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### Knowledge, Patents, and the Market Place

#### James W. Falk\*

One of the most fragile and yet most important commodities is knowledge. It is of vital importance to our civilization to encourage the development and the dissemination of knowledge, of ideas, of science, as well as the promotion of the useful arts, recognizing the specific meaning those terms connote when used in the constitutional sense.<sup>1</sup> At the same time we are firm believers in the strenuous interplay of forces known as the market place. All things must struggle for survival in the market place which acts as the determining factor of value.<sup>2</sup>

One of the tenets of our faith in the capitalist system is that all things have the right to compete for survival in the market place,<sup>3</sup> and we generally make no exception on the basis of the nature of the item that is thus sent forth to do battle in the market place. To accord some measure of order to the struggle, however, the American economic pattern has erected certain safeguards and attempted to establish certain general rules of combat, notably the antitrust statutes. Further, from time to time we have experimented with other measures, such as the codes of fair competition under the National Recovery Act, and more recently, the wage and price controls of the Nixon administration.

What is often overlooked, however, is an existing order-regulating system for providing rules in the market place competition for certain

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<sup>Board of Managers of that association.
1. Cf. Lutz, Patents and Science, Clarification of the Patent Clause of the United States Constitution, 18 GEO. WASH. L. REV. 50 (1949).
2. "[T]he market, where buyers and sellers meet to compare and evaluate what they have to exchange, [is] the characteristic institution of capitalism. The governor of this institution is competition." J. CHAMBERLAIN, THE ROOTS OF CAPITALISM, 146 (1959).
3. "For competition, with us, is more than a technical concept. It is also a symbol of all that is good." J.K. GALBRAITH, AMERICAN CAPITALISM, 94 (2d ed. 1956).</sup> 

items which require just such protection against the crushing competitive forces present in the market place. This system, which has been with us longer than the economic controls of the second Roosevelt era or the antitrust innovations of the first Roosevelt administration, is the patent system. Too little attention has been paid to the patent system as a means of encouraging the publication of technology and thus preventing the spread of secrecy over wider areas of our intellectual activity. It is not often realized that the patent system has the unique ability to provide for the dissemination of technical knowledge in addition to the economic advantages.<sup>4</sup>

Most of the discussion of the patent system as a mechanism for publication has focused on the patent document itself as the means of pub-While this is certainly true in some cases, as one approaches lication. those areas of technology closer to fundamental science and more removed from gadgetry it is more likely that the scientist would publish his discoveries in a technical journal or by presentation of papers at an appropriate symposium or meeting as soon as the application is filed. Further, there is a great desire on the part of the scientist to make this early publication since he realizes how dependent his future work is on the totality of the pool of common knowledge. Accordingly, in this paper the concept of publication of knowledge is not to be thought of in the narrower sense of the issuance of the patent itself.

"The best test of truth is the power of the thought to get itself accepted in the competition of the market."<sup>5</sup> When that principle is applied to ideas and truths, to knowledge and science, which are of commercial value and whose existence have been caused by expenditures of vast sums of money, the principle is of no significance. The competition of the market is too abrasive. Everything is taken and used. It may be "accepted" but acceptance to the originator is indistinguishable from stealing. Sometimes the actions are so offensive to the law's sense of decency, that the hand of the thief is stayed<sup>6</sup> but more often

<sup>4.</sup> This is not to say that it has been completely ignored. Thus the Report of the Attorney General's National Committee to Study Antitrust Laws at 224-25 lists as the Attorney General's National Committee to Study Antitrust Laws at 224-25 lists as the first public purpose of the patent system "the encouragement of the early disclosure of patentable inventions" and list as subsequent purposes the ultimate availability of these inventions upon expiration of the patent and "encouraging the investment of risk capital." (Mar. 31, 1955). 5. Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting,

discussing freedom of expression). 6. International News Service v. Associated Press, 248 U.S. 215 (1918). See also, the tape piracy cases, e.g., Capitol Records Inc. v. Erickson, 2 Cal. App. 3d 526 (1969), cert. denied, 398 U.S. 960 (1970) and Columbia Broadcasting System, Inc. v. Spies, 167 U.S.P.Q. 489 (Ill. App. 1970).

the view is that expressed by Justice Brandeis in his famous dissent in International News Service v. Associated Press:

To appropriate and use for profit, knowledge and ideas produced by other men, without making compensation or even acknowledgement, may be inconsistent with a finer sense of propriety; but, with the exceptions indicated above, the law has heretofore sanctioned the practice.7

One of the exceptions noted by Justice Brandeis involves the patent statutes.<sup>8</sup> One traditionally explains the value of the patent system in terms of a property in the invention created by statute for the inventor or his assignee. And the explanation or defense for this special privilege is most usually found in the economics of production of new devices-that the patent is necessary to encourage the investment required not so much for the invention as for the innovation needed to bring the invention into this all enveloping market place.<sup>9</sup>

This emphasis on the tangible product introduced into commerce ignores the idea and knowledge behind that product. The patent system creates a market place, or at least orders a market place out of the disarray of the competitive forces allowed by our legal principles; it creates an ordered market place wherein this idea and knowledge can circulate.

When considering how to attain maximum economic advantage of his newly discovered knowledge, every inventor is given the option of seeking a patent, and thus bringing himself under our patent system, or of relying upon secrecy within the concepts of our developing law of trade secrecy, and thus not bringing his newly found knowledge within the patent system.<sup>10</sup> One of the most often cited expressions of this option<sup>11</sup> is the observation of the Supreme Court in United States v.

After 1900, the possible rewards to be obtained from radio patents provided a direct stimulus to the inventors and those who financed them . . . [W]ithout the patent system, it is difficult to see how many of these in-ventors could have obtained adequate financial support except by joining estab-lished companies; and in the critical years when these men were beginning their experiments, none of the existing firms was interested in their in-ventions. The patent system, therefore, provided an important stimulus. 10. Cf. MILGRIM, TRADE SECRETS, § 8.02(1) (Bender 1971). For an example of the advantages of trade secrecy and the hazards of publication see Forest Labora-tories, Inc. v. Pillsbury Co., 171 U.S.P.Q. 731 (7th Cir. 1971), where damages for misappropriation of a trade secret were allowed only up to the date of the issuance of the patent which was found not to be infringed by the trade secret process used by the defendant, even though the critical step of the trade secret was disclosed in the patent. 11. Quoted by Judge Friendly in Painton & Co., Ltd. v. Bourns, Inc., 442 F.2d 216 (2nd Cir. 1971).

Id. at 257. 7.

Now 35 U.S.C. 8

Cf. W.R. MACLAUREN, INVENTION AND INNOVATION IN THE RADIO INDUSTRY, 258 9 (1949):

After 1900, the possible rewards to be obtained from radio patents provided

Dubilier Condenser Corp. that the inventor need not either patent or publish his invention but "may keep his invention secret and reap its fruits indefinitely."12

This emphasis on exploitation and economic reward is merited, but the promotion of the useful arts and sciences requires publication of new knowledge. The antithesis of the promotion of the useful arts and science is secrecy. Trade secret law is for the promotion of the economic advantages in products, not knowledge. It is product-oriented based upon the concept of property, or at least upon relationships arising with respect to that property.<sup>13</sup>

The importance of the patent system is that it negates this need for secrecy on the part of those who are willing to contribute to the development of knowledge, but yet are not philanthropists willing to allow others to profit commercially at their expense. Even those who do not need the patent system to encourage their investment in new products or to enable them to raise capital for such products do need it as a means of enabling them to place into and receive from the stream of knowledge of the technical community those new ideas and new insights that have been created.

Attempts outside the patent system<sup>14</sup> to allow the creator a modicum of profit or even a head start on his profit over the copiers have run afoul of the antitrust laws and have failed.<sup>15</sup> Thus, wherever possible, secrecy is actively promoted by the law. But this is precisely the opposite of what the law should be encouraging as a matter of policy.

Our emphasis on competition<sup>16</sup> has caused the law to limit protection in these areas to the federal statutory remedies absent any deceptive actions, such as palming off.<sup>17</sup> But there has been no concomitant development in the understanding of the statutory areas, particularly the patent system, with respect to the nature of the market place. Granted that one may not take knowledge from the public, may not subtract one part of that which is available to all and attempt to re-

<sup>289</sup> U.S. 178, 186 (1933). 12.

<sup>13.</sup> As Justice Holmes stated in the oft-quoted passage from E.I. Dupont de Nemours Power Co. v. Masland, 244 U.S. 100, 102 (1917):

Whether the plaintiffs have any valuable secret or not the defendant knows the facts, whatever they are, through a special confidence that he accepted. The property may be denied, but the confidence cannot be.

The property may be denied, but the confidence cannot be. 14. This discussion is omitting consideration of the copyright laws. 15. Fashion Originator's Guild of America v. F.T.C., 312 U.S. 457 (1941). 16. See, Goldstein, The Competitive Mandate, From Sears to Lear, 59 CAL. L. Rev. 873 (1971); See also, Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225 (1964), Brulotte v. Thys Co., 379 U.S. 29 (1964), and Lear, Inc. v. Adkins, 395 U.S. 653 (1969).

<sup>17.</sup> Omitting discussion of common law copyright.

serve it for his own purposes, it does not follow that one should not be allowed to clothe truly new ideas with the armor of the patent system so that they can withstand the rigors of the market place.

Not all new knowledge is in a form that lends itself to protection under the patent statutes, but the policy of the law should be to expand the breadth of the patent statutes at the expense of the area within the scope of the law of trade secrets. Trade secret obligations may continue ad infinitum, in some situations even after the rationale or the secret is in fact lost.<sup>18</sup> But the problem with trade secrecy is the distinction between the word "secret" and the word "patent", the latter etymologically meaning open or not secret. We must allow knowledge to be "open" so that it can enter the market place, yet sufficiently protected that its creators can afford not to keep it secret. This is the greatest value of the patent system.

The question thus becomes: what should the policy of the law be in recognition of the competitive forces underlying our concept of our economy—to promote trade secrecy or to utilize other available legal procedures that encourage open disclosures of technology? Specifically in terms of the impact of one technology on our economy, the Department of Justice has indicated its preference for trade secrecy. Thus, Donald I. Baker, director of policy planning in the Department's Antitrust Division recently stated:

Trade secret law gives the software inventor a protected head start with others. It enables him to prevent his employees or industrial spies from making off with his programs; and it enables him to license others to use his programs on reasonable terms, with appropriate sanctions against disclosure to third parties . . . . Certainly, trade secret law offers a less complete reward to the inventor than software patents would—but it is quicker and cheaper.<sup>19</sup>

Inherent in this approach is the underlying concept that it is better for the country and its technical development if ideas and information are not disclosed and not made public. There is a recognition that without the protection afforded by the patent system only secrecy pro-

<sup>18.</sup> Warner-Lambert Pharmaceutical Co. v. John J. Reynolds, Inc., 178 F. Supp. 655 (S.D.N.Y. 1959), aff'd, 280 F.2d 197 (2d Cir. 1960) where the court decided that 1881 and 1885 agreements on Listerine were enforceable and were not conditioned on continued secrecy. But see Choisser Research Corp. v. Electronic Vision Corp., 173 U.S.P.Q. 234, 236 (Cal. 1972) where the California Supreme Court said: "We agree that under Lear, the Listerine case . . . allowing royalties after disclosure, is no longer law."

<sup>19.</sup> Address by Mr. Baker, Fifth Annual New England Antitrust Conference, as reported in Electronic News, Nov. 15, 1971 at 34.

tects against spies and unscrupulous employees. But there is no recognition either that this approach is undesirable as a policy matter or that it is unnecessary for those technological innovations that rise to the statutory and constitutional level<sup>20</sup> of invention.

With respect to this new type of technological knowledge, namely the knowledge of how to use and control computers and data processors, we can see the differing points of view on (1) free flow of ideas, (2) secrecy, and (3) the protected flow of knowledge based on the patent system.

First, there are those who because of their Ben Franklin philosophical background,<sup>21</sup> or because of their current economic involvements in the production of computer machinery want all knowledge to be forced unprotected to run the gamut of the market place where anyone can take it for his own use with no acknowledgement to the creator of that knowledge.

Second, there are those who, like the Department of Justice, prefer an individual to keep his knowledge out of the market place, to keep it secret. Granted that this does nothing to further science, nothing to promote continued development in the technology and may in fact cause myriad duplications of research and development effort, these people believe that under our present policies secrecy is the best technique for protecting the investment they have placed in this knowledge. The result of this approach is that the investor gains the advantage in the market place, but scientific knowledge is not increased and society will ultimately suffer.22

Thirdly, there are those who believe that the ordering of the market place for new knowledge is precisely the situation the patent system was created to deal with. These people are attempting, within the other recognized limitations of originality<sup>23</sup> and nonobviousness,<sup>24</sup> to establish that this technology should also be within the patent sytem.

<sup>20.</sup> Graham v. John Deere Co., 383 U.S. 1 (1966).
21. Benjamin Franklin declined an early form of patent for the "sole vending" of the Pennsylvania fireplace invented by him by stating:

As we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by any inventions of ours; and this we should do freely and generously. R. BURLINGAME, MARCH OF THE IRON MEN 79 (1938).

However, in view of Franklin's acute business acumen, one may wonder whether he would feel the same with today's competitive markets and opportunities.

<sup>22.</sup> A classic example of trade secrecy is the invention of obstetrical forceps in England in the last century. Rather than rely on patents, this invention was kept secret and used only by the inventor and his son; the forceps were not available to other doctors. P. FINDLEY, PRIESTS OF LUDINDA, THE STORY OF OBSTETRICS, 155-68 (1939).

<sup>23. 35</sup> U.S.C. § 102. 24. 35 U.S.C. § 103.

Within this approach lies the hope that the market place for knowledge in this area will not be destroyed and secrecy encouraged.25

All this is not to say that trade secrecy does not have a place in our law, our policy, and in our competitive economy. Judge Friendly, in his careful analysis in Painton & Co., Ltd. v. Bourns, Inc.,<sup>26</sup> in reversing Judge Motley's sweeping dismissal of all trade secret law, stated:

The district judge cited no data to prove that licensing of trade secrets had worked adversely to the public interest. To the contrary, such facts as have been brought to our notice indicate that the sharing of technological know-how on the basis of proper agreements has been beneficial not only within this country but in its relations with others.<sup>27</sup>

There is, indeed, a competitive aura to be seen in trade secret law. But it must be appreciated that trade secret law should be a second choice in policy; where an invention can be within our patent statutes. it is to be preferred that the patent statutes be allowed to work to their full advantage. This will provide an advantage to the public which exceeds the public benefits from trade secret law.

As stated by Judge Friendly in Painton in discussing Lear, Inc. v. Adkins:28

Although the Court stated that 'federal law requires that all ideas in general circulation be dedicated to the common good unless they are protected by a valid patent,' 395 U.S. at 668, [citations omitted], it did not say or suggest that federal law requires that all ideas must be put in general circulation.<sup>29</sup>

However, federal policy should be such as to encourage all ideas to be put into general circulation by recognizing the strength and the flexibility of the patent system in dealing with such ideas.

In Brenner v. Manson<sup>30</sup> the Supreme Court had an opportunity to discuss, in the words of Justice Harlan's dissent, "policy and practice" in order to support their decision on an issue of statutory interpretation<sup>31</sup> not germane to this discussion. However, to support the Court's

<sup>25.</sup> This approach also recognizes that inventions are today often far removed from what they were at the time of the Constitution. Justice Clark aply referred to the business of the inventor at that time as "a love affair between a tinkerer and his gadget." Clark, To Promote Progress of ... Useful Arts, 43 N.Y.U. L. REV. gadget." 88 (1968).

<sup>26. 442</sup> F.2d 216, 169 U.S.P.Q. 528 (2d Cir. 1971). 27. *Id.* at 225-26. 28. 395 U.S. 653 (1971). 29. 442 F.2d at 225. 30. 383 U.S. 519 (1966).

<sup>31.</sup> While a number of issues was discussed, the basic one simply is: Does a process, whose only use is to produce a product currently the subject of research but otherwise without use, possess the degree of utility required by statute?

holding that patents should not issue in the factual context of that case Justice Fortas stated:

It is true, of course, that one of the purposes of the patent system is to encourage dissemination of information concerning discoveries and inventions. And it may be that inability to patent a process to some extent discourages disclosure and leads to greater secrecy than would otherwise be the case . . . However, in light of the highly developed art of drafting patent claims so that they disclose as little information as possible—while broadening the scope of the claim as widely as possible—the argument must be warily evaluated. Moreover, the pressure for secrecy is easily exaggerated. . . .

Whatever weight is attached to the value of encouraging disclosure and of inhibiting secrecy, we believe a more compelling consideration is that a process patent in the chemical field, which has not been developed and pointed to the degree of specific utility, creates a monopoly of knowledge which should be granted only if clearly commanded by the statute. . . .<sup>32</sup>

Without questioning the ultimate decision in that case, this one of the "half a dozen reasons in support of its interpretation"<sup>33</sup> is submitted to be wrong insofar as it indicates the Supreme Court's preference for secrecy over patents. It is also wrong in its inferrence that the publication of knowledge depends on the issuance of the patent itself, regardless of Justice Fortas's condemnation of patent drafting as an obfuscatory art. One need only note all the technical journals and professional society meetings to appreciate that knowledge can be disseminated far more quickly and with more pertinent information disclosed than Justice Fortas assumed.

While no statistical evidence can be gathered, it is intuitively true that every narrowing of the patent grant or narrowing of the scope of technology over which the patent system can operate results in an equal enlargement of the area of technical knowledge not put "in general circulation" but maintained hidden from the public and from subsequent researchers because of its status as a trade secret.

<sup>32. 383</sup> U.S. 519 at 533-34. It is interesting to compare Justice Fortas's language here with a later statement:

Unless we can fashion a patent system in which genuine invention and the **public disclosure of invention are fostered and promoted**, and the appropriate exploitation of invention is protected, we will garner not the fruits of competition, but the chaos of guerilla warfare and the stagnation of a closed and secret industrial society.

Fortas, The Patent System in Distress, 53 J. PAT. OFF. Soc'Y, No. 12 (Dec. 1971). 33. 383 U.S. 537 (Harlan, J., dissenting).

Judge Friendly's holding in *Painton* in delimiting the scope of the Supreme Court's decisions in Sears v. Stiffel<sup>34</sup> and Comco Corp. v. Day-brite Lighting<sup>35</sup> has also been reached by the Seventh Circuit<sup>36</sup> where the court stated:

Although that which is published may be freely copied as a matter of federal right, Sears, Roebuck & Co., V. Stiffel, [citations omitted], that which is unpublished, and therefore not available for copying, may be protected from misappropriation without offending any federal law.37

Again, to complement this logic, this decision needs a companion decision, under the patent statutes, which recognizes the impetus of the patent system in encouraging publication. For "that which is unpublished" may indeed be "protected from misappropriation" but it adds nothing to that interchange of knowledge through publication which is the lifeblood of scientific advance.

What is important is that we recognize the value of the patent system by emphasizing its stabilizing effect on an ordered market rather than by looking only at the property aspects of the statutory right.

'Property' is a historical concept; one may bestow much labor and ingenuity which inures only to the public benefit; 'ideas', for instance, though upon them all civilization is built, may never be 'owned'. The law does not protect them at all, but only their expression; and how far that protection should go is a question of more or less; an author has no 'natural right' even so far, and is not free to make his own terms with the public.<sup>38</sup>

But insofar as these "ideas" can be fitted into the patent system for the protection of their "expression", or more aptly of their utilization in the statutorily recognized classes of invention such as machines and processes,<sup>39</sup> their protection should be encouraged by the law, not because they then rise to the level of "property" but because there is then provided an ordered market place in which they can circulate, thus defeating the necessity for secrecy.

It is not a question of creating a new "property" right in ideas but of recognizing the value of the patent system in providing a market place for this property. The courts and lawyers have for too long been looking at the patent system narrowly in terms of the "property"

<sup>34. 376</sup> U.S. 225 (1964).
35. 376 U.S. 234 (1964).
36. Bailey v. Logan-Square Typographers, Inc., 169 U.S.P.Q. 322 (7th Cir. 1971).
37. Id. at 324.
38. BC A. Marcon With the second s

<sup>38.</sup> R.C.A. Mfg. Co. v. Whiteman, 114 F.2d 86, 90 (2d Cir. 1940). 39. 35 U.S.C. § 101.

granted to the patentee in derogation of the rights of the public. Instead the view should be that of the public's need to obtain the information as the primary value, with the patentee's property of secondary importance. Insofar as technology can be thus disseminated within the patent system, the patent system is fulfilling its constitutional purpose because the creation of new ideas for technology is just as important as production of new goods for commerce in attaining the promotion of the useful arts and sciences.

The solution to the problems discussed in this paper thus does not require legislation or even a specific holding by a court on a question before it. It is rather a question of a change in attitude and an appreciation by both the courts and government of the intrinsic value of the patent system. There must be a recognition that while the patent system does encourage investment and does promote innovation and new products, there is another aspect of equal importance—the encouragement of dissemination of knowledge. The economic values of the patent system have thus far received almost all the attention and too little has been said concerning the ability of the patent system to encourage the flow of ideas among the skilled practitioners of the various useful arts.

Every time an entrepreneur or an investor opts for secrecy, the patent system is diminished. Every time the choice is to make the information available in view of possible patent protection, the patent system is strengthened. This decision is made over and over again by a multitude of individuals and organizations, each one determining what he considers best for his particular situation. When these individuals feel that there is sufficient validity in our patent system so that they will always want to publish their knowledge in preference to secrecy, this problem will be truly solved.