control over secondary expressive works to the period where such control is most likely to be net beneficial, namely when it would prevent the prospect of a low-quality secondary work being rushed to market just to beat out the competition. After the period when this danger is greatest has passed (say, two to five years),<sup>254</sup> the terrain of secondary innovation would open up, reaping the benefits of “many minds” having a go.

An essential part of any effort to rein in the scope of a derivative-works right is clearly defining the line dividing such works from those infringing the reproduction right. The status of this border, at present, remains an esoteric mystery. This is due primarily to the fact that the reproduction right, as currently interpreted, may cover quite remote degrees of similarity under a very broad substantial similarity test. Is a television commercial incorporating a short fragment of text, similar to that appearing in a graphic work, a reproduction, or a derivative work?<sup>255</sup> Nobody knows.<sup>256</sup> And, more significantly, nobody cares, which is why the distinction has remained an elusive one. Except in rare cases, nothing turns on it: whether we call a secondary work a reproduction or a derivative, either way it falls under the copyright owner's exclusive entitlements.<sup>257</sup> However, in a regime where the derivative-works entitlement is reined in, the reproduction right must accordingly be cut back to size and the borderline between the two clearly demarcated and vigilantly policed.

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incentives if “user innovation[s],” such as parody movies and song remixes, were exempted from derivative coverage); Sterk, *supra* note 243, at 1226 (suggesting that copyright protection for architects would clearly fall out of such a category of protection).

253. See Samuelson, *supra* note 243, at 1530 (arguing that some social benefits are likely to flow from granting authors power to control derivative markets “at least for some time”).

254. See Abramowicz, *Copyright's Derivative Right*, *supra* note 1, at 319–20 (defending the derivative right as “a tool that allows authors to take their time”); Samuelson, *supra* note 243, at 1530–31 (similarly arguing that authors should have time to plan derivatives).

255. See *Andreas v. Volkswagen of Am., Inc.*, 336 F.3d 789, 791 (8th Cir. 2003) (reinstating a jury award for a graphic artist claiming infringement by voice-over in a television commercial).

256. See 2 NIMMER ON COPYRIGHT, *supra* note 98, at § 8.09[A], at 8-142.8(13) (“[I]f the right to make derivative works . . . has been infringed, then there is necessarily also an infringement of either the reproduction or performance rights.”); Abramowicz, *Copyright's Derivative Right*, *supra* note 1, at 334 (“[T]he tests for violation of the derivative right and violation of the reproduction right are themselves almost redundant.”). *But see* Daniel Gervais, *The Derivative Right, or Why Copyright Law Protects Foxes Better than Hedgehogs*, 15 VAND. J. ENT. & TECH. L. 785, 839–48 (2013) (attempting to define the normative distinction between the reproduction and derivative-works entitlement).

257. Jed Rubenfeld, *The Freedom of Imagination: Copyright's Constitutionality*, 112 YALE L.J. 1, 50 (2002) (“Contemporary copyright jurisprudence rarely distinguishes between reproductions and infringing derivative works.”).

Otherwise, a de facto, broad derivative-works entitlement will return through the back door of reproduction.<sup>258</sup> The history of copyright teaches us that such a restrictive definitional approach to reproduction is hardly unworkable: indeed, historically the right to make copies was much narrower, and more clearly delineated, than it is today.<sup>259</sup> To be sure, fuzzy borderlines will always exist in this area; the main question is where to draw them.

*B. Originality as Novelty*

Rolling back derivative-works protection, while curbing the likely net harmful effect of the entitlement in its current form, will do little to ameliorate the central problem of rent dissipation highlighted by product differentiation theory: namely, the basic concern that many of the expressive works incited by increased copyright protection will be partial substitutes for existing works, lured in considerable part by diverting existing demand rather than creating new value. What can be done to ameliorate this concern?

The most direct means for curbing rent dissipation is to modify the originality criterion that serves as a threshold condition for acquiring copyright protection. That creators must satisfy *some* originality requirement is accepted today as a fundamental feature of copyright,<sup>260</sup> yet at the same time, there is also universal agreement in the case law that the requisite level of originality is extremely low. To qualify for copyright, a work needs merely to be independently created rather than copied, and to exhibit a modicum of creativity,<sup>261</sup> one small enough to be present, as the Supreme Court has observed, in the vast majority of cases.<sup>262</sup> Recent scholarship, however, has begun to question this conventional wisdom and proposed various schemes for beefing up originality's requirements.<sup>263</sup>

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258. This is exactly what happened historically prior to the 1976 Copyright Act. Over a period of 150 years, the originally limited right of reproduction was gradually expanded thereby giving rise to a de facto, broad derivative-works entitlement. See Oren Bracha, *The Ideology of Authorship Revisited: Authors, Markets, and Liberal Values in Early American Copyright*, 118 *YALE L. J.* 186, 224–33 (2008); Rubinfeld, *supra* note 257, at 50–52.

259. Bracha, *supra* note 258, at 224–25.

260. See *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991) (“The *sine qua non* of copyright is originality.”).

261. *Id.*

262. *Id.* (“The vast majority of works make the grade quite easily, as they possess some creative spark . . .”).

263. See, e.g., Erlend Lavik & Stef van Gompel, *On the Prospects of Raising the Originality Requirement in Copyright Law: Perspectives from the Humanities*, 60 *J. COPYRIGHT SOC'Y USA* 387, 442 (2013) (opining that originality should be assessed based on the specialized standards for certain subcategories of copywriteable works, such as novels or magazines); Joseph Scott Miller, *Hoisting Originality*, 31 *CARDOZO L. REV.* 451, 458 (2009) (urging that copyright have a creativity threshold similar to patent law); Gideon Parchomovsky & Alex Stein, *Originality*, 95 *VA. L. REV.* 1505, 1507 (2009) (proposing “a workable copyright system that calibrates authors’ protection and liability to the originality level of their works”).

Product differentiation theory sheds new light on both the existing doctrine and the revisionary scholarship.

As mentioned, that originality does not require novelty, but only independent creation, is a deeply entrenched rule of copyright.<sup>264</sup> In the famous words of Judge Learned Hand: “[I]f by some magic a man who had never known it were to compose anew Keats’s Ode on a Grecian Urn, he would be an ‘author,’ and, if he copyrighted it, others might not copy that poem . . . .”<sup>265</sup> Moreover, even a work that draws heavily on a preexisting work needs only to satisfy a very meager “distinguishable variation[]” test to be deemed independently created.<sup>266</sup> Revisionary views of originality, meanwhile, tend to emphasize the need for greater creativity or merit, rather than novelty.

Product differentiation theory, however, turns the spotlight exactly on a substantial novelty requirement as a means for reducing rent dissipation. The most direct way of reducing wasteful entry by new works that primarily divert demand from works already supplied is to remove the engine that propels this dynamic, meaning, the copyright protection that enables the capture of such rents and thereby attracts duplicative entry. Moreover, achieving this result through a novelty requirement has the virtue of sharpening what may otherwise be the blunt tool of simply reducing overall protection by specifically targeting those cases where rent dissipation is a significant concern. The lure of copyright rents is denied only to those works that are close substitutes for existing ones, where the supramarginal benefits of entry are particularly small. As a result, the works that are attracted by copyright-based revenues will be those that exhibit a smaller degree of substitution and therefore higher levels of net supramarginal benefit. A novelty requirement, in other words, ensures that the inframarginal cost generated by a given level of copyright protection is exchanged for a substantial amount of true supramarginal benefit from the satisfaction of new demand.

Importantly, this theoretical justification also supplies a specific meaning for novelty in this context. Novelty here does not simply mean a low degree of expressive similarity to existing works. It means, rather, a small degree of market substitution in terms of demand satisfaction. Similarity of concrete expression does not always overlap with substitution. A modern remake of a twenty-year-old film is probably more similar to the existing predecessor work than a banal disaster movie that closely follows a worn-out formula without exhibiting a high degree of concrete expressive

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264. See *Feist*, 499 U.S. at 345 (“Original, as the term is used in copyright, means only that the work was independently created by the author . . . .”); 1 NIMMER ON COPYRIGHT, *supra* note 98, § 2.01[A], at 2-7 (“[I]t is now clearly established . . . that the originality necessary to support a copyright merely calls for independent creation, not novelty.”).

265. *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 54 (2d Cir. 1936).

266. *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 105 (2d Cir. 1951).

similarity to any particular other variants in the genre. Yet it is the latter that is a closer substitute for existing works, representing higher levels of wasteful demand diversion. In short, the guiding light of novelty should be the functional element of market substitution, not expressive similarity detached from its relationship to consumer demand.

This proposal faces several possible objections. First, having any meaningful bite to originality runs against the dominant grain of American copyright jurisprudence over the last century, with its deep-seated resistance to a high originality bar. The classic statement of this resistance is, of course, Justice Holmes's warning in *Bleistein v. Donaldson Lithographing Co.*<sup>267</sup>: "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 of the narrowest and most obvious limits."<sup>268</sup> Underlying this position are two intertwined elements. The first is an assessment of institutional competence, that judges or juries are extremely ill equipped to evaluate the aesthetic merit or social worth of expressive works, an evaluation that is highly uncertain, prone to dangers of paternalism or elitism, and in any case perhaps inherently subjective.<sup>269</sup> The second is the conviction that there exists a far superior mechanism for channeling creative efforts in socially valuable directions, rendering unnecessary any dubious sorting by courts: the market or box office, which ensures that a copyright owner's compensation is proportional to the consumer demand for her work (said demand being our best measure of its social value).<sup>270</sup> It is precisely this alternative mechanism, however, that product differentiation theory calls into question in an important subset of cases. High-rent-dissipation cases are ones where we cannot simply rely on the box office, as market sales significantly misalign the private interests of entrant firms competing to divert rents from that of net social benefit.

Rent dissipation, then, robs the second element of resistance to originality of much of its force. To be sure, the first element of institutional competence does remain. However, even here, the problem is no longer as acute as under traditional analysis. Under the proposed originality bar, courts would have to evaluate not the work's social value or artistic merit,

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267. 188 U.S. 239 (1903).

268. *Id.* at 251.

269. Amy B. Cohen, *Copyright Law and the Myth of Objectivity: The Idea-Expression Dichotomy and the Inevitability of Artistic Value Judgments*, 66 *IND. L.J.* 175, 194 (1990) ("[G]rowing twentieth-century skepticism regarding the existence of any objective or neutral definition of artistic value helps to explain why Congress and the courts are reluctant to allow copyright determinations to be made on the basis of a judge's view of a work's artistic value.").

270. See *Henderson v. Tompkins*, 60 F. 758, 764 (C.C.D. Mass. 1894) ("[R]eception by the public may be the only test on the question of insignificance or worthlessness under the copyright statutes."); Bracha, *supra* note 258, at 218–20 (discussing the historical perspective on how copyright doctrine came to equate social and artistic value with market value in the context of the originality requirement).

but rather its degree of novelty, as measured in terms of market substitution. This is significantly less prone to the dangers of subjectivism, elitism, or paternalism. That is not to say that novelty will be typically easy to assess. The degree of market substitution among expressive works may be an elusive question, requiring much information and subtle judgment. As explained, market substitution does not completely overlap with expressive similarity and it may depend on other ambiguous factors such as the shelf life of works and segmentation of the market. It does not follow, however, that the task is infeasible. Novelty judgments by courts are a staple part of patent law,<sup>271</sup> and whether technological innovation is fundamentally different from expressive works in this respect is debatable.<sup>272</sup> And related judgments are frequently required to be made by courts in the course of applying other doctrines of copyright. As part of the analysis of fair use, courts routinely evaluate whether allegedly infringing works are transformative or “mere substitutes” for the plaintiff’s work.<sup>273</sup> In applying the substantial-similarity test for infringement, courts need to resolve such questions as whether the similarity of the character in *The Greatest American Hero* simply invokes that of *Superman* or makes the former a close substitute of the latter for the relevant target audience.<sup>274</sup> These are market-substitution inquiries, albeit ones conducted in a more focused way where the frame of comparison is one other particular work rather than the entire universe of potential close substitutes in the market.

A second problem facing the proposed novelty requirement is the high cost to creators of having to engage in preemption checks. This difficulty, often advanced to explain or justify why independent creation is not copyright infringement, is equally applicable here.<sup>275</sup> How is a prospective creator to know whether her planned work will meet the novelty requirement? The universe of expressive works is vast, and comprehensively scanning it to ascertain a future project’s novelty may be prohibitively expensive.<sup>276</sup> The difficulty is exacerbated by the background rules of copyright. In contrast to patent’s examination system, under the current copyright regime neither registration nor deposit is a precondition for copyright protection, which means that there is no centralized com-

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271. See 35 U.S.C. § 102 (2006).

272. Jeanne C. Fromer, *A Psychology of Intellectual Property*, 104 NW. U. L. REV. 1441, 1454–55 (2010) (critically examining the assumption behind the argument that technological and expressive innovation are fundamentally different in regard to novelty).

273. See *supra* notes 194–200 and accompanying text.

274. See *Warner Bros. v. Am. Broad. Cos.*, 720 F.2d 231, 241–42 (2d Cir. 1983) (considering both the visual resemblance and totality of attributes in determining whether *The Greatest American Hero* infringed upon *Superman*).

275. See Landes and Posner, *supra* note 5, at 345–46.

276. Unlike in the context of preemption checks for purposes of avoiding infringement, the universe of works relevant for novelty searches is not limited to works under copyright protection but extends to any potential substitute, including public domain works.

prehensive database of copyright “prior art” that could be consulted to establish novelty.<sup>277</sup> Furthermore, unlike patents, copyright does not involve a system of claiming that forces owners of preexisting works to produce a textual statement of the intellectual work’s “metes and bounds.”<sup>278</sup> While not resolving all the difficulties associated with novelty inquiries, the ability to compare textual elements at least contains the process and gives it some analytic structure. None of this exists in copyright law. These preemption-check difficulties also bear on the first difficulty, of courts’ institutional capacity: what is true of creators *ex ante* is true of courts *ex post*. A closer look shows, however, that these difficulties, while substantial, may not be as fatal as appears on first blush. As long as the purpose of the novelty bar—preventing high degrees of duplicative substitutes—is firmly kept in mind, the “prior art” burdens it imposes become correspondingly more delimited. What is required here is not absolute novelty as against the entire universe of existing expressive works; rather it is enough to meet the bar to deny protection only to those works that largely divert demand that is already satisfied by existing works. For this purpose, it is enough to take into account as “prior art” only extant works that currently satisfy some market demand, that is, works that enjoy a nontrivial level of public visibility or commercial success. It is only a short step from this restriction to taking into account only registered works. Not all registered works are highly visible or successful. As a result of the advantages of optional registration,<sup>279</sup> however, a large number of commercially exploited works are registered.<sup>280</sup> Thus, doubly limiting copyright’s “prior art” to registered works that are commercially exploited is consistent with the novelty bar’s underlying rationale. While such

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277. See 17 U.S.C. §§ 407(a)–408(a) (allowing, but not requiring as conditions of copyright protection, the registration and deposit of copyrighted works).

278. Clarisa Long argues that this distinction is inherent in the different subject matter of the two areas. According to Long, while the utilitarian subject matter of patent is amenable to “[r]eductionism,” it “is harder to define the creative expression contained in most copyrighted goods.” Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 488 (2004). Paul Goldstein argues in a similar vein that expressive subject matter, by contrast to a utilitarian one, is not amenable to efficient indexing and classification. See 1 PAUL GOLDSTEIN, *COPYRIGHT: PRINCIPLES, LAW AND PRACTICES* § 2.2.1 n.8 (1989) (arguing that unlike patentable subject matter, “literary, musical, and artistic expression cannot be effectively classified to enable authors, composers and artists to examine all pertinent prior works to determine whether their contributions substantially differ from these prior works”). For a critical treatment of this line of argument see Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. CHI. L. REV. 719, 781–94 (2009).

279. Raymond Shih Ray Ku et al., *Does Copyright Law Promote Creativity? An Empirical Analysis of Copyright’s Bounty*, 62 VAND. L. REV. 1669, 1689–90 (2009) (discussing the advantages of registration).

280. Christopher Sprigman, *Reform(aliz)ing Copyright*, 57 STAN. L. REV. 485, 496 & fig.1 (2004) (discussing the connection between copyright registration and a “realistic prospect of commercial return” from the work).

limitation will not eliminate the difficulties associated with *ex ante* or *ex post* novelty calls, it is likely to reduce them significantly.

A final objection derives from any costs of increased uncertainty as a result of errors made in the course of handling the preceding two challenges in implementing a novelty requirement. By denying copyright to a subset of potential expressive works, a novelty bar will of course reduce the number of works created. To the extent that the works not created are those that fail to satisfy the requirement as properly construed, foregoing them is of course the precise outcome desired, reflecting the basic policy judgment embodied in the bar that the net social value of such works is small or even negative because of their modest added value relative to the duplicative costs of their development. However, the suboptimal character of preemption checks by innovators and novelty decisions by courts means some works that should meet the requirement will not and vice versa, resulting in a zone of *ex ante* uncertainty. Thus, to the extent that creators exhibit some degree of risk aversion, there will be some chilling effect on net beneficial, supramarginal innovation.

### C. *Trimmed Copyright for Derivatives*

A third alternative means for targeting rent dissipation is to reduce the strength of copyright protection afforded to derivative works. This is a mirror image of using a strengthened derivative-works exclusive entitlement for the same purpose. The underlying assumption of both proposals is that markets in derivative works are characterized by a high degree of substitution between variants. Sometimes the substitutes are the primary work and its derivatives, but more often the concern is that numerous duplicative derivatives will be created in the wake of a successful primary work. The proposed rule would dampen the stream of duplicative derivatives by directly decreasing the force that drives it: copyright protection that makes rents available to makers of derivatives. This could be achieved, for example, by a dramatically shorter duration of the copyright in derivative works. This lever is less accurately targeted than the previous one. It is underinclusive because it targets only one source of rent dissipation, wasteful races between duplicative derivatives. More importantly, it is overinclusive because, unlike novelty, it does not instruct courts to examine directly the degree of substitution, but rather relies on the proxy category of derivatives. In reality, not all derivative works exhibit a high degree of substitution with others. Reducing the incentive to create such nonduplicative derivatives that offer undiluted supramarginal benefits may be a net loss. Another difficulty of this strategy is the zone of uncertainty created by the need to differentiate between derivative works that receive reduced protection and nonderivatives entitled to stronger

copyright.<sup>281</sup> Reducing copyright for derivatives, however, is free from the serious costs associated with relying on a strong derivative-works entitlement to curb secondary-level dissipation. Reducing protection for derivatives does not fuel rent dissipation on the primary level. Nor does it suffer from the disadvantages of centralized control over secondary innovation. Reducing the available rents in secondary markets means that fewer works will enter, but many minds are still free to try, free from the power of central control.

An informal version of the strategy described here already exists in patent law and has long been understood as a mechanism for reducing rent dissipation. In patent law “pioneer” inventions, meaning inventions that supply substantial new value and exhibit a smaller degree of substitution with existing ones, receive stronger protection.<sup>282</sup> This is achieved through broader claim construction, a generous application of the enablement standard to include many analogues to the core invention disclosed, and a broad application of the doctrine of equivalents.<sup>283</sup> The combined effect of the application of these rules is to create, *de facto*, two tiers of patent protection: a stronger level to pioneer inventions and a weaker one for more run-of-the-mill inventions that are likely to exhibit a higher degree of substitution.

To a lesser extent, the same logic already exists in an embryonic form in various parts of copyright law. Those features are the very ones that in the earlier discussion of the derivative-works entitlement we described as showing that copyright doctrine does not track rent dissipation concerns well.<sup>284</sup> For example, the second factor that courts are instructed to

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281. The need to define the borderline between reproduction and derivative works already arises from the first recommendation, discussed above, of restricting the derivative-works entitlement. *See supra* subpart III(A).

282. *See Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 415 (1908) (“[A] greater degree of liberality and a wider range of equivalents are permitted where the patent is of a pioneer character.” (quoting *Cimiotti Unhairing Co. v. Am. Fur Ref. Co.*, 198 U.S. 399, 406 (1905)); *Price v. Lake Sales Supply R.M., Inc.*, 510 F.2d 388, 394 (10th Cir. 1974) (“[A] patent which constitutes a marked improvement in the art is entitled to a substantial range of equivalents . . . .”); *In re Hogan*, 559 F.2d 595, 606 (C.C.P.A. 1977) (noting that pioneer inventions “deserve broad claims to the broad concept”); 5B DONALD S. CHISUM, CHISUM ON PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 18.04[2], at 18-750 (2007) (“[A] greater scope of equivalents will be afforded to patents claiming pioneer inventions or important improvements . . . .”); *Merges & Nelson*, *supra* note 219, at 848 (“[T]here is an argument for granting a broad set of claims for pioneering inventions.”).

283. *See Abramowicz, Uneasy Case for Copyright*, *supra* note 1, at 1669 (“Copyright law is more likely to restrict fair use and tolerate rent-dissipating entry for creative works, which are less likely to be redundant and thus rent dissipating . . . .”).

284. *See supra* subsection II(B)(3)(a). There is no contradiction here. Earlier we discussed thin protection and the second fair use factor in the context of the claim that tight control of primary works reduces rent dissipation on the secondary level. In that context more protection to highly original primary works is ill suited to minimize rent dissipation on the primary level. Here, we discuss these features as a way to discourage rent dissipation by reducing the rents that attract entry of substitute works. The different framework makes all the difference. Viewed from this

consider when deciding whether a use is exempted by the fair use doctrine is the nature of the copyrighted work.<sup>285</sup> One common inquiry under this factor is the degree of originality of the copyrighted work, with a lower degree of originality cutting in favor of fair use.<sup>286</sup> Courts often apply this factor mechanically and don't appear to impute much importance to it. Viewed through the lens of rent dissipation, however, this inquiry receives new meaning. A higher degree of exempting certain uses as fair as a function of lower originality follows the mold of less protection to more duplicative works. Just like weaker protection to derivative works, this fair use factor can reduce rent dissipation by lowering rents where a higher degree of substitution is present.<sup>287</sup>

Another example is the rule stated by the Supreme Court in *Feist*, under which works that exhibit only a small degree of originality, such as works that make a relatively small new contribution by combining uncopyrightable elements, receive only “thin” copyright protection.<sup>288</sup> This rule is often understood to mean that the protectable parts of the work receive weaker protection, for example by limiting infringement to cases fairly close to literal reproduction.<sup>289</sup> One treatise writer observes that this understanding is based on a “false principle.”<sup>290</sup> He plausibly explains that thin protection simply applies the general principle that only the original parts of a work receive protection; but the strength of protection given to the parts that are protectable is not any weaker, by, for example, being limited to literal reproductions.<sup>291</sup> Understanding thin copyright as a strategy for reducing rent dissipation sheds new light on the question. From this perspective, the relevant feature of low originality works is the high degree of substitution in the relevant market. For example, a map that incorporates many factual elements similar to other maps and whose originality consists in some thin layer of original expression (such as its color scheme) is likely to be a close substitute for many other maps. This raises the concern of substantial rent dissipation and gives thin protection a new rationale. Thin protection, in the sense of weaker protection to the

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vantage point, lower protection to less novel works helps reduce rent dissipation generated by such works operating as close substitutes of each other.

285. 17 U.S.C. § 107(2) (2012).

286. *See supra* note 186.

287. *See supra* note 272.

288. *See Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348–49 (1991) (concluding a compilation of factual information is solely entitled to thin copyright protection because its sole source of originality is the selection and arrangement of the facts themselves).

289. *See NIMMER ON COPYRIGHT*, *supra* note 98, § 13.03[A], at 13-66.2 (“[S]uper-substantial similarity’ must pertain when dealing with works subject to only ‘thin’ protection.” (citations omitted)).

290. 2 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 3:68 (2014).

291. *Id.*

original parts, serves as a check on rent dissipation by removing some of the copyright-generated rents in this area.

The point of these examples is not that existing copyright law is already optimized in this respect, but rather that the logic of a weaker protection as a check on rent dissipation exists within copyright law in a somewhat haphazard form. This logic could be extended through a categorically weaker form of protection afforded derivative works, designed to achieve the same purpose in a more systematic and effective way.

#### *D. Overall Weaker Protection*

One final means for combating copyright-induced rent dissipation is simply to reduce the overall level of copyright protection. This is the bluntest tool of the lot. Reducing copyright protection by, for example, significantly trimming its duration or narrowly construing the scope or sweep of some of its general entitlements, does not target specific cases where a high degree of rent dissipation is likely. As such, it is clearly overinclusive. Some substantial supramarginal benefits may be foregone, both from completely new innovations and from those that exhibit only a small level of substitution with existing works. The countervailing benefit will of course be reduced copyright rents, diminishing the incentives for wasteful entry so as to curb rent dissipation in all—primary and secondary—markets, both between and across primary works and their derivatives. To the extent that rent dissipation is a serious problem under current levels of copyright protection, the trade-off may be worth it. If one takes the view that more calibrated adjustments of copyright's legal levers, designed to target rent dissipation at a more fine-grained level, are beyond the capacity of our lawmaking institutions, adjustment of copyright at this crude aggregate level may be all that remains.

#### Conclusion

This Article makes three interventions in the field of economic analysis of copyright.

The first is to clarify some fundamental elements of the economics of copyright that are too often either obscured or outright denied in existing scholarship. One such obscured element is the fact that, contrary to common observation, copyright is not a response to a public-goods problem. In respect to copyright, the two characteristics of information goods as public goods pull in opposite directions. Copyright is a solution to the policy problem created by the nonexclusionary nature of informational works that results, in turn, in a new problem in the form of restricted access to non-rivalrous goods. Second, in contrast to recent assertions, generating incentives through copyright always involves conferring the power to price above marginal cost. And in the absence of costless, perfect price discrimination, this always involves some deadweight loss. Incentive-

generating copyright and pricing power are logical correlatives. The one does not exist without the other. This remains unchanged even when a copyright owner does not enjoy a monopoly and even if a copyrighted work has to compete with substitutes. The last feature of copyright highlighted here is that its inescapable trade-offs between incentive benefits and access (or other) costs are not internal to a particular innovation but rather operate over different markets or innovations. Copyright necessarily involves certain costs incurred with regard to inframarginal innovations to obtain the benefits of other supramarginal innovations.

Our second intervention is evaluating what, on the theoretical level, the recent introduction of product differentiation theory adds to the standard picture of the economics of copyright. Replacing the standard monopoly-pricing analysis with the framework of product differentiation does not change any of the fundamental elements of the economics of copyright just described. Product differentiation theory operates within the same basic framework of copyright as a set of trade-offs between supramarginal benefits and inframarginal costs. The contribution of the new theoretical perspective lies in refining our understanding of some of those benefits and costs. On the benefits side, product differentiation theory's important new insight is that much of the supramarginal works incited by copyright are partial substitutes for existing works and therefore only partially serve new previously unsatisfied demand. It follows that the diminishing returns of copyright protection are attributable now to two distinct dilutive effects. The net social value of completely new works attracted by additional increments of copyright tends to fall because of the diminishing ratio between the innovation's development cost and its social benefit. By contrast, the net value of innovations that operate as partial substitutes in inframarginal markets falls because as product space becomes more crowded, a larger portion of the private value of these innovations is attributable to demand diversion and a smaller part represents demand creation. On the inframarginal cost side, product differentiation theory adds two important revisions. First, it instructs that the competitive pressures of entry by partial substitutes may temper, but never completely eliminate, the deadweight loss effects of copyright. Second, it reveals a new, significant cost produced by entry of partial substitutes in the form of the duplicative cost of their development.

Finally, we distill the central policy implications of product differentiation analysis and identify what we think are the most plausible set of doctrinal reforms to pursue in response. The central thrust of product differentiation's revised understanding of copyright's costs and benefits is to sensitize us to two related sources of rent dissipation: inframarginally, there is a shift in focus on costs from deadweight loss to wasteful, duplicative entry, and supramarginally, we see the benefits of increasingly close substitute innovations. Rent dissipation is not, contrary to some

current proposals, effectively addressed by ratcheting up copyright protection. The hope that copyright's centralized control power could curb wasteful entry evaporates the moment one understands that copyright is also the cause that generates duplicative entry, by increasing the cannibalizing returns held out to entrants. Proper understanding of product differentiation theory orients the analysis, then, toward doctrinal mechanisms for reducing copyright's generation of the duplicative rents in the first place. Such mechanisms vary from narrowly targeted tools, such as a novelty-focused threshold originality requirement, to blunter instruments, such as weakening overall copyright protection. If one were to generalize, the rise of product differentiation theory would seem at bottom to provide some new reasons for skepticism toward the current excesses of strong copyright.