# SUBTESTS OF "NONOBVIOUSNESS": A NONTECHNICAL APPROACH TO PATENT VALIDITY

The application of legal standards to factual situations is often governed by vague or conclusory criteria. Standards such as "reasonable man" or "due process" have acquired a more definite legal content through repeated exposure to judicial treatment. However, the legal standards applicable to the validity of patent grants have not enjoyed the benefit of such a transition. It will be the objective of this Note to assess the difficulties which have obstructed the judicial development of one such standard, that of "nonobviousness," and suggest means of avoiding these difficulties.<sup>1</sup>

#### I. BACKGROUND

# A. The Standard of "Nonobviousness"

The Constitution grants Congress the power "to promote the Progress of Science and useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries . . . . "2 The limitation of the grant of power to the promotion of progress implies that some innovation be left for the free use of all. The test of "obviousness" implements this policy by denying a monopoly when a particular result could have been accomplished by anyone familiar with the art. The test is codified in section 103 of the 1952 Patent Act, which provides that a patent may not be obtained if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." <sup>5</sup>

Courts of the nineteenth century had little difficulty applying such a test, since the technical level of innovation was low enough that a judge's

<sup>&</sup>lt;sup>1</sup> 35 U.S.C. § 103 (1958). For other broad standards of patentability, see 35 U.S.C. § 101 (1958) ("new and useful"); 35 U.S.C. § 102 (1958) ("novelty").

<sup>&</sup>lt;sup>2</sup>U.S. Const. art. I, § 8, cl. 8; see Staff of the Subcomm. on Patents, Trademarks, and Copyrights, Senate Comm. on the Judiciary, 85th Cong., 1st Sess., Study No. 7, Efforts To Establish a Statutory Standard of Invention 1-2 (Comm. Print 1958).

<sup>&</sup>lt;sup>3</sup> See Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp., 340 U.S. 147, 152-53 (1950).

He who is merely the first to utilize the existing fund of public knowledge for new and obvious purposes must be satisfied with whatever fame, personal satisfaction or commercial success he may be able to achieve. Patent monopolies, with all their significant economics and social consequences, are not reserved for those who contribute so insubstantially to that fund of public knowledge.

Dow Chem. Co. v. Halliburton Oil Well Cementing Co., 324 U.S. 320, 328 (1945).

<sup>4</sup> The test first appeared in Hotchkiss v. Greenwood, 52 U.S. (11 How.) 248 (1850). A patent for a clay-formed doorknob was held invalid because the substitution of clay for metal was thought not to require "more ingenuity and skill . . . than were possessed by an ordinary mechanic acquainted with the business . . ."

Id. at 267; see Reviser's Note to the 1952 Patent Act, 35 U.S.C.A. 21 (1959).

<sup>5</sup> 35 U.S.C. § 103 (1958).

native intelligence and education supplied the background necessary to an understanding of the innovation's operation; he was able to place himself in the position of one skilled in the art in deciding whether the innovation was "obvious." <sup>6</sup> However, revolutionary advances such as the telegraph and barbed wire seem elementary in comparison to the elusive chemical formulae or the intricate electronic circuits prevalent today. Given their lack of technological training, it is not surprising that trial judges in many cases find difficulty in understanding the innovations, the briefs, and the exhibits. Judges are nevertheless constrained to apply a test of nonobviousness better suited to a past age. <sup>8</sup>

# B. Present Instruments of Decision-Making

Litigants presently rely on adversary experts to apprise the court of technical issues.<sup>9</sup> However, such experts are known to be excessively partial so that these issues become distorted beyond even the point of legitimate disagreement.<sup>10</sup> Furthermore, it is doubtful that an expert can teach the court enough physics or other science in the limited time available to provide it with a sufficient working knowledge to cope with the more technical facts. Therefore, a judge may revert to "a judicial hunch." <sup>11</sup> Such a method of decision-making is likely to result in inconsistent holdings so that it is difficult for the inventor to assess the probability that his patent will be upheld.<sup>12</sup>

634, 641 (1950).

<sup>&</sup>lt;sup>6</sup> See generally Dession, The Trial of Economic and Technological Issues of Fact (pts. 1-2), 58 Yale L.J. 1019, 1242 (1949).

<sup>7</sup> See Borkin, The Patent Infringement Suit-Ordeal by Trial, 17 U. Chi. L. Rev.

<sup>&</sup>lt;sup>8</sup> New methods of research such as team research, progressive laidout planning and integration with business techniques, and language barriers between court and patentees contribute to the difficulty. Inlow, The Patent Grant 142 (1950); Kahn, Fundamental Deficiencies in American Patent Law, 40 Am. Econ. Rev. 475, 486 (1940).

<sup>&</sup>lt;sup>9</sup> See, e.g., Admiral Corp. v. Zenith Radio Corp., 296 F.2d 708 (10th Cir. 1961). See generally Smith, Scientific Proof, 52 Yale L.J. 586 (1943); Whinery, Role of the Court Expert in Patent Litigation, in Subcomm. on Patents, Trademarks, and Copyrights, Senate Comm. on the Judiciary, 85th Cong., 1st Sess., Study No. 8 (Comm. Print 1958).

<sup>10</sup> Wigmore called them "virtually the retained partisan assistants of counsel."
2 Wigmore, Evidence § 563, at 648 n.3 (3d ed. 1940); see Holstensson v. V-M Corp.,
198 F. Supp. 779, 787 (W.D. Mich. 1961), rev'd, 325 F.2d 109 (6th Cir. 1963);
Sink, The Unused Power of a Federal Judge To Call His Own Expert Witness, 29
So. Cal. L. Rev. 195, 203 (1956); Whinery, supra note 9, at 6-7.

<sup>11</sup> Hutcheson, The Judgment Intuitive: The Function of the "Hunch" in Judicial Decisions, 14 Cornell L.Q. 274, 278 (1929). Uncertain standards enable courts to decide patent cases on extralegal grounds. In Vincent v. Suni-Citrus Prods. Co., 215 F.2d 305 (5th Cir.), cert. denied, 348 U.S. 952 (1955), the court affirmed a Florida district court with the statement that the holding of invalidity was one "phase of the long . . . struggle . . . to free [the state's] . . . large and growing citrus waste processing industry from the adverse effects of patent monopoly control . . . ." Id. at 305-06.

<sup>12</sup> It has been said to be an "inescapable solipsism that subjects patent applications to the test of as many different standards of patentability as there are district judges . . . ." Gross v. JFD Mfg. Co., 207 F. Supp. 631 (E.D.N.Y. 1962), rev'd, 314 F.2d 196 (2d Cir.), cert. denied, 374 U.S. 832 (1963). See generally Medina, A New Judge Tries His First Patent Case, 34 CORNELL L.Q. 220 (1948).

# C. Abuses Engendered by Unpredictability

Powerful patentees are encouraged to misuse a system when the less powerful cannot rely on the law, <sup>13</sup> Less capitalized competitors are more apt to settle infringement suits against them, so that invalid patents are given the economic deference of valid ones. <sup>14</sup> Unpredictability also discourages poorer litigants from undertaking to assert valid patent rights, thus denying them protection. <sup>15</sup> As a result, inventors have less confidence in the patent system and the expansion of unsanctioned monopoly is facilitated. <sup>16</sup> Writers, recognizing these shortcomings, have recommended reforms such as patent infringement courts manned by specially trained personnel, court-appointed technical experts, and Government intervention in infringement actions. <sup>17</sup> However, while present difficulties are in part attributable to inadequate procedures, such reforms would provide only a symptomatic cure of a more fundamental disease. <sup>18</sup>

# D. The Need for Judicially Cognizable Standards

A transformation of the standards of invention from vague conclusory terms to ones anchored in judicially cognizable facts would vitiate the need for procedural reform while aiding in the development of a case-by-case refinement and growth of the legal standard of patentability. Since the

<sup>13 &</sup>quot;Sheer economic power often counts for as much as does the worth of the patent to the progress of science and useful arts." Kahn, supra note 8, at 485-86; see Borkin, supra note 7, at 646; Stedman, Invention and Public Policy, 12 LAW & CONTEMP. PROB. 649, 661 (1947).

<sup>14</sup> See the tactics of United Shoe Machinery Corporation and Alcoa described in Stocking & Watkins, Monopoly & Free Enterprise 457 (1951). The patent infringement suit has been called the most effective weapon for harassing competitors and thwarting entry of new rivals. Fortune, Aug. 1942, pp. 105-32.

<sup>15</sup> The burden of litigation has been called an important factor in patent protection. Deller, An Inquiry into the Uncertainties of Patentable Invention and Suggested Remedies, 38 J. Pat. Off. Soc'y 152, 178 (1956); Stedman, supra note 13, at 649. One estimate of the minimum cost in 1942 was \$50,000. Borkin, supra note 7, at 646 n.29.

<sup>16</sup> See Henry, Standards of Invention in Mechanical Cases, 32 J. Pat. Off. Soc'x 97 (1950). Even an unpredictable standard of validity may not discourage inventors from innovating unless the grant of exclusivity is too arbitrary. It has been asserted, however, that patents may be needed less as a lure for invention than as a lure for investors. Picard v. United Aircraft Corp., 128 F.2d 632, 642 (2d Cir.), cert. denied, 317 U.S. 651 (1942) (Frank, J., concurring). If so, an unpredictable standard could still have a deterrent effect on innovation, for investors are faced with many more alternatives to research than are inventors.

<sup>&</sup>lt;sup>17</sup> See generally Beuscher, The Use of Experts by the Courts, 54 Harv. L. Rev. 1105 (1941).

Deller has urged that it "would be better to err on the side of granting a few insignificant patents than destroy all incentives to innovation . . . ." Deller, supra note 15, at 177. Compare Edwards, Maintaining Competition 236 (1949).

<sup>18</sup> The Supreme Court has not seen fit to resolve conflicting decisions over the validity of individual patents or over the tests of validity. The Court has not reviewed a patent validity case since the 1952 act. Recent dicta suggests that at least one member of the Court entertains a begrudging view of patent validity. Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 351 (1962) (Black, J., concurring).

<sup>&</sup>lt;sup>19</sup> See generally Stocking & Watkins, Monopoly & Free Enterprise 449 (1951); Gerhardt, Patent Policy and Invention, 34 J. Pat. Off. Socy 877 (1952).

courts have difficulty in applying the broad standard of nonobviousness to technical facts, subtests should be developed which would realize the policies contained in the above standards but which would be based upon non-technical facts.<sup>20</sup> Some courts have developed and utilized such subtests, often termed "indicia of invention." <sup>21</sup> The focus of these inquiries is upon economic and motivational rather than technical issues; <sup>22</sup> the facts with which to resolve such issues are more amenable to judicial treatment than are the technical facts with which the courts generally struggle. Moreover, they give direction to the statutorily-required inquiry as to whether the innovation was obvious to those skilled in the art by furnishing a basis for inferring that had these artisans attempted a solution, it would or would not have been obvious to them.

Some of the subtests to be considered have been consciously used by courts, some are in the nature of proposals by writers, and others are classifications arising from facts found in judicial opinions. Consideration will be given to the nature and sources of the facts upon which the subtest can be applied, their probative weight, their susceptibility to judicial handling, and the relationship they bear to the standard of nonobviousness.

#### II. THE SUBTESTS OF PATENTABILITY

# A. Longfelt Demand

The driving force behind innovation is the need for the improvement of existing technology. A defect in a product or process spurs the businessman to deploy resources for discovering a solution. High production costs, undesirable side effects from the use of a product, or a limited period of usefulness are typical of defects which will stimulate research. Existence of the defect creates a demand for its correction, and it is reasonable to infer that the defect would not persist were the solution "obvious." This is the rationale of longfelt demand and its justification as a test of non-obviousness.<sup>23</sup>

<sup>&</sup>lt;sup>20</sup> See Harris, Some Aspects of the Underlying Legislative Intent of the Patent Act of 1952, 23 Geo. WASH. L. Rev. 658 (1955).

<sup>21</sup> Kaakinen v. Peelers Co., 301 F.2d 170, 172-73 (9th Cir.), cert. denied, 371 U.S. 823 (1962); Copease Mfg. Co. v. American Photocopy Equip. Co., 298 F.2d 772, 781-82 (7th Cir. 1961); Honolulu Oil Corp. v. Shelby Poultry Co., 293 F.2d 127, 130-32 (4th Cir. 1961); Safety Car Heating & Lighting Co. v. General Elec. Co., 155 F.2d 937, 939 (2d Cir. 1946). See generally Note, The Statutory Standard of Invention: Section 103 of the 1952 Patent Act, 3 PATENT, TRADEMARK & COPYRIGHT J. 317 (1959).

<sup>&</sup>lt;sup>22</sup> Judge Learned Hand noted such issues in Reiner v. I. Leon Co., 285 F.2d 501 (2d Cir. 1960), cert. denied, 366 U.S. 929 (1961):

<sup>[</sup>H]ow long did the need exist; how many tried to find the way; how long did the surrounding and accessory arts disclose the means; how immediately was the invention recognized as an answer by those who used the new variant?

Id at 504

<sup>&</sup>lt;sup>23</sup> Facts indicative of longfelt demand have in general been prominent in judicial decisions. See Goodyear Tire & Rubber Co. v. Ray-O-Vac Co., 321 U.S. 275, 279 (1944); Eibel Process Co. v. Minnesota & Ont. Paper Co., 261 U.S. 45, 53-54, 68 (1923); Allen v. Standard Crankshaft & Hydraulic Co., 323 F.2d 29, 34 (4th Cir.

Longfelt demand can be inferred by proof that a defect existed, but the patentee must articulate the defect in need of solution.<sup>24</sup> The more pronounced and persistent the defect, the stronger the inference of longfelt demand. Often, however, proper assessment of the magnitude of a defect will be hampered if the necessary evidence is unavailable or is highly technical. In such a case a court can turn to other sources within an industry for evidence showing that many skilled artisans have attempted to find a solution to the problem which the patent in question purports to solve.<sup>25</sup> Such evidence shows indirectly the presence of a significant defect while serving as a simulated laboratory test of the obviousness of the solution to a skilled artisan.

The amount of research expended by the industry is an important source of evidence and this can be measured in terms of man-hours. Information as to the research time devoted to the solution of similar problems in the field would be of value in appraising the significance of the amount of research for the defect under consideration.

A thousand monkeys working at a thousand benches for a thousand years is impressive in monkey-hours, but one well-equipped technician would undoubtedly produce superior innovations. Therefore, the quality of research should also be examined.<sup>26</sup> Research by simple repetitive routines should not be the basis for an inference that the solution was not

<sup>1963);</sup> Lorenz v. F. W. Woolworth Co., 305 F.2d 102, 104 (2d Cir. 1962); Ekstrom Carlson & Co. v. Onsrud Mach. Works, Inc., 298 F.2d 765, 770 (7th Cir.), cert. denied, 369 U.S. 886 (1962); Kingsland, The Statutes and Decisions Presenting the Better Tests of Inventions, 34 J. Pat. Off. Soc'y 473, 478-80 (1952). But see White v. Tak-trac, Inc., 140 U.S.P.Q. 156, 159 (S.D. Cal. 1963) ("a weak reed for a patentee to lean upon"). In H.R. 4061, 80th Cong., 1st Sess. (1948), a proposal for longfelt demand as the statutory test is discussed. Staff of the Subcomm. on Patents, Trademarks, and Copyrights, Senate Comm. on the Judiciary, 85th Cong., 1st Sess., Study No. 7, Efforts To Establish a Statutory Standard of Invention 7-9 (Comm. Print. 1958).

<sup>&</sup>lt;sup>24</sup> Hutchinson v. Pacific Car & Foundry Co., 319 F.2d 756, 760 (9th Cir. 1963); Brooks v. Stoffel Seals Corp., 266 F.2d 841, 842 (2d Cir.), cert. denied, 361 U.S. 883 (1959). The fact that patentee has obtained many other patents in the area will not substitute for articulation of the nature of the defect. Lorenz v. F. W. Woolworth Co., 305 F.2d 102, 105 (2d Cir. 1962).

<sup>&</sup>lt;sup>25</sup> National Latex Prods. Co. v. Sun Rubber Co., 274 F.2d 224, 240 (6th Cir. 1959), cert. denied, 362 U.S. 989 (1960); Ben Adler Signs, Inc. v. Wagner Sign Serv., Inc., 112 F.2d 264, 267 (7th Cir.), cert. denied, 311 U.S. 692 (1940).

In Minnesota Mining & Mfg. Co. v. Permacel-Le Page's, Inc., 222 F. Supp. 540, 547 (N.D. III. 1963) the court stated that "the best evidence [of validity] . . . is the length of time during which the industry sought unsuccessfully to [innovate] . . . as well as the extensive efforts of [patentee's] . . . staff."

<sup>&</sup>lt;sup>26</sup> Unsuccessful efforts must be by those familiar with the prior art. Fluor Corp. v. Gulf Interstate Gas Co., 259 F.2d 405, 408 (5th Cir. 1958). In General Elec. Co. v. DeForest Radio Co., 23 F.2d 698 (D. Del. 1928), aff'd, 283 U.S. 664 (1931), the court noted that the "great and renowned" physicist Langmuir made many experiments to achieve the patented result but was "traveling, all unknown to him, over a field already well explored." Id. at 705. Articles in scientific journals and the experiments themselves showed Langmuir's lack of knowledge of the prior art. 283 U.S. at 679-80.

The failure of Government scientists during a national emergency to solve a problem has been called persuasive evidence of nonobviousness. Entron, Inc. v. Jerrold Electronics Corp., 295 F.2d 670, 675 (4th Cir. 1961).

obvious to those skilled in the art.<sup>27</sup> However, courts will seldom encounter such evidence for few competitive enterprises would allocate resources so poorly.

Even if the research were not large in terms of man-hours, an investment large in dollars or large relative to capital or earnings could support an inference that the solution was not obvious. The underlying presumption would have to be that the research was a highly efficient operation which would have suceeded had the solution been available.

Even in the absence of a showing of a mobilization of resources to solve the problem, proof that a defect persisted for a long period of time could support an inference that the solution would have been achieved had it been obvious to those skilled in the art.<sup>28</sup> Finally, a showing that a large proportion of the firms in an industry attempted to solve the problem could be the basis for inferring a strong need.

The significance of a given period of time during which a defect was present or even of a period of proven unsuccessful research can not be determined by a single absolute standard, for the speed of innovation varies from industry to industry. To create an inference of longfelt demand, the time the defect persisted should at least be longer than the average time lapse proceeding the unpatented solutions of defects in the relevant art.<sup>29</sup>

In receiving evidence of unsuccessful research, courts must take care that such research was conducted under the same state of the art as that which confronted the patentee.<sup>30</sup> It may be that an intervening innovation made that which the patentee accomplished obvious even though it was not obvious to prior unsuccessful researchers.

If the patentee is able to manipulate any of the factual elements of longfelt demand, they will not accurately reflect demand or be support for invention. For example, a patentee in a monopolistic or highly oligopolistic industry would be in a position to suppress the solution to a problem in order to give the appearance of a period of failure, while fear of a com-

<sup>&</sup>lt;sup>27</sup> See Picard v. United Aircraft Corp., 128 F.2d 632 (2d Cir.), cert. denied, 317 U.S. 651 (1942) (L. Hand, J.) (decrying the use of trial and error research as evidence of invention).

<sup>&</sup>lt;sup>28</sup> See E. J. Brooks v. Stoffel Seals Corp., 266 F.2d 841, 842 (2d Cir.), cert. denied, 361 U.S. 883 (1959) (patentee imprudently asserted in his patent application that "recently there has been a demand"). But see In re Lechene, 277 F.2d 173 (C.C.P.A. 1960) (time lapse alone not proof of nonobviousness). In Savoy Leather Mfg. Corp. v. Standard Brief Case Co., 261 F.2d 136, 138 (2d Cir. 1958), the court, in the absence of evidence, thought that a six-year lapse could be as plausibly attributed to a belief of the industry of the nonpatentability of the advance as to unsuccessful attempts at solution. Even if such a belief were proven, this should not relieve the court of its obligation to determine patentability by other tests.

<sup>&</sup>lt;sup>29</sup> While a considerable time lapse is evidence of patent validity, a rapid solution by the patentee should not necessarily be evidence against validity. See Ekstrom Carlson & Co. v. Onsrud Mach. Works, Inc., 298 F.2d 765, 770 (7th Cir.), cert. denied, 369 U.S. 886 (1962) (rapid solution indicates "inventive genius").

<sup>30</sup> Reiner v. I. Leon Co., 285 F.2d 501, 504 (2d Cir. 1960), cert. denied, 366 U.S. 929 (1961) (dictum); Otto v. Koppers Co., 264 F.2d 789, 800 (4th Cir. 1957), cert. denied, 355 U.S. 939 (1958); Lyon v. Bausch & Lomb Optical Co., 224 F.2d 530, 535 (2d Cir.), cert. denied, 350 U.S. 911 (1955).

petitor's successful innovation would deter such practices in a more competitive field.

The facts relevant to the proof of longfelt demand would rarely be technical, and thereby would be amenable to judicial treatment. Although issues raised under the test are often questions of degree, for example, the length of time to be required for unsuccessful research, or the weight to be given to the ability and methods of unsuccessful researchers, such issues seem to be suited to a case-by-case development of legal standards since courts will be able to reason by analogy, even from one industry to another. The test also furthers the constitutional directive of progress promotion in two respects. First, potential innovators will be encouraged to innovate if they know that their research efforts and those of their competitors will ultimately aid in defending their patent. Furthermore, when proof of unsuccessful research has been presented, it is improbable that the patent has been granted for knowledge already in the hands of those skilled in the art.

This test would not be of help to a patentee with a pioneering invention in a wholly new field, as there would have been no longfelt demand.<sup>31</sup> This, however, in no way curtails the value of longfelt demand in implementing the section 103 test of "obviousness."

#### B. Commercial Success

The possibility of market success attendant upon the solution of an existing problem may induce innovators to attempt a solution. If in fact a product attains a high degree of commercial success, there is a basis for inferring that such attempts have been made and have failed.<sup>32</sup> Thus the rationale is similar to that of longfelt demand and is for the same reasons a legitimate test of invention.<sup>33</sup> The operative facts, however, are the actions of buyers rather than those of producers. The courts have recognized and made use of such facts in the determination of patent validity.<sup>34</sup>

The basic measure of commercial success should be the proportion of the total market for the product that the patentee has obtained. However,

<sup>31</sup> See Paramount Publix Corp. v. American Tri-Ergon Corp., 294 U.S. 464, 474 (1935).

<sup>32</sup> One court thought it incredible that with a latent demand of twenty-one million units, researchers would have been blind to the patentee's solution had it really been obvious. S. H. Kress Co. v. Aghnides, 246 F.2d 718, 721, 723 (4th Cir. 1957), cert. denied, 355 U.S. 889 (1958).

<sup>33</sup> Commercial success has been thought to be strong evidence of validity when it also appears that many highly trained artisans had been working on improvements for many years. Kaakinen v. Peelers Co., 301 F.2d 170, 173 (9th Cir.), cert. denied, 371 U.S. 823 (1963); Georgia Pac. Corp. v. United States Plywood Corp., 258 F.2d 124, 133 (2d Cir.), cert. denied, 358 U.S. 884 (1958); Kingsland, supra note 23, at 480-84.

<sup>34</sup> Otto v. Koppers Co., 246 F.2d 789, 799-800 (4th Cir. 1957), cert. denied, 355 U.S. 939 (1958) (commercial success persuasive that solution not apparent to skilled artisans); see Schumaker v. Gem Mfg. Co., 311 F.2d 273, 276 (7th Cir. 1962); Hayes Spray Gun Co. v. E. C. Brown Co., 291 F.2d 319, 322 (9th Cir. 1961); Reiner v. I. Leon Co., 285 F.2d 501, 504 (2d Cir. 1960), cert. denied, 366 U.S. 929 (1961); Hartford Nat'l Bank & Trust Co. v. E. F. Drew & Co., 237 F.2d 594, 596 (3d Cir. 1956). See generally Costas, Discovery and the Issue of Commercial Success in Patent Infringement Actions, 31 F.R.D. 215 (1963).

the significance of a particular share of a market may vary between industries, and therefore the legal standard should not be based solely on a fixed percentage. Defining the relevant market may present difficulties for a court, particularly when the innovation encroaches upon several independent markets. Resort to sources such as the patentee's sales literature could help in ascertaining the actual and potential uses for the product. Another difficulty is presented by innovations which combine the qualities of several previously independent products. In such a case the relevant market could be circumscribed by considering the needs of diverse types of buyers which potentially could be met by the innovation. For example, where a new material combines the high strength of steel with the low conductivity of ceramics, the relevant markets would consist of all substitute combinations of these qualities.

The presence of certain factors negate the significance of a showing of commercial success. Market dominance due to attributes of the product other than those for which the patent was granted, such as the color of the product or the box in which it is packed, should not be used to sustain the inference of validity.<sup>35</sup> Factors such as these could often be detected by consulting the patentee's sales literature and advertising or discussion of the product in technical manuals or articles. However, if competitors of the patentee have seen fit to incorporate the patented attribute in their own products, it would be difficult to maintain that the patentee's success was due to extraneous factors.<sup>36</sup>

Although courts have occasionally brushed aside showings of commercial success because they were due to "advertising," 37 the fact that a

<sup>&</sup>lt;sup>35</sup> Welsh Mfg. Co. v. Sunware Prods. Co., 236 F.2d 225, 227 (2d Cir. 1956); Bulldog Elec. Prods. Co. v. General Elec. Co., 105 F.2d 466, 468-69 (4th Cir. 1939); Modern Millinery Box Corp. v. Boas Box Co., 219 F. Supp. 615, 618 (E.D. Pa. 1963); Kennatrack Corp. v. Stanley Works, 216 F. Supp. 394, 396-97 (N.D. Ill. 1961), aff'd, 314 F.2d 164 (7th Cir. 1962). But see American Safety Table Co. v. Schreiber, 269 F.2d 255, 261 (2d Cir.), cert. denied, 361 U.S. 915 (1959), where the court indicated that complete market supercession relieved the court from determining the amount of commercial success due to the patentable features. However, the bare fact of supercession should be no basis for inferring nonobviousness.

<sup>36</sup> Brown v. Brock, 240 F.2d 723, 728 (4th Cir. 1957), suggests that an infringer could never successfully contend that nonpatented features were responsible for the patentee's success. The court there dismissed such a contention on the grounds that the infringer had, inconsistently with his allegation, chosen to incorporate the patented device in his own product. However, it is only when a significant number of competitors use the patented device that commercial success becomes hard to attack, not when a sole infringer does so. The latter is, by definition, the case in every infringement suit.

<sup>&</sup>lt;sup>37</sup> Diamond Rubber Co. v. Consolidated Rubber Tire Co., 220 U.S. 428, 442 (1911); Deering Milliken & Co. v. Temp-Resisto Corp., 274 F.2d 626, 632-33 (2d Cir. 1960). In Wahl Clipper Corp. v. Andis Clipper Co., 66 F.2d 162, 165 (7th Cir. 1933), the court posited the need for close scrutiny to ascertain whether increased sales were

due to advertisement . . . to an intensive sales drive, a consolidation of competing industries, an abandonment of the manufacture of an old article, a happy use of a trade name, a sharp revival of business, or any other means which an alert management of an industry successfully adopts to sell a nationally used article.

patentee generated a market by extensive advertising does not per se eliminate the inference of validity. Innovations often have no preexisting market, and only by advertising can the product be brought to the attention of potential buyers. This is not "creating one's own market," but is satisfying a latent demand. It is only when the commercial success results from overstating the patented attribute of the product that it does not support an inference of nonobviousness since buyer demand resulting in success would have resulted from other than the attribute itself. It may be difficult to distinguish success due to puffing from that which arouses a latent demand. One possibility is to resort to evidence of market domination in historical perspective.<sup>38</sup> If it appears that the innovation has permanently displaced other products, it would be unlikely that success was due merely to puffing.<sup>39</sup> Finally, a court must be assured that the patentee's market domination is not attributable to monopoly power or other economic coercion, or to other factors unrelated to patent validity.<sup>40</sup>

The absence of commercial success can have an adverse effect upon the validity of a patent to the extent that it rebuts any inference of a longfelt demand. The patentee could at least neutralize the impact of a commercial failure by showing that it was due to lack of capital, bankruptcy, or similar factors unrelated to the operation of the patented product. Failure due to a superior but different innovation by a competitor would support a showing of longfelt demand.

The inference of nonobviousness is not as strong under this test as is that drawn from a showing of longfelt demand,<sup>41</sup> but a showing of both presents a convincing case for patentability. Moreover, the factual issues would rarely entail technical considerations. Therefore commercial success should occupy an important role in the judicial repertoire of tests of patent validity.

<sup>38</sup> One court has required "evidence as to . . . sales by years [and] . . . evidence permitting a quantitative comparison of . . . sales before and after the patent . . . " National Lead Co. v. Western Lead Prods. Co., 324 F.2d 539, 545 (9th Cir. 1963). One writer believes that the difficulty in isolating factors such as excessive advertising expenditures from commercial success renders the entire test of doubtful value. ROBERTS, PATENTABILITY AND PATENT INTERPRETATION 181-82 (1927).

<sup>&</sup>lt;sup>39</sup> Failure of sales to remain at a high level led one court to find that commercial success was due to unpatented features of the item. Ripple Sole Corp. v. American Biltrite Rubber Co., 192 F. Supp. 551, 556 (D. Mass. 1961), aff'd, 302 F.2d 2 (1st Cir.), cert. denied, 371 U.S. 876 (1962).

<sup>&</sup>lt;sup>40</sup> See, e.g., Brooks v. Stoffel Seals Corp., 266 F.2d 841, 844 (2d Cir.), cert. denied, 361 U.S. 883 (1959) (Government agency encouraged use of patentee's product). Judge Wyzanski in United Shoe Mach. Corp. v. Industrial Shoe Mach. Corp., 223 F. Supp. 826, 831-32 (D. Mass. 1963), rejected immediate and widespread success as proof of invention. He demanded proof not only of the actual demand for similar machines but also that the large market and sales were chiefly attributable to the technical advance and not to a dominant market position, monopoly power, peculiar legal exchange agreements for old machines on lease, or unusual pricing policies.

<sup>41</sup> The inference is not as strong only in the sense that it is often difficult to ascertain when success is due only to the patented feature of the product, thereby inducing less confidence in a showing of commercial success. See ROBERTS, op. cit. supra note 38.

# C. Commercial Acquiescence

Often those in an industry fail to challenge validity of a patent even though they suffer economic injury because of the patented product. Such behavior has been used by the courts in support of the validity of the patent.<sup>42</sup> The rationale stems from the probability that those in a field will not so behave unless convinced of the patent's validity.<sup>43</sup> The focus of the test is upon the actions of those in the field toward the patent, not the actions of the infringer.<sup>44</sup>

Commercial acquiescence is most frequently indicated by the grant of licenses for a patented product.<sup>45</sup> It would usually be more economical for a licensee to copy the product than to pay royalties to a patentee, and the willingness of the licensee to incur royalty costs would therefore justify an inference of his belief in the validity of the patent and the resultant futility of infringement. The more widespread the licensing the stronger the inference of patent validity.<sup>46</sup> The extent of licensing should be measured by the percent of acquiescence in the total possible license market. However, it is crucial that the licensees be primarily motivated by respect for the patentee's legal rights. If other factors underlie a decision to license, the arrangement may lose its evidentiary significance.<sup>47</sup>

<sup>42</sup> See, e.g., Eible Process Co. v. Minnesota & Ont. Paper Co., 261 U.S. 45, 55-56 (1923) (licensing by competitors); Georgia Pac. Corp. v. United States Plywood Corp., 258 F.2d 124, 133-34 (2d Cir.), cert. denied, 358 U.S. 884 (1958) (competitors failed to infringe); Kingsland, supra note 23, at 482-83.

<sup>&</sup>lt;sup>43</sup> See Cold Metal Process Co. v. Republic Steel Corp., 233 F.2d 828, 836 (6th Cir.), cert. denied, 352 U.S. 891 (1956) (court inferred nonobviousness from licensing by the trade).

<sup>44</sup> Courts often rely on prior actions by an alleged infringer indicative of acquiescence. This rationale, however, contains an element of waiver or estoppel and therefore must be distinguished from commercial acquiescence. See Georgia Pac. Corp. v. United States Plywood Corp., 258 F.2d 124, 134 (2d Cir.), cert. denied, 358 U.S. 884 (1958). But see Interstate Rubber Prods. Co. v. Radiator Specialty Co., 214 F.2d 546 (4th Cir. 1954) (infringer sought license; patent still invalid); cf. Houston Oil Field Material Co. v. Claypool, 269 F.2d 134, 136 (5th Cir. 1959) (defendant applied for same patent; held invalid).

<sup>45 &</sup>quot;More persuasive evidence than the action of competitors in taking licenses and paying substantial royalties for the privilege of selling the patented article can hardly be found." Wahl Clipper Corp. v. Andis Clipper Co., 66 F.2d 162, 165 (7th Cir. 1933). But see Deering, Milliken & Co. v. Temp-Resisto Corp., 274 F.2d 626, 633 (2d Cir. 1960) ("'Payment of very substantial royalties by licensees merely means that [they] . . . have chosen to capitalize on [patentee's] . . . publicity and process").

<sup>&</sup>lt;sup>46</sup> See Canadian Ingersoll-Rand Co. v. Peterson Prods., 223 F. Supp. 803, 820 (N.D. Cal. 1963) (distribution of licenses not sufficiently widespread to support validity).

<sup>47</sup> See Eibel Process Co. v. Minnesota & Ont. Paper Co., 261 U.S. 45, 55 (1923) (five licensees producing 44% of industry output held stock in the patentee corporation; held insufficient to deny the aid of commercial acquiescence); Hobbs v. Wisconsin Power & Light Co., 250 F.2d 100, 105 (7th Cir. 1957), cert. denied, 356 U.S. 932 (1958) (license as a "favor" to patentee); Technograph Printed Circuits, Ltd. v. Bendix Aviation Corp., 218 F. Supp. 1, 49-51 (D. Md. 1963) (fear of half million dollar litigation fund motivated licensees); Senco Prods., Inc. v. Fastener Corp., 168 F. Supp. 850, 852 (N.D. Ill. 1958), aff'd, 269 F.2d 33 (7th Cir. 1959), cert. denied, 361 U.S. 932 (1960) (licensee took series of licenses from patentee).

Royalties may be so low that it is more economical to pay than to contest the validity of the patent,<sup>48</sup> so that a showing by a patentee-licensor of a series of arrangements yielding a relatively high return aids his case for validity. However, a low-pricing arrangement should not be evidence against patent validity since low rates might be set because the licensee wishes to obtain widespread, high-volume royalty arrangements.

Licensing arrangements among supposed competitors may be proved the result of a cooperative agreement to acquiesce in each other's innovations, the purpose being to "rope off" the particular market from the alleged infringer. A history of acquiescence in doubtful innovations or an unexplained lack of research in key areas among competitors constitutes evidence of such a scheme. Since only an outsider would challenge validity, it is important that the challenge not be defeated because of mutually planned acquiescence.

Another indication of commercial acquiescence is extensive research, termed "circuminvention," by competitors designed to achieve the same advantages as the patent by a different and noninfringing means.<sup>50</sup>. It is unlikely that the necessary resources would be expended if the patent's validity were in doubt.

Actual copying of the innovation by a substantial number of competitors without recognition of patentee's rights would logically weigh against validity. Since, however, the ordinary bias of competitors would be to disrespect the validity of a threatening patent, such evidence ought rarely be determinative.<sup>51</sup> However, it does have some probative weight and could be considered in conjunction with evidence as to whether the copier or the industry generally have respect for other patents. If those in the field copy only after numerous unsuccessful attempts at circumvention or after their licenses have expired, such copying should have slight adverse effect upon validity for the facts would constitute positive evidence of acquiescence.

<sup>48</sup> In Kleinman v. Kobler, 230 F.2d 913, 914 (2d Cir.), cert. denied, 352 U.S. 830 (1956), the court said that "to take a license, calling for small royalty payments, frequently involves less expense than prolonged litigation . . . " See Consolidated Electrodynamics Corp. v. Midwestern Instruments, Inc., 260 F.2d 811, 817 (10th Cir. 1958).

<sup>&</sup>lt;sup>49</sup> In Kleinman v. Kobler, *supra* note 48, the court found a patent invalid even though two of the largest manufacturers took licenses along with two smaller firms. "[I]f the licenses are few [they] . . . may deem it desirable to share a monopoly which will endure while the patent-owner frightens off other users." *Id.* at 914.

<sup>&</sup>lt;sup>50</sup> See S. H. Kress Co. v. Aghnides, 246 F.2d 718, 721 (4th Cir.), cert. denied, 355 U.S. 889 (1957).

<sup>55</sup> U.S. 889 (1957).

51 In Wahl Clipper Corp. v. Andis Clipper Co., 66 F.2d 162, 165 (7th Cir. 1933), the court stated in response to the infringer's defense that he was within his legal rights in marketing an identical product: "Conceding for the moment its legal rights [in so acting], the question exists, why change its type of vibrator unless the article copied possessed merit? And why was not the change made earlier if the article possessed merit and its production was obvious to a mechanic skilled in the art?" As is often the case, the court failed to distinguish infringement by a defendant from that by numerous other competitors. See Charles Peckat Mfg. Co. v. Jacobs, 178 F.2d 794 (7th Cir. 1949), cert. denied, 339 U.S. 915 (1950); McKee v. Graton & Knight Co., 87 F.2d 262, 264 (4th Cir. 1937); Black & Decker Mfg. Co. v. Baltimore Truck Tire Serv. Corp., 40 F.2d 910, 914 (4th Cir. 1930).

The facts upon which a showing of commercial acquiescence would be predicated should present no difficulties to a court. Moreover, actions against self-interest by those in the field constitute a more satisfactory basis for inferring that an innovation is not obvious than either the testimony of adversary experts or the "judicial hunch" arising from a survey of the prior art by the court.

### D. Simultaneous Solution

While a failure of other investigators to solve the problem solved by a patentee is evidence of a longfelt demand, success of other investigators considerably weakens the case for validity by suggesting that the means thereof were already within the public domain.<sup>52</sup> The term "simultaneous" is here used merely to stress the requirement that all successful investigators be faced with the same state of the art, for only then can it be inferred from other solutions that the patented solution was obvious. It is not necessary that the solution occur after the patented one, although this would normally be the case as an already existing solution often bars grant of a patent under the statutory requirement of "novelty." <sup>53</sup>

A patentee can dispel an inference of obviousness by showing that the state of the art confronting him was different from that confronting an alleged simultaneous solver. This could be done where the art had been advanced by intervening developments which made possible or facilitated the second solution. In the absence of concrete evidence of intervening developments, their presence may be inferred from a substantial time span between the two solutions, the strength of this interference depending upon the rate of innovation in the industry.

Assuming an absence of intervening developments, identical solutions are highly persuasive evidence of obviousness. The simultaneous solution must be reached independently. However, the fact that the second solver knew of patentee's success does not destroy automatically the significance of the second solution since it is possible to know that a solution has occurred without knowing the exact means by which it was accomplished. Knowledge that a solution has been achieved may in fact spur innovative efforts on the part of competitors. A rapid independent replication of the patentee's solution would be an effective laboratory demonstration that, given an impetus to innovate, the solution was obvious to skilled artisans.<sup>54</sup>

<sup>&</sup>lt;sup>52</sup> Audio Devices, Inc. v. Armour Research Foundation, 293 F.2d 102, 107 (2d Cir. 1961); Wilson Athletic Goods Mfg. Co. v. Kennedy Sporting Goods, Inc., 233 F.2d 280, 283 (2d Cir. 1956); Graham v. Jeoffroy Mfg., Inc., 206 F.2d 769, 771 (5th Cir. 1953); Kay Patents Corp. v. Martin Supply Co., 202 F.2d 47, 50 (4th Cir. 1953); Hamilton & Till, What is a Patent?, 13 Law & Contemp. Prob. 245 (1948).

 $<sup>^{53}</sup>$  E.g., Graham v. Jeoffroy Mfg., Inc., supra note 52, at 771; see 35 U.S.C. § 102 (1958).

<sup>54</sup> Audio Devices, Inc. v. Armour Research Foundation, 293 F.2d 102, 107 (2d Cir. 1961). However, a court must be certain that the solver had no access to any aspects of patentee's means of solution. Since patent applications are kept secret until issuance of the patent, the burden upon the infringer urging a simultaneous solution would be easier to meet if the solution were arrived at before rather than after issuance.

The mere fact of a second solution would not necessarily mean that the patentee's solution was obvious, for the two solutions may be so dissimilar that no inference could be drawn that what the patentee did was obvious. The similarity of the solutions would in most instances be a question of degree, although there are tools available for the assessment of such differences. One such test is the doctrine of equivalency, developed to resolve the issue of infringement, which is addressed to the question of whether the methods of solution before the court are used in the art as common alternatives.<sup>55</sup> The shortcoming of this test is that it often entails complex technological considerations, thereby diminishing the utility of simultaneous solution as an indicium of invention.

In appraising the probative weight of a simultaneous solution, the skill possessed by the simultaneous solver must be taken into account, for a solution which a novice could achieve would presumably have been obvious to one skilled in the art. However, a second solution by an expert would not be fatal to a patent claim, since it still could be maintained that the solution was not obvious to a skilled artisan. The efforts expended by the second solver also should influence the weight to be given a simultaneous solution; if produced in a short time, an inference of obviousness is considerably strengthened, while if it was turned out as a product of group research over an extensive period of time, the inference is not as compelling.

A problem of proving simultaneous solution is the inaccessibility of evidence that a second solution has occurred. Discovery devices would alleviate the problem with respect to information held by the plaintiff-patentee, but access to nonparty records may be difficult. In a competitive industry a second solver would be as interested in attacking the validity of a patent as is the defendant infringer, but in an industry dominated by a few major researchers, mutual respect for one another's patents may render evidence of a second solution unavailable to an outsider.

The absence of a showing of a simultaneous solution should not aid the patentee's case for validity, for without additional facts the inference of nonobviousness is tenuous. The kinds of facts which would strengthen such an inference, such as a period of unsuccessful research, are precisely those supporting a showing of longfelt demand.

# E. Professional Approval

The opinions of highly skilled experts can aid a court in the determination of obviousness. From the knowledge of expert evaluation of an

<sup>55</sup> Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 607-10 (1950). In Williams Iron Works Co. v. Hughes Tool Co., 109 F.2d 500, 503 (10th Cir. 1940), the court looked to "the modes or means of operation, the functions, and the effects of the patented device and the accused device. . . . Otherwise stated . . . whether the two devices do the same work in substantially the same way and accomplish substantially the same result."

<sup>&</sup>lt;sup>56</sup> Baldwin-Lima-Hamilton Corp. v. Tatnall Measuring Sys. Co., 169 F. Supp. 1, 16-17 (E.D. Pa. 1958), aff'd per curiam, 268 F.2d 395 (3d Cir. 1959).

innovation, a court can infer whether or not it would have been obvious to those of lesser skill such as is possessed by an artisan in the field. Thus, where trade publications all hail a product as a boon to consumers and deserving of a patent, a court could properly use such facts in support of validity. Courts should consider approval from sources such as text writers, technologists, scientific commentators, and university professors.<sup>57</sup> Use of this type of expert approval entails a smaller risk of distortion than use of adversary experts.

Even though an expert does not shower praise upon an innovation, his opinion can nevertheless be of value to a court. Thus, if a skilled expert were unable to comprehend an innovation, it would be unlikely that it would have been obvious to a skilled artisan.<sup>58</sup> Similarly, if before the issuance of a patent an expert had maintained that what the patentee in fact did could not be done, an inference of nonobviousness would be entirely justified.<sup>59</sup>

An additional source of professional approval is statements of competitors bearing upon the validity of the patented product. By extolling the virtues of a patent in a training course or by calling the product revolutionary, competitors or infringers have indicated such approval.<sup>60</sup>

The issues raised by this test would consist largely of assessing the significance of a professional's remarks and would present few difficulties to a court. Thus, it would be crucial for a court to know whether the statement of a competitor was either self-serving or against interest. Questions may also arise as to the meaning of an expert's remarks. While in such a case it may be possible for the writer to testify in court, this procedure would reintroduce the risk of partiality inherent in an adversarial setting and should be relied upon sparingly by the courts.

<sup>57</sup> See Twentier's Research, Inc. v. Hollister, Inc., 319 F.2d 898, 902 (9th Cir. 1963); Ex parte Brockmann & Bohne, 127 U.S.P.Q. 57 (Pat. Off. Bd. App. 1959). Compare National Latex Prods. v. Sun Rubber Co., 274 F.2d 224, 240 (6th Cir.), cert. denied, 362 U.S. 989 (1960) (technical dictionary defined process in terms of patentee's use).

Holdings of other courts on the same patent may be given an effect similar to that of professional comment when the validity of a patent is relitigated. See Mast, Foos & Co. v. Stover Mfg. Co., 177 U.S. 485, 488 (1900); Crozier-Straub, Inc. v. Reiter, 34 F.2d 577 (E.D. Pa. 1929). Prior decisions on the same patent have been called "stare decisis." Cold Metal Process Co. v. E. W. Bliss Co., 285 F.2d 231, 236 (6th Cir. 1960), cert. denied, 366 U.S. 911 (1961); see Technical Tape Corp. v. Minnesota Mining & Mfg. Co., 247 F.2d 343, 349 (2d Cir. 1957), cert. denied, 355 U.S. 952 (1958).

<sup>&</sup>lt;sup>58</sup> General Tire Co. v. Watson, 184 F. Supp. 344, 348-49 (D.D.C. 1960); see McKee v. Graton & Knight Co., 87 F.2d 262, 264 (4th Cir. 1937) (trade initially skeptical of device's utility); National Battery Co. v. Richardson Co., 63 F.2d 289, 292 (6th Cir. 1933) (trade incredulous).

 $<sup>^{59}\,\</sup>mathrm{See}$  Honolulu Oil Corp. v. Shelby Poultry Co., 293 F.2d 127, 131 (4th Cir. 1961).

<sup>60</sup> See Otto v. Koppers Co., 246 F.2d 789, 800 (4th Cir. 1957), cert. denied, 355 U.S. 939 (1958); Sel-O-Rak Co. v. Henry Hanger & Display Fixture Corp., 232 F.2d 176, 179 (5th Cir.), cert. denied, 352 U.S. 870 (1956); Ibis Enterprises, Ltd. v. Spray-Bilt, Inc., 220 F. Supp. 65, 76 (S.D. Fla. 1963).

# F. Progress Through the Patent Office

Courts and writers have been of the opinion that the Patent Office is overly liberal in granting exclusive rights to an innovation. This tendency is attributed in part to a policy that progress is better promoted if in close or doubtful cases patents are initially granted rather than denied 61 and in part to less than stringent Patent Office procedures. 62 In any event litigated patents have had a high rate of invalidation by the courts.<sup>63</sup> Therefore, when it appears that a patentee has experienced certain difficulties in the Patent Office, courts have drawn inferences adverse to the patentee's claim of validity. Thus, the refusal of the Office to issue a patent until the applicant altered some of his claims has been used by the Courts as support for a determination of invalidity.64 One possible justification for attaching significance to the alteration of claims by the Patent Office is that this, in effect, is a narrowing of the subject matter of the claim, making the claim a less significant advance and therefore more likely to have been obvious to those skilled in the art. However, it is just as reasonable to assume that the alteration was merely a clarification of a properly patentable innovation. To penalize altered claims would seem merely to put a premium on retaining patent counsel to draft cautiously worded applications for limited patent grants. There is also a risk that the courts will fail to differentiate the clarification of a valid claim from mere artful restatement of the obvious. which, through semantics, gives a simple improvement a patentable appearance.

To the extent that use of Patent Office occurrences represents a negative attitude toward the Office, an explicit repudiation of this test of validity will not solve the basic problem. However, the relevance of such facts to the standards of patentability remains slight; if courts abandon the test, they might at least resort to more relevant facts in reaching and justifying their decisions.

<sup>61</sup> Deller, An Inquiry Into the Uncertainty of Patentable Invention and Suggested Remedies, 38 J. Pat. Off. Socy 152, 177 (1956).

<sup>62</sup> In Lorenz v. F. W. Woolworth, 305 F.2d 102, 105 (2d Cir. 1962), the court refused to allow the presumption of validity from the grant to alter "the preponderance of the evidence" against validity since "unavoidable obstacles to an accurate and impartial decision . . . are inherent in ex parte proceedings in the patent office

In 1878 a congressional witness is said to have claimed that the Office has "educated a body of examiners who can discriminate where there is no difference." See Hamilton & Till, What Is a Patent?, 13 Law & Contemp. Prob. 245, 253 n.24 (1948).

<sup>&</sup>lt;sup>63</sup> Borkin, The Patent Infringement Suit—Ordeal by Trial, 17 U. Chi. L. Rev. 634, 646 (1950).

<sup>64</sup> See Gentzel v. Manning, Maxwell & Moore, Inc., 230 F.2d 341, 345 (2d Cir.), cert. denied, 352 U.S. 840 (1956); Bendix Aviation Corp., 218 F. Supp. 1, 7-8 (D. Md. 1963). But see McKee Door Co. v. Forest Door Co., 284 F.2d 809, 811, 815 (7th Cir. 1960) (earlier court holding of validity outweighs Patent Office difficulties).

## III. Conclusion

This note has outlined only the subtests for the section 103 standard of nonobviousness with which the courts have particularly struggled; subtests should similarly be defined for the other standards of patent validity. A nontechnical approach to patent cases may provide in time a workable body of precedent for courts to apply, and greater certainty for patentees.

Richard L. Robbins