

ABSTRACT
Working Paper
Patents and Competition:
Toward a Knowledge Theory of Progress

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While the Patent Act of 1790 was sailing through the First Federal Congress, Jefferson, Franklin and others remained skeptical of, if not downright opposed to patents as the means to promote progress. Although the large questions of political economy have seemingly been settled, severe criticism of the patent system persists. In recent years, the Federal Trade Commission, the National Academies Board on Science, Technology, and Economic Policy, as well as a multitude of scholars and practitioners have questioned its effectiveness. Indeed, Congress is currently considering changes to address some of the current Patent Act's perceived shortcomings. This paper develops an alternative to the dominant view of patents in order to explore a different approach to promoting progress. Although the approach is familiar in some of its particulars, its alternative logic produces a sharply different set of policies and doctrines.

The dominant view of patents derives from the constitutional policy of promoting progress and from the particular understanding that material progress is served by granting inventors exclusive rights to the commercial exploitation of their intellectual work. The logic subtending this regime of private rights is incentive theory: When inventors are given these exclusive rights, they are more inclined to invent and to commercialize their inventions; the result is progress in the form of more material benefits to society.

Incentive theory provides a powerful normative and analytical framework for patent protection. Indeed, we rely on incentive theory even though our confidence is largely unfounded, even though the literature has long reminded us that we cannot know in advance whether particular incentive structures will promote progress. Paradoxically, incentive theory's very inability to provide a mechanism for predicting how patents will affect progress has actually driven an expansion of patent protection. Unable to forecast the impact of incentives embodied in alternative doctrines and policies, decision-makers have tended to adopt the fall-back position that simply expanding the private commercial incentives to inventors promotes more progress.

In short, policy makers have tended to follow an intuition that increasing the means increases the ends. This focus on the means lies behind the so-called propertization of patents. Despite its shortcomings, both theoretical and empirical,

incentive theory has held the loyalty of policy makers and scholars as if there is something more to it than “common sense” or intuition. One example is the automatic issuance of preliminary injunctions – the exclusionary remedy that identifies a regime as property – despite the injunction’s equitable character and its traditional call to take into account the public interest. In patent cases, the public interest is viewed in the shrunken terms of protecting the inventor’s incentive to engage in research and development.

The trend toward increased propertization has also fortified the borders between the patent regime and the adjacent domains of copyright and antitrust. It has strengthened the time-honored view that copyright and patent are mutually exclusive spheres. The view emerged long ago from the parsing of the intellectual property clause’s parallel syntactical structure, corroborated by the First Congress’s passage of two separate statutes in 1790. The commercial logic of incentive theory has reinforced this binary view, even though several well-ripened Supreme Court opinions, actual practices of inventors and authors as well as recent scholarly inquiry have blurred the boundary line. The conventional view holds that patents encourage inventors to produce intellectual work that promotes *material* progress by advancing technological and industrial arts; it is copyright that is intended to encourage authors to promote progress by advancing knowledge. The commercial logic of incentive theory focuses attention on the material benefits promised by patent protection, treating the knowledge benefit as a by-product and leaving it largely to copyright and its First Amendment emanations.

The commercial logic of incentive theory has also suppressed the border tensions observed in the traditional political geography of patent and antitrust relations. The patent regime was earlier seen as granting rights to exclude competitors, rights that were termed monopolies. The antitrust system, together with an insurgent patent misuse doctrine, championed the policy of promoting competition in commercial markets and the strategy of strictly limiting patent monopolies to their statutory boundaries. In recent years, however, incentive theory has effectively muted these border tensions. To begin, a narrowly economic characterization of patents as property rights rather than monopolies largely removed monopoly rhetoric from patent discourse. Furthermore, the purely commercial context for both patent and antitrust policies has nurtured a joint economic logic of encouraging commercial innovation, both to promote material progress and to sponsor Schumpeterian competition.¹ Incentive theory lies at the core of this joint logic for tolerating, if not promoting, the occasional economic monopoly achieved “on the merits.” Antitrust’s competition logic of innovation and patent’s property logic of innovation, the latter cleansed of monopoly rhetoric, can now be mediated by asking whether the particular patent rule or policy in question enhances *ex ante* incentives to innovate.² If it does, then both logics are seen as satisfied.

¹ My use of “innovation” and “invention” follows Schumpeterian convention. By “innovation,” I mean the commercialization of invention. The use of “commercial innovation” thus reflects redundancy.

Nonetheless, I use the phrase here to emphasize the commercial nature of innovation and to distinguish it from the prior activity of invention. Hereafter, simply “innovation” will be used in its conventional way. Re: Schumpeterian competition, see Section III of the paper

² Antitrust is temporally displaced into *ex post* questions. Although the dominant analysis posits the moment of invention as the appropriate dividing line between *ex ante* and *ex post* questions, between IP

This paper develops an alternative to the commercial logic that drives the incentive theory of patents, that produces its problem of means and ends, and that shapes its boundary conditions with neighboring regimes. An alternative logic flows from a new framework for understanding the public benefits promised by patent protection. In particular, the new logic begins by shifting priority to patent's knowledge benefit, to the importance of contributing new ideas and information to the public domain, and away from the material benefits anticipated from commercial exploitation. A knowledge theory replaces incentive theory as the primary means for promoting progress. Questions of efficiency and distribution relate first and foremost to knowledge and then to wealth. The paper explores the implications of a normative framework that shifts attention from commercial markets to a marketplace of ideas. In this light, patent policy makers would first assess the impact on the production of new knowledge, on access to public goods for free exchange and non-rivalrous competition, and only thereafter inquire into the impact on incentives to innovate associated with private rights in commercial markets.

This turn toward the knowledge benefit provides a sharply different normative ground and, with it, an alternative logic for shaping patent policy. A knowledge theory of progress informs far-reaching improvements to current doctrines and policies such as the experimental use defense, the doctrine of reverse equivalents and the requirements of description and enablement for computer software. In sum, paying primary attention to the knowledge benefit promises a workable theory for developing patent policy, a theory that makes better internal sense and that offers more efficient solutions to border tensions with the neighboring policy regimes, particularly antitrust, copyright and trade secrecy.

The first section explicates the incentive theory supporting the dominant approach to patents and concludes that the theory's limitations sabotage its value for policy makers. The next section explores the conventional view of patent and copyright protection as mutually exclusive categories and finds strong support for an alternative approach that leads to the recognition that there is more overlap than exclusivity in their coverage of intellectual work. What emerges is the enhanced importance of the patent regime's intention to promote progress by advancing public knowledge and, with it, an alternative to the failed incentive theory. The third section investigates the traditional view of patent and antitrust as opposed means of producing innovation, as well as the current view that shifts the focus to the ends of encouraging innovation. The section shows how, instead, both regimes have always depended on parallel yet distinctly different competition logics, mediated by commitments to property ethics. The stage is set for the fourth section, the paper's nucleus, which develops the alternative approach to patents founded on a knowledge theory of progress, an approach driven by an unacknowledged competition logic situated in the marketplace of ideas. It explores the implications of a knowledge theory for promoting progress and, hence, for addressing economic questions of efficiency and distribution. The final section takes up the "So what?" question. It revises several key doctrines and policies to illustrate the implications of a knowledge theory for promoting progress through patents.

and antitrust, the point in time that has functional significance in patent policy is the moment of patent issuance, as discussed in Sections I and III of the paper.