

# NOTES

## THE "GENETIC MESSAGE" FROM THE CORNFIELDS OF IOWA: EXPANDING THE LAW OF TRADE SECRETS

### TABLE OF CONTENTS

I.	Introduction . . . . .	631
II.	What Is a Trade Secret? . . . . .	632
	A. Trade Secret Defined . . . . .	632
	B. Criteria for Determining if a Trade Secret Exists . . . . .	634
	C. The Requirement of "Relative Secrecy" . . . . .	636
	D. Policy Touchstones of Trade Secret Law . . . . .	636
III.	Trade Secret Cause of Action . . . . .	637
	A. Introduction . . . . .	637
	B. The "Confidential Relationship" Cause of Action . . . . .	637
	C. The "Improper Means" Cause of Action . . . . .	639
	D. Conclusion . . . . .	640
IV.	Circumstantial Evidence and the Shifting Burden of Proof . .	641
	A. Proving Misappropriation Through Circumstantial Evidence . . . . .	641
	B. Shifting the Burden of Proof . . . . .	642
V.	Modification of the Secret . . . . .	643
VI.	Federal Preemption . . . . .	644
VII.	Conclusion . . . . .	647
	Appendix: Restatement of Torts § 757 (1939) . . . . .	648

### I. INTRODUCTION

Who would have guessed that the cornfields of Iowa would provide fertile ground for expanding the law of trade secrets? A recent case involving the misappropriation of the "genetic message" of inbred seed corn has broadened Iowa's trade secret law to include a cause of action premised on acquisition by improper means.

The Iowa Supreme Court first addressed trade secret law in *Basic*

*Chemicals, Inc. v. Benson* [hereinafter *Basic Chemicals*].<sup>1</sup> In that seminal decision Iowa's high court held an employee liable for the theft of secret documents from his former employer as part of a conspiracy with a competitor.<sup>2</sup> The court concluded that the competitor acquired the trade secrets as a result of the "confidential relationship" existing between the employee and employer.<sup>3</sup>

For over a decade *Basic Chemicals* has been hornbook law for the "confidential relationship" cause of action in Iowa. The Iowa Supreme Court recently affirmed the principles it set forth in *Basic Chemicals* in *Kendall/Hunt Publishing Co. v. Rowe* [hereinafter *Rowe*].<sup>4</sup> More significantly, Federal District Judge Donald O'Brien extended Iowa's trade secret law to include the "improper means" cause of action in *Pioneer Hi-Bred International, Inc. v. Holden Foundation Seeds, Inc.* [hereinafter *Pioneer Hi-Bred*].<sup>5</sup>

In holding a competitor liable for the misappropriation of inbred corn, Judge O'Brien concluded that the existence of a confidential relationship between the plaintiff and the defendant is not an absolute requirement for bringing a trade secret claim.<sup>6</sup> Rather, a trade secret claim can be premised on acquisition of a trade secret by "improper means."<sup>7</sup>

The essence of *Pioneer Hi-Bred* is that Iowa's law of trade secrets has reached full maturity. More importantly to the legal profession as a whole, the court blazed a new legal frontier in holding that genetic material is protectable as a trade secret.

As an overview, this note discusses what a trade secret is and sets forth the elements of a trade secret claim. This note also takes up the more particularized topics of how circumstantial evidence can be used to prove a trade secret case and whether liability attaches when a trade secret has been modified. The final area addressed is whether state trade secret law is preempted by federal statutes.

## II. WHAT IS A TRADE SECRET?

### A. Trade Secret Defined

The appropriate starting point for any discussion of trade secret law is the Restatement of Torts § 757 (1939) [hereinafter Restatement].<sup>8</sup> The Re-

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1. *Basic Chems., Inc. v. Benson*, 251 N.W.2d 220 (Iowa 1977).

2. *Id.* at 229.

3. *Id.*

4. *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d 235 (Iowa 1988).

5. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, No. 81-60-E, slip op. (S.D. Iowa October 29, 1987).

6. *Id.* at 73.

7. *Id.*

8. RESTATEMENT OF TORTS § 757 (1939) has been reproduced in the Appendix to this note. A number of courts have concluded that the appropriate starting point for the resolution of a

statement defines "trade secret" as follows:

A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers . . . . A trade secret is a process or device for continuous use in the operation of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business . . . .<sup>9</sup>

This definition was adopted in *Basic Chemicals, Rowe, and Pioneer Hi-Bred*. The specific trade secrets at issue in *Basic Chemicals* were chemical formulas, customer books, buy books, and cost books.<sup>10</sup> These trade secrets were literally within the Restatement's definition.<sup>11</sup>

The trade secret at issue in *Rowe* was a list of prospective authors.<sup>12</sup> The court concluded that this list was not a trade secret, but was "simply information as to . . . ephemeral events in the business" of the publisher.<sup>13</sup> The court based its conclusion on three factors: (1) The constantly changing list of prospects was not the sort of "definite information" which qualified for status as a trade secret;<sup>14</sup> (2) The list lacked the definite value required of a trade secret;<sup>15</sup> (3) It would be easy for a competitor to compile a list of "professors who *might* want to publish a book in the future."<sup>16</sup>

The trade secret at issue in *Pioneer Hi-Bred* was the "genetic message" of inbred lines of seed corn.<sup>17</sup> The Restatement's definition makes no men-

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trade secret controversy is the RESTATEMENT OF TORTS § 757. See, e.g., *Hulsenbusch v. Davidson Rubber Co.*, 344 F.2d 730 (8th Cir.), cert. denied, 382 U.S. 977 (1965); *A.H. Emery Co. v. Marcan Prods. Corp.*, 389 F.2d 11, 16 (2d Cir.), cert. denied, 382 U.S. 835 (1968); *Forest Laboratories, Inc. v. Pillsbury Co.*, 452 F.2d 621, 623-24 (7th Cir. 1971); *Clark v. Bunker*, 453 F.2d 1006, 1009-10 (9th Cir. 1972).

9. RESTATEMENT OF TORTS § 757 comment b (1939).

10. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 227.

11. *Id.*

12. *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 245-46.

13. *Id.* at 246 (citing RESTATEMENT OF TORTS § 757 comment b (1939)).

14. *Id.*

15. *Id.* Value of the information is one of the factors used to determine whether a trade secret exists. See *infra* text accompanying note 19.

16. *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 246 (emphasis original). The difficulty with which a competitor could acquire a trade secret is also a factor used to determine whether a trade secret exists. See *infra* text accompanying note 19.

17. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 72. "Genetic message" is defined as the genetic traits of a corn plant which are transferred to its offspring as the result of cross-breeding with another corn plant. The specific inbred lines at issue in *Pioneer Hi-Bred* were Pioneer's H3H and H43SZ7. These lines are the male parent of Pioneer hybrid lines 3780 and 3541. Pioneer claimed that Holden had wrongfully acquired and appropriated the seed of Pioneer's H3H and/or H43SZ7 and used it to produce and market inbred lines

tion of whether genetic material qualifies as a trade secret. The Restatement's definition, however, is only the starting point for determining whether a trade secret exists.

### B. *Criteria for Determining if a Trade Secret Exists*

The Iowa Supreme Court has noted that "an exact definition of a trade secret is not possible."<sup>18</sup> To supplement the Restatement's definition of trade secret, the court adopted six criteria for determining whether a trade secret exists in a particular case:

- (1) The extent to which the information is known outside of the business;
- (2) The extent to which it is known by employees and others involved in the business;
- (3) The extent of measures taken to guard the secrecy of the information;
- (4) The value of the information to the business and to competitors;
- (5) The amount of effort or money expended in developing the information;
- (6) The ease or difficulty with which the information could be properly acquired or duplicated by others.<sup>19</sup>

These six criteria are used to determine whether a trade secret exists when the "secret information" is not one of the enumerated examples set forth in the Restatement's definition of trade secret. The "genetic message" of inbred corn is not literally a "formula, pattern, device or compilation of information." Yet Judge O'Brien had no difficulty in concluding that the genetic message of Pioneer's inbreds was a protectable trade secret.

To understand how Judge O'Brien applied the six criteria in determining whether the "genetic message" of Pioneer's inbreds qualified as a protectable trade secret, some familiarity with the seed corn industry is necessary. As an overview, the development of new inbreds is the basis of competitiveness in the seed corn industry.<sup>20</sup> Altering the genetic message of inbreds can produce higher yields, disease resistance, and other sought-after characteristics. New inbred lines are crossed to produce the hybrid seed corn which is sold to the farmer.<sup>21</sup> For competitors in the seed corn industry,

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designated as LH38, LH39, and LH40. *Id.*

18. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 226.

19. *Id.* (citing RESTATEMENT OF TORTS § 757 comment b (1939)). See also *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 246; *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 71.

20. Testimony in *Pioneer Hi-Bred* revealed that Pioneer annually spends \$33 million on corn research and releases, on the average, seven new hybrid varieties. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 5.

21. Inbred lines are developed by self-pollination and selection until the line is relatively homozygous (true-breeding). Hybrid seed is produced by crossing two different inbred lines. It should be noted that inbred corn plants are characterized by small—even deformed—ears of corn. Early developers of the hybrid industry recognized that two inbred lines could be crossed to produce a hybrid seed that would greatly outperform either of its parents. This phenomenon

development of new inbred varieties translates into profits and increased market shares.

The development of inbred lines is undertaken in private research fields isolated from other corn.<sup>22</sup> Once the female inbred plants have been fertilized by pollen from the male inbreds, the male plants are chopped out or harvested separately and fed to livestock or commingled with other corn at elevators.<sup>23</sup> The corn produced by the female plants is the hybrid corn sold to the farmer.

Against this background, Judge O'Brien concluded that the genetic message of Pioneer's inbred corn lines was "akin to a secret formula" when judged "in light of the totality of the circumstances."<sup>24</sup> In applying the six criteria and reaching the conclusion that Pioneer had a protectable trade secret, Judge O'Brien emphasized: (1) Pioneer had spent a great deal of time and money in developing its inbred lines, (2) The secret did not exist outside of Pioneer's research fields and the fields of its contractors, (3) The secret could only be duplicated with a "great deal of effort and some luck," and (4) Pioneer took all "reasonable precautions" to protect the secrecy of the genetic messages of these lines.<sup>25</sup>

The six criteria can also be used to disprove the existence of a trade secret.<sup>26</sup> Even if a purported secret is a "formula, pattern, device or compilation of information," it does not necessarily follow that it is protected as a trade secret. For example, if the owner of a trade secret fails to take reasonable measures to guard the secrecy of the information, the secret is within the public domain.<sup>27</sup> Similarly, if a competitor can "reverse engineer" a trade secret from a finished product, the secret is properly acquired and the competitor will not be held liable.<sup>28</sup>

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is known as "hybrid vigor." The crop produced as a result of hybrid vigor is characterized by large ears, high yields, and other sought-after characteristics. However, seed from this crop cannot be replanted by the farmer the following year with the same results. Thus the farmer must purchase first generation hybrid seed each year at the retail level. See *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 3-7.

22. Isolation is necessary to prevent pollen from the silks of corn plants in neighboring fields from inadvertently fertilizing the inbred female plants (creating an impure inbred line).

23. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 6.

24. *Id.* at 72.

25. *Id.*

26. The fact that the list of prospective authors did not have "definite value" and could easily be acquired by competitors negated the existence of a trade secret in *Rowe. Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 246.

27. For example, the *Rowe* court noted that a list of current authors published by Kendall was not a trade secret because the identities of the authors were "openly disclosed to the public." *Id.*

28. Reverse engineering involves starting from a known product and working backwards. Reverse engineering is considered by the courts to be "legitimate" conduct. See *M. JAGER, TRADE SECRETS* § 5.04[3][A] (1985). For treatment of reverse engineering in the case law, see *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 489-90 (1973). See also *LIG Indus. v. Scott*, 49 Ill.2d 88, 273 N.E.2d 393 (1971); *Textile Rubber & Chem. Co. v. Shook*, 243 Ga. 587, 255 S.E.2d

### C. The Requirement of "Relative Secrecy"

In addition to the Restatement's definition and the six criteria for determining whether a trade secret exists, the Iowa Supreme Court has also adopted the requirement of "relative secrecy."<sup>29</sup> According to this requirement, "a substantial amount of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information."<sup>30</sup> The court noted that whether such a degree of secrecy exists in a particular case is a question of fact.<sup>31</sup> In other words, relative secrecy is determined by the extent of the security measures taken by the owner of the trade secret. While neither the Iowa Supreme Court nor Judge O'Brien forged a test concerning the adequacy of security measures, the general rule adopted by other courts is that security measures must be "reasonable under the circumstances."<sup>32</sup>

The leading case discussing security measures "reasonable under the circumstances" is *E.I. DuPont de Nemours & Co. v. Christopher* [hereinafter *Christopher*].<sup>33</sup> In *Christopher* the Fifth Circuit Court of Appeals stated: "[r]easonable precautions against predatory eyes we may require, but an impenetrable fortress is an unreasonable requirement, and we are not disposed to burden industrial inventors with such a duty in order to protect the fruits of their efforts."<sup>34</sup> Similarly, the Supreme Court of Pennsylvania reasoned in an early trade secret case: "[a]n unlocked door is not an invitation to the passerby to help himself."<sup>35</sup>

### D. Policy Touchstones of Trade Secret Law

Any discussion of "what is a trade secret?" would be incomplete without mention of the policies which underly trade secret protection. The United States Supreme Court, in the landmark case of *Kewanee Oil Co. v. Bicron Corp.* [hereinafter *Kewanee*],<sup>36</sup> stated: "[t]he maintenance of standards of commercial ethics and the encouragement of invention are the broadly stated policies behind trade secret law. The necessity of good faith

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705 (1979); *Curtiss-Wright Corp. v. Edel-Brown Tool & Die Co.*, 381 Mass. 1, 407 N.E.2d 319 (1980); *Electro-Craft Corp. v. Controlled Motion, Inc.*, 332 N.W.2d 890 (Minn. 1983); *Valso Cincinnati, Inc. v. N & D Mach. Serv., Inc.*, 24 Ohio St. 3d 41, 492 N.E.2d 814 (1986).

29. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 229.

30. *Id.* (citing RESTATEMENT OF TORTS § 757 comment b (1939)).

31. *Id.*

32. See R. MILGRIM, *TRADE SECRETS* § 2.04 (1978); R. ELLIS, *TRADE SECRETS* § 41 (1943) ("A course of conducting business which necessarily implies a desire on the part of the employer that the information in question is to be kept a secret.").

33. *E.I. DuPont de Nemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), cert. denied, 400 U.S. 1024 (1971).

34. *Id.* at 1017.

35. *Pressed Steel Car Co. v. Standard Steel Car Co.*, 210 Pa. 464, —, 60 A. 4, 8 (1904).

36. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1973).



and honest, fair dealing [is] the very life and spirit of the commercial world."<sup>37</sup>

Besides the encouragement of invention and the maintenance of commercial morality, a third policy is also present when a court shapes a remedy in trade secret cases. That policy is the public's interest in having free competition in the sale and manufacture of goods not protected by a valid patent.<sup>38</sup>

These policy goals are the undercurrent of trade secret protection. They are also the foundation for the trade secret cause of action.

### III. TRADE SECRET CAUSE OF ACTION

#### A. Introduction

The Eighth Circuit Court of Appeals has described the trade secret cause of action in the following language: "[T]he essence of the wrong is the obtaining of unjust enrichment and unfair competitive advantage through inequitable conduct."<sup>39</sup> Such inequitable conduct may take the form of wrongful acquisition of a trade secret as a result of a confidential relationship or appropriation by improper means.

#### B. The "Confidential Relationship" Cause of Action

The "confidential relationship" cause of action has existed as long as trade secrets have been protected by the law. At the turn of the century, Justice Holmes described the confidential relationship cause of action as follows: "[W]hether the plaintiffs have any valuable secret or not the defendant knows the facts, whatever they are, through a confidence he accepted . . . . Therefore, the starting point for the present matter is not property or due process of law, but that the defendant stood in a confidential relationship with the plaintiffs."<sup>40</sup>

The "confidential relationship" cause of action arises in three situations. First, when an employee is privy to the trade secrets of his or her employer, the employee has an obligation not to disclose because of the confidential nature of the employer-employee relationship.<sup>41</sup> Second, a confi-

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37. *Id.* at 481-82, cited in *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 73-74. See *Developments in the Law—Competitive Torts*, 77 HARV. L. REV. 888, 947-48 (1964).

38. Generally, courts do not grant perpetual injunctions in trade secret cases (although trade secrets can be maintained indefinitely) because of the public's interest in "free competition." See *Curtiss-Wright Corp. v. Edel-Wright Tool & Die Co.*, 381 Mass. 1, 407 N.E.2d 319 (1980); Stern, *A Reexamination of Preemption of State Trade Secret Law After Kewanee*, 42 GEO. WASH. L. REV. 927, 978 (1974).

39. *E.W. Bliss Co. v. Struthers-Dunn, Inc.*, 408 F.2d 1108, 1112 (8th Cir. 1969).

40. *E.I. DuPont de Nemours Powder Co. v. Masland*, 244 U.S. 100, 103 (1917).

41. *MacBeth-Evans Glass Co. v. Schnelbach*, 239 Pa. 76, —, 86 A. 688, 691 (1913). See also *Minnesota Mining & Mfg. Co. v. Technical Tape Corp.*, 23 Misc. 2d 671, 192 N.Y.S.2d 102

dential relationship can arise out of the express terms of a contract.<sup>42</sup> Third, an obligation not to disclose the secrets of another can arise out of circumstances which imply a confidential relationship.<sup>43</sup>

The Iowa Supreme Court embraced the "confidential relationship" cause of action in the context of an employer-employee relationship. In *Basic Chemicals* the court set forth the following elements of a trade secret claim:

- (1) Existence of a trade secret,
- (2) Acquisition of the secret as a result of a confidential relationship, and
- (3) Unauthorized use of the secret.<sup>44</sup>

The court also stated that the burden is on the plaintiff to establish each of these elements by a preponderance of the evidence.<sup>45</sup>

The factual setting of *Basic Chemicals* illustrates the confidential relationship cause of action. Richard Benson (the defendant) was president and general manager of Basic Chemicals Company (the plaintiff).<sup>46</sup> In 1971 Benson resigned and went to work for a competitor.<sup>47</sup> Shortly after Benson's resignation, it was discovered that Basic's formula books, customer lists, buy books, and cost books were missing.<sup>48</sup> To prove that Benson had "purloined" the missing documents, Basic produced a letter which Benson had written to Basic's customers stating that his new employer would continue to offer the same product lines at the same prices.<sup>49</sup> The court concluded that Benson had "wrongfully appropriated" valuable and confidential documents of his former employer as part of a conspiracy with a competitor.<sup>50</sup> In reaching this conclusion the court held that: (1) the missing documents were "trade secrets," (2) Benson had acquired the documents as a result of a confidential relationship, and (3) Benson's use of the documents was unauthorized.

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(1959); *Triangle Sheet Metal Works, Inc. v. Silver*, 154 Conn. 116, 222 A.2d 220 (1966); *National Rejectors, Inc. v. Trieman*, 409 S.W.2d 1 (Mo. 1966); *Kubik, Inc. v. Hull*, 56 Mich. App. 335, 224 N.W.2d 80 (1974); *Computer Print Sys., Inc. v. Lewis*, 281 Pa. Super. 240, 422 A.2d 149 (1980); *1st Am. Sys., Inc. v. Rezatto*, 311 N.W.2d 51 (S.D. 1981); *Valco Cincinnati, Inc. v. N & D Mach. Serv., Inc.*, 24 Ohio St. 3d 41, 492 N.E.2d 814 (1986).

42. An express contract can explicitly create a duty of confidentiality. Examples of contracts which create such a duty are nondisclosure agreements and covenants not to compete.

43. *Mann v. Tatge Chem. Co.*, 201 Kan. 326, \_\_\_, 440 P.2d 640, 648-49 (1968). See RESTATEMENT OF TORTS § 757 comment j (1939).

44. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 226; *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 245-46.

45. *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 245-46; *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 226.

46. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 223.

47. *Id.*

48. *Id.*

49. *Id.* at 224.

50. *Id.* at 229.



The court relied on the following legal principles in adopting the confidential relationship cause of action:

The law is well settled that knowledge acquired by an employee during his employment cannot be used for his own advantage to the injury of his employer during the employment; and after the employment has ceased the employee remains subject to a duty not to use trade secrets, or other confidential information which he acquired in the course of his employment, for his own benefit or that of a competitor to the detriment of his former employer.<sup>51</sup>

These principles should not be read to imply that employees may never use skills and experience gained from a former employer in subsequent positions. In fact, the court recognized that "a man's aptitude, his skill, his dexterity, his manual and mental ability, and such other subjective knowledge as he obtains in the course of his employment, are not the property of his employer . . . ."<sup>52</sup> There is, however, a marked difference between prohibiting an employee from exercising his "acumen or worldly wisdom" and prohibiting an employee from "purloining" his employer's trade secrets.<sup>53</sup>

### C. The "Improper Means" Cause of Action

The second element of the *Basic Chemicals* cause of action—"acquisition of the secret as a result of a confidential relationship"—was not present in *Pioneer Hi-Bred*. There was no confidential relationship between Pioneer and Holden. They were simply competitors in the seed corn business.<sup>54</sup> Pioneer alleged that Holden had acquired the "genetic message" of its inbred corn lines by "improper means"—that is, the inbreds were misappropriated out of Pioneer's research and production fields.<sup>55</sup>

In considering this factual setting, Judge O'Brien concluded that the "confidential relationship" element is "not an absolute requirement in the proof of misappropriation of a trade secret . . . . [t]he real key is whether

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51. *Id.* at 230 (citing *Sperry Rand Corp. v. Rothlein*, 241 F. Supp. 549, 564-65 (D. Conn. 1964)).

52. *Id.* at 227.

53. *Id.*

54. In explanation of the statement that Pioneer and Holden are competitors, a brief description of the hybrid seed corn industry is necessary. The industry is segmented. Pioneer exemplifies the integrated seed corn company. Pioneer has its own breeding program, develops its own seed stocks, creates its own parent corn, produces the hybrid seed, and markets the hybrid seed to the farmer. By contrast, Holden is a foundation seed company. Foundation seed companies develop inbred lines and sell them to hybrid seed companies. Hybrid seed companies cross the inbreds acquired from the foundation companies to produce hybrids. The hybrids are then marketed to the farmer. In the mid-1980s, Holden was selling inbred seed to about 200 hybrid companies. See *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 4-7.

55. There was no direct evidence of "theft" presented. Pioneer proved misappropriation of its trade secrets through circumstantial evidence. Proving a trade secret case through circumstantial evidence is discussed in detail below. See *infra* notes 66-75 and accompanying text.

the defendant discovered the secret by improper means."<sup>56</sup> In reaching this conclusion Judge O'Brien relied on *Christopher* and the Restatement of Torts § 757.

In *Christopher* the Fifth Circuit Court of Appeals was confronted with a similar legal question—whether to extend Texas' trade secret law to include the "improper means" cause of action.<sup>57</sup> While Texas' trade secret law provided for a trade secret cause of action only in the confidential relationship context,<sup>58</sup> the Fifth Circuit Court of Appeals predicted that the Texas Supreme Court would allow a cause of action premised on acquisition by improper means if confronted with the issue.<sup>59</sup> The court set forth the following commandment of trade secret law: "Thou shalt not appropriate a trade secret through deviousness under circumstances in which countervailing defenses are not reasonably available."<sup>60</sup> This commandment has now become ingrained into trade secret law.<sup>61</sup>

The Restatement of Torts § 757(a) is explicit in providing for the improper means cause of action. According to the Restatement, "[o]ne who discloses or uses another's trade secret without a privilege to do so is liable to the other if he discovered the secret through improper means."<sup>62</sup> The Restatement defines improper means as "means which fall below the generally accepted standards of commercial morality and reasonable conduct."<sup>63</sup>

Implicit in this definition is the conclusion that improper means encompasses "legal" conduct. For example, in *Christopher* the court concluded that aerial reconnaissance of a manufacturing plant under construction constituted improper means even though such conduct was legal.<sup>64</sup> This conduct was improper because it fell below acceptable standards of conduct in the chemical industry.

Whether legal or illegal, "improper means" will always be a phrase of many nuances, determined by time, place, and circumstances.<sup>65</sup>

#### D. Conclusion

As a result of *Pioneer Hi-Bred*, two trade secret causes of action now exist in Iowa: (1) Wrongful acquisition of a trade secret as a result of a confi-

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56. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 72-73.

57. *E.I. DuPont de Nemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), cert. denied, 400 U.S. 1024 (1971).

58. *Id.* at 1014.

59. *Id.* at 1015.

60. *Id.* at 1017.

61. See *USM Corp. v. Marson Fastener Corp.*, 379 Mass. 90, 393 N.E.2d 895 (1979); *Hurst v. Hughes Tool Co.*, 634 F.2d 895 (5th Cir. 1981); *Drill Parts & Serv. Co. v. Joy Mfg. Co.*, 439 So. 2d 43 (Ala. 1983).

62. RESTATEMENT OF TORTS § 757 (1939).

63. *Id.* comment f.

64. *E.I. DuPont de Nemours & Co. v. Christopher*, 431 F.2d at 1014.

65. *Id.* at 1017.

dential relationship, and (2) Appropriation of a trade secret by improper means. The elements of the trade secret cause of action set forth in *Basic Chemicals* have been modified by *Pioneer Hi-Bred* as follows:

- (1) The existence of a trade secret; (2) Acquisition of the secret either (a) as a result of a confidential relationship, or (b) by improper means; and (3) Unauthorized use of the secret.

#### IV. CIRCUMSTANTIAL EVIDENCE AND THE SHIFTING BURDEN OF PROOF

##### A. Proving Misappropriation Through Circumstantial Evidence

Each element of a trade secret claim must be proved by a preponderance of the evidence.<sup>66</sup> This standard of proof presents special problems where there is no direct evidence of misappropriation by the defendant. Courts have recognized this difficulty:

Plaintiffs in trade secret cases . . . are confronted with an extraordinarily difficult task. Misappropriation and misuse can rarely be proved by convincing direct evidence. In most cases plaintiffs must construct a web of perhaps ambiguous circumstantial evidence from which a trier of fact may draw inferences which convince him that it is more probable than not that what the plaintiffs allege did in fact take place. Against this often delicate construct of circumstantial evidence there frequently must be balanced defendants and defendants' witnesses who directly deny everything.<sup>67</sup>

Despite this difficulty, the task of proving a trade secrets claim through circumstantial evidence is not insurmountable. *Pioneer Hi-Bred* illustrates this proposition. Pioneer claimed that Holden had "stolen" its inbred corn lines and Holden denied everything. There was no direct evidence of misappropriation. To establish a prima facie case of misappropriation, Pioneer set out to prove that Holden's inbreds were direct descendants of inbreds developed by Pioneer and that Holden's claimed pedigree was false.<sup>68</sup>

To prove its circumstantial case of misappropriation, Pioneer offered the results of three independent tests to prove that Holden inbreds were derived from Pioneer's parental material.<sup>69</sup> First, Pioneer presented the results of electrophoresis—a scientific technique which is used for separating and identifying various forms of enzymes present in plants.<sup>70</sup> The technique is comparable to fingerprinting in that it provides a means whereby unique-

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66. *Basic Chems., Inc. v. Benson*, 251 N.W.2d at 226; *Kendall/Hunt Publishing Co. v. Rowe*, 424 N.W.2d at 246.

67. *Greenberg v. Croydon Plastics Co.*, 378 F. Supp. 806, 814 (E.D. Pa. 1974).

68. Holden claimed that L120 (the alleged inbred parent of LH38, LH39, and LH40) was derived from Oh43 (a public inbred developed by the University of Ohio). *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 23-24.

69. *Id.* at 54.

70. *Id.* at 31.

ness can be identified.<sup>71</sup> The corn was also tested by using a technique known as reverse phase high performance liquid chromatography. This test allows comparison of zein proteins of a corn plant.<sup>72</sup> The third scientific test employed was a "growout." A growout is a planned planting and crossing of certain inbred and hybrid lines to observe and compare the known effects of genetic similarities and differences among the resulting crosses.<sup>73</sup>

In considering whether the tests were conclusive, Judge O'Brien stated that "the tests *each* support Pioneer and persuade the Court that while it is not clear how Holden got the Pioneer male parent seed, it had it and used it."<sup>74</sup> Thus, even though there was no direct evidence of misappropriation by Holden, Pioneer established its *prima facie* case through circumstantial evidence.

*Pioneer Hi-Bred* illustrates the principle that "the importance of circumstantial evidence cannot be minimized by the court. The record must be carefully scrutinized to determine whether the totality of the circumstances establishes the existence and misappropriation of trade secrets by a preponderance of the evidence."<sup>75</sup>

### B. *Shifting the Burden of Proof*

Once the plaintiff establishes a *prima facie* case of trade secret misappropriation, the defendant has the burden of proving that the secrets were lawfully acquired in order to prevail. This burden shifting procedure forces defendants to rebut the plaintiff's allegations of wrongful acquisition. The following excerpt illustrates the use of the burden shifting procedure in a confidential relationship cause of action:

On this record we did find substantial evidence that Larson did possess valuable secrets which he disclosed confidentially to Munsingwear pursuant to their agreement, prior to the issuance of his patents. On this record we find substantial evidence that Munsingwear merchandised a garment that was very closely similar to the Larson process. This being so, the burden shifted to Munsingwear to show that at the time it could have arrived at the process by independent invention, inspection or reverse engineering.<sup>76</sup>

This burden shifting procedure was also employed in *Pioneer Hi-Bred*. After Pioneer had established a *prima facie* case of misappropriation, Judge

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71. *Id.* at 32.

72. *Id.* at 43. Zein is defined as a group of alcohol soluble storage proteins in the endosperm (a nutritive tissue in seed plants). *Id.*

73. *Id.* at 54.

74. *Id.* at 55.

75. *Vekamaf Holland B.V. v. Pipebender, Inc.*, 211 U.S.P.Q. 955, 979 (D. Minn. 1981), *aff'd*, 217 U.S.P.Q. 32 (8th Cir. 1982).

76. *Garter-Bare Co. v. Munsingwear, Inc.*, 723 F.2d 707, 715 (9th Cir.), *cert. denied*, 469 U.S. 980 (1984).

O'Brien shifted the burden of proof to Holden to establish that the inbreds at issue were lawfully acquired.<sup>77</sup> Holden could have met this burden by showing that it had developed the inbreds through independent breeding efforts.<sup>78</sup> However, the court concluded that Holden failed in this endeavor because of two glaring evidentiary deficiencies. First, Holden failed to keep adequate records of its breeding program to document the source of its parental lines.<sup>79</sup> Second, Holden had "inadvertently" thrown away the seed which was claimed to be the parent of the inbreds in question.<sup>80</sup> As a result of these shortcomings, O'Brien concluded that Holden had not met its burden of proving lawful acquisition.

#### V. MODIFICATION OF THE SECRET

A circumstantial case of misappropriation is even tougher to prove when the secret has been modified. When a competitor acquires a trade secret, the competitor can be expected to alter the secret just enough to avoid suspicion. The United States Supreme Court noted this phenomenon in a patent case: "one who seeks to pirate an invention, like one who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy. Outright and forthright duplication

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77. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 74.

78. *Id.* at 75.

79. *Id.* at 24. Judge O'Brien states:

The Court deems it very significant that not a single L number (the alleged life blood of Holden Foundation Seeds, Inc. that separated it from other foundation houses) can be traced to a row in a Holden field in a preceding generation. It is unimaginable that Holden would go to all the work necessary to maintain detailed and documented nursery records that allow every line of Oh43Ht, a public line, to be traced to six years without a break through winter and summer nurseries and yet would not record the far more meaningful records of source rows or comparable identifying designations or descriptions of their breeder's work while conducting several years of simultaneous line development in hopes of developing a successful new line. This glaring, poorly explained and consistent failure to record source designations of every L line used by Holden is hard to accept as continuing oversight. It is even more unlikely to be a conscious omission in any legitimate corn program. Further, it is hard to reconcile with the breeder's other careful records of breeding relating to far less meaningful nursery activity.

*Id.*

80. *Id.* at 25. Judge O'Brien stated:

[T]hough [Holden] holds onto many kinds of corn seeds for its reserve, it "inadvertently" threw away the last of the L120 seed that it had. This is surprising since L120 is the keystone to their great new corn lines. . . . Holden's explanations as to how and why it was discarded are not persuasive. Its presence would have been most valuable evidence, if it in fact did not come from Pioneer's parent seed, by clearly demonstrating in growouts, electrophoresis and/or chromatography tests that it was in fact not identical, or close to Pioneer's seed.

*Id.*

is a dull and very rare type of infringement."<sup>81</sup>

Generally, modifications and improvements of a trade secret do not free a wrongdoer from liability for misappropriation of the secret.<sup>82</sup> Modifications only make the wrongdoing harder to detect. One court has stated: "A company misappropriating a trade secret may lose the benefits of its future independent experiments because of the difficulty of determining how much of the improvement is attributable to those independent efforts and how much of the information is gained by wrongdoing."<sup>83</sup> In trying to segregate honest efforts and ill-acquired knowledge, every doubt must be resolved against the wrongdoer.<sup>84</sup>

*Pioneer Hi-Bred* illustrates the application of these principles. The court held that Holden had misappropriated and modified Pioneer's inbreds. In this regard the court concluded that Holden was not insulated from liability because the disputed lines were dissimilar to Pioneer's inbreds.<sup>85</sup> Judge O'Brien stated:

The Court recognizes that the proof was not precise as to just how they [Holden] got it [Pioneer's inbreds], but has concluded that it is immaterial whether they acquired some and increased it; or acquired some, increased it, saw its variability and selected out some plants and used them; or acquired some and used it as a parent to make a cross with one or more lines and then dropped inbred lines later from the population that was generated, or some similar process. "Possession is very strong; rather more than nine points of the law."<sup>86</sup>

## VI. FEDERAL PREEMPTION

A final issue which must be included in any discussion of trade secret law is federal preemption. Trade secret law, created by state courts and legislatures, is protection for information which provides a competitive edge in one's business. Trade secrets often include inventions. The federal government has also provided protection for inventions through the patent laws. Patent laws grant an inventor a statutory monopoly right for the use of his invention for a period of seventeen years. In contrast, trade secret protection lasts as long as the secret is maintained. The question arises as to whether

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81. *Graver Tank Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 607 (1950).

82. *Sinclair v. Aquarius Elec., Inc.*, 42 Cal. App. 3d 216, \_\_\_, 116 Cal. Rptr. 654, 658-59 (1974). See *McCormack & Dodge Corp. v. ABC Management Sys., Inc.*, 222 U.S.P.Q. 432, 436 (Wash. 1983).

83. *Rohm & Haas Co. v. Adco Chem. Co.*, 689 F.2d 424, 434 (3d Cir. 1982). See *Macheth-Evans Glass Co. v. Schnellbach*, 239 Pa. 76, \_\_\_, 86 A. 688, 693 (1913); *Stone v. Goss*, 65 N.J. Eq. 756, \_\_\_, 55 A. 736, 738 (1903).

84. *Rohm & Haas Co. v. Adco Chem. Co.*, 689 F.2d at 434.

85. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 76.

86. *Id.* at 107 (citing *Lord Mansfield, Corporation of Kingston-upon-Hull v. Horner* (1774) Lofft 576, 591).



the federal statutory scheme preempts the common law doctrine of trade secrets.

This was the certified question before the United States Supreme Court in *Kewanee*.<sup>87</sup> The Court's answer to this question was that trade secret law and patent law can "peacefully coexist."<sup>88</sup> In particular, the Supreme Court noted the importance of trade secret protection in circumstances where an invention is not patentable. The Court stated: "Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with the discovery and exploitation of his invention."<sup>89</sup>

The Court also discussed the consequences of discarding trade secret law under the preemption doctrine. The Court stated: "The detrimental misallocation of resources and economic waste that would thus take place if trade secret protection were abolished . . . cannot be justified by reference to any policy that the federal patent law seeks to advance."<sup>90</sup> The Court further stated:

Nothing in the patent law requires that States refrain from action to prevent industrial espionage. In addition to the increased costs for protection from burglary, wiretapping, bribery, and the other means used to misappropriate trade secrets, there is the inevitable cost to the basic decency of society when one firm steals from another. A most fundamental human right, that of privacy, is threatened when industrial espionage is condoned or is made profitable; the state interest in denying profit to such illegal ventures is unchallengeable.<sup>91</sup>

Seemingly, the Court put the preemption issue to rest.<sup>92</sup> However, the preemption issue again raised its head in *Pioneer Hi-Bred*. Holden alleged that the Plant Variety Protection Act (PVPA) of 1970<sup>93</sup>—a spinoff of the federal patent laws—constituted federal preemption of all claims for wrongful appropriation of plants, seed, or other genetic matter at issue.<sup>94</sup> While Pioneer had never sought protection for its inbreds under the PVPA,<sup>95</sup> Holden had received PVP certificates protecting the disputed inbreds. The question presented was whether Pioneer's remedy was limited to an administrative proceeding to contest the validity of the PVP certificates issued to Holden.

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87. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

88. *Id.* at 485-87.

89. *Id.* at 485.

90. *Id.* at 487.

91. *Id.*

92. Cf. Stern, *A Reexamination of Preemption of State Trade Secret Law After Kewanee*, 42 GEO. WASH. L. REV. 927, 978 (1974).

93. 7 U.S.C. §§ 2401-2582 (1987).

94. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 97-98.

95. *Id.* at 98.

While Judge O'Brien did not address this precise issue,<sup>96</sup> he did conclude that Pioneer's trade secret claim was not preempted by the PVPA. In deciding the preemption issue, the court set forth the following guidelines:

Courts must look to congressional intent to determine whether common law theories are preempted by federal legislation. The federal statute's words or legislative history must explicitly state such an intent. If no such intent is specifically expressed, then courts must sustain the state law action "unless it conflicts with federal law or would frustrate the federal scheme, or unless the courts discern from the totality of circumstances that Congress sought to occupy the field to the exclusion of the States."<sup>97</sup>

In applying these guidelines to the question of whether Pioneer's trade secret claim was preempted by the PVPA, Judge O'Brien concluded that "nothing in the statute or legislative history"<sup>98</sup> explicitly states that Congress intended to preempt state law or its remedies.<sup>99</sup> The court also noted that trade secret law would not frustrate the federal statutory scheme and that the totality of circumstances did not indicate that Congress sought to regulate this field to the exclusion of state law.<sup>100</sup>

Judge O'Brien held that the PVPA should not be found to "silently obliterate" the entire field of common law protection of trade secrets.<sup>101</sup> The court emphasized that:

[t]o hold otherwise would discourage breeding of the type which produced H3H [Pioneer's inbred] by making it fair game to any who were willing to appropriate and use it. Such a result would undoubtedly destroy incentive and the breeder's ability to recoup the costs of research and development, thus depriving the industry and the consumer of valu-

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96. Holden's preemption argument was that the PVP office would not issue a certificate for H3H [Pioneer's inbred] because it is an unstable inbred (a seven-eighths backcross). From this assumption, Holden urged the court to conclude that if a plant is not protectable under the PVPA, there can be no other common law claim of property rights or ownership. The basis for Holden's argument that Pioneer's inbreds are not protectable under the PVPA is 7 U.S.C. § 2402 (1987), which provides that only novel varieties are entitled to protection. A novel variety is defined under 7 U.S.C. § 2401(a)(3) (1987) as requiring: "Stability in the sense that the variety, when sexually reproduced or reconstituted, will remain unchanged with regard to its essential and distinctive characteristics with a reasonable degree of reliability commensurate with that of varieties of the same category in which the same breeding method is employed." Holden claimed that Pioneer's inbreds were unstable. See *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 99.

97. *Id.* (citing *Allis-Chalmers Corp. v. Lueck*, 471 U.S. 202, 208 (1985); *Malone v. White Motor Corp.*, 435 U.S. 497, 504 (1978)).

98. The legislative history of the PVPA is found in 1970 U.S. CODE CONG. & ADMIN. NEWS, 5082-96.

99. *Pioneer Hi-Bred Int'l, Inc. v. Holden Found. Seeds, Inc.*, slip op. at 99.

100. *Id.*

101. *Id.* at 98.

able improvements in the hybrid corn industry.<sup>102</sup>

## VII. CONCLUSION

Trade secret protection gives commercial morality the force of law and is an impetus behind modern innovation. The law of trade secrets provides a remedy against industrial espionage. It is an important tool to combat bribery, wiretapping, theft, or any other impropriety used to misappropriate a competitor's trade secrets. As illustrated by *Basic Chemicals*, an employer has recourse when an employee purloins his employer's trade secrets. As illustrated by *Pioneer Hi-Bred*, seed corn companies have recourse against competitors for the misappropriation of genetic material.

*Pioneer Hi-Bred* marks a significant advance in the law of trade secrets. Iowa's practitioners now have the "improper means" cause of action at their disposal. Intellectual property law attorneys across the nation are now armed with precedent for extending trade secret protection to the fruits of genetic engineering. That trade secret protection has been expanded is truly the "message" from the cornfields of Iowa.

*Jeffrey J. Wolf*

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102. *Id.* at 100.

## APPENDIX: RESTATEMENT OF TORTS § 757 (1939)

§ 757. *Liability for Disclosure or Use of Another's Trade Secret—General Principle.*

One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if

- (a) he discovered the secret by improper means, or
- (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him, or
- (c) he learned the secret from a third person with notice of the facts that it was a secret and that the third person discovered it by improper means or that the third person's disclosure of it was otherwise a breach of duty to the other, or
- (d) he learned the secret with notice of the facts that it was a secret and that its disclosure was made to him by mistake.

*Comment:*

*a. Rationale.* The privilege to compete with others includes a privilege to adopt their business methods, ideas or processes of manufacture. Were it otherwise, the first person in the field with a new process or idea would have a monopoly which would tend to prevent competition. This privilege has some limitations, however. In the first place, in order to promote the progress of science and the useful arts, patent and copyright laws provide protection to the originator. The patent laws prohibit the witting or unwitting manufacture, sale or use by any person of a device, process or article which infringes a patent granted to another. The copyright laws prohibit the plagiarism of a work copyrighted by another. The protection afforded by both types of legislation is limited to a fixed number of years. Both types of legislation establish a monopoly for the purpose of encouraging invention and art. In the second place, the law of torts prohibits copying in a manner which creates in the market avoidable confusion of commercial source. The privilege to copy is not a privilege to palm off one's goods as those of another. Thus, when the physical appearance of one's goods has acquired in the market a significance as identifying the goods of which he is the commercial source, another may not copy that appearance if it is non-functional, and if it is functional, he may only copy it only upon taking reasonable precautions to avoid confusion. The rule stated in this Section is a further limitation on the privilege to copy when the thing copied is a trade secret. This limitation is not imposed because of any difference in function or value between trade secrets and other devices or processes. A formula for a medical compound or a process of manufacturing is equally effective in making its product when the formula or process is generally known as when it is secret. Its original discovery may require equal ingenuity and labor when it must necessarily be disclosed by the product which results from it as when it can be kept secret. Exclusion of others from the privilege of using it will give it the same value to the originator in one case as in the other. Indeed, a patent

monopoly is granted only upon full disclosure of the subject matter of the patent. The significant difference of fact between trade secrets and processes or devices which are not secret is that knowledge of the latter is available to the copier without the use of improper means to procure it, while knowledge of the former is ordinarily available to him only by the use of such means. It is the employment of improper means to procure the trade secret, rather than the mere copying or use, which is the basis of liability under this Section.

There is considerable discussion in judicial opinions as to the basis of liability for the disclosure or use of another's trade secrets. Analogy is sometimes found in the law of "literary property," copyright, patents, trademarks and unfair competition. The suggestion that one has a right to exclude others from the use of his trade secret because he has a right of property in the idea has been frequently advanced and rejected. The theory that has prevailed is that the protection that is afforded only by a general duty of good faith and that the liability rests upon the breach of this duty; that is, breach of contract, abuse of confidence or impropriety in the method of ascertaining the secret. Apart from breach of contract, abuse of confidence or impropriety in the means of procurement, trade secrets may be copied as freely as devices which are not secret. One who discovers another's trade secret properly, as, for example, by inspection or analysis of the commercial product embodying the secret, or by independent invention, or by gift or purchase from the owner, is free to disclose it or use it in his business without liability to the owner . . . .

The protection afforded by the rule stated in this Section is in some respects greater and in some respects less than that afforded by the patent law. It is greater in that it is not limited to a fixed number of years and does not require novelty and invention as in the case of patents. It is less in that secrecy of the process and impropriety in the method of procuring the secret are requisite here but not in the case of patents.

*b. Definition of trade secret.* A trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in the business in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investment made or contemplated, or the date fixed for announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operation of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in

the business, such as a code for determining discounts, rebates or other concessions in a price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

*Secrecy.* The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. Matters which are completely disclosed by the goods which one markets cannot be his secret. Substantially, a trade secret is known only in the particular business in which it is used. It is not requisite that only the proprietor of the business know it. He may, without losing its protection, communicate it to employees involved in its use. He may likewise communicate it to others pledged to secrecy. Others may know of it independently, as, for example, when they have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret is not possible. Some factors to be considered in determining whether the given information is one's trade secret are: (1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of security measures taken by him to guard the secrecy of the information; (4) the value of the information to him and to his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

*Novelty and prior art.* A trade secret may be a device or process which is patentable; but it need not be that. It may be a device or process which is clearly anticipated in the prior art or one which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability because a patent protects against unlicensed use of the patented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices. The protection is merely against breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who is subject to liability under the rule stated in this Section. Thus, if the secret consists of a device or process which is a novel invention, one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for profits derived from his past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resort to the secret,



the wrongdoer's liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be inappropriate.

*Information not a trade secret.* Although given information is not a trade secret, one who receives the information in a confidential relation or discovers it by improper means may be under some duty not to disclose or use that information. Because of the confidential relation or the impropriety of the means of discovery, he may be compelled to go to other sources for the information. As stated in Comment *a*, even the rule stated in this Section rests not upon a view of trade secrets as physical objects of property but rather upon abuse of confidence or impropriety in learning the secret. Such an abuse or impropriety may exist also where the information is not a trade secret and may be equally a basis for liability . . . .

*c. Disclosure or use.* One who has a trade secret may be harmed merely by the disclosure of his secrets to others as well as by the use of his secret in competition with him. A mere disclosure enhances the possibilities of adverse use. The persons to whom the disclosure is made may or may not be liable under Clause (c) for the subsequent use. Since a trade secret is vendible and since its sale value depends in part upon its secrecy, a mere disclosure may reduce the vendibility or sale value of the secret. The rule stated in this Section protects the interest in a trade secret against both disclosure and adverse use.

The duties not to disclose and not to use another's trade secret are not, however, necessarily concomitant, though they are frequently found together. Thus, a former employee to whom the secret was communicated in the course of his employment may be under both duties. On the other hand, a manufacturer who is permitted by the owner of the secret to use it in his manufacturing may be subject only to a duty not to disclose the secret to third persons. Or the manufacturer may be permitted to use the secret only in the manufacture of products for the owner, with a duty not to disclose the secret or use it in the manufacture of products on his own account or for others.

*Modification or improvement of the secret by the actor.* To subject a person to liability, under the rule stated in this Section, for the use of another's trade secret, there is no requirement that he use it in exactly the form in which he received it. He may be liable even if he uses it in exactly the form in which he received it. He may be liable even if he uses it with modifications or improvements upon it effected by his own efforts. Differences in detail do not preclude liability if, substantially, the process used by the actor is derived from the other's secret in the manner stated in this Section. The liability is avoided only when the contribution by the other's secret is so slight that the actor's process can be said to be derived from other sources; although even in such a case the actor is still subject to liability for harm caused by his disclosure or possession of the secret . . . . The extent of the modifications or improvements made by the actor upon the

other's secret may, however, affect the computation of damages or profits for which he is liable to the other.

*d. Privilege.* A privilege to disclose or use another's trade secret may arise from the other's consent or from other conduct on his part by which he is estopped from complaining. A privilege to disclose may also be given by the law, independently of the other's consent, in order to promote some public interest. Thus, a witness who is compelled by law to answer a question which calls for the disclosure of the secret is not liable for making the disclosure in his answer. Or the privilege may be given to protect an interest of the actor, as, for example, when disclosure may be necessary to defend a charge of infringement. In order to protect trade secrets against disclosure in the course of litigation, testimony involving such disclosure is generally taken by the court privately rather than in public and the record of such testimony is appropriately safeguarded against public disclosure.

*e. Remedies.* One who has a right under the rule stated in this Section is entitled to a remedy or remedies appropriate under the circumstances. He may recover damages for past harm, or be granted an injunction against future harm by disclosure or adverse use, or be granted an accounting of the wrongdoer's profits, or have the physical things embodying the secret such as designs, patterns and so forth, surrendered by the wrongdoer for destruction. Moreover, he may have two or more of these remedies in the same action if the court is competent to administer them. Defenses generally available in tort actions and actions for injunctive relief are also available here, insofar as they are applicable.

*Comment on Clause (a):*

*f. Improper means of discovery.* The discovery of another's trade secret by improper means subjects the actor to liability independently of the harm to the interest in the secret. Thus, if one uses physical force to take a secret formula from another's pocket, or breaks into another's office to steal the formula, his conduct is wrongful and subjects him to liability apart from the rule stated in this Section. Such conduct is also an improper means of procuring the secret under this rule. But means may be improper under this rule even though they do not cause any harm other than that to the interest in the trade secret. Examples of such means are fraudulent misrepresentations to induce disclosure, tapping of telephone wires, eavesdropping or other espionage. A complete catalogue of improper means is not possible. In general they are means which fall below the generally accepted standards of commercial morality and reasonable conduct.

*g. Actor's purpose.* Liability under the rule stated in this Section is based not on the actor's purpose to discover another's trade secret but on the nature of the conduct by which the discovery is made. The actor is free to engage in any proper conduct for the very purpose of discovering the secret. So long as his conduct is proper, his purpose does not subject him to liability. Conversely, if his conduct is improper, he is subject to liability even though he engaged in the conduct for a purpose other than that of discover-

ing the secret.

*h. Improper means employed against third person.* The rule stated in Clause (a) of this Section applies to improper means in procuring the secret not only from the owner but also from any third person holding the secret under a duty not to disclose to others. Thus, the rule applies to a theft of the secret from an employee of the owner or from a post office or bank, or from any other person to whom the secret is entrusted in confidence. If the actor procures the secret by voluntary disclosure by such third person in breach of his duty and the actor employs no improper means to cause the disclosure, he is not subject to liability under the rule stated in Clause (a). But if the actor intentionally procures the third person to make a disclosure in breach of his duty, the actor may be liable under both rules; under the former because inducing one to commit a breach of duty is an improper means of procuring the secret; and under the latter because of the actor's knowledge of the breach.

*i. Procuring the third person to employ improper means.* The rule stated in Clause (a) applies to the case in which the actor procures a third person to discover the secret by improper means, as when A hires B to steal a trade secret from C's safe. If, however, A does not authorize the use of improper means, he is subject to liability only under the rule stated in Clause (c).

*Comment on Clause (b):*

*j. Breach of confidence.* A breach of confidence under the rule stated in this Clause may also be a breach of contract which subjects the actor to liability . . . . But whether or not there is a breach of contract, the rule stated in this Section subjects the actor to liability if his disclosure or use of another's trade secret is a breach of the confidence reposed in him by the other in disclosing the secret to him. The chief example of a confidential relationship under this rule is the relationship of the principal and agent. Such is also the relationship between partners or other joint adventures. But this confidence may exist also in other situations. For example, A has a trade secret which he wishes to sell with or without his business. B is a prospective purchaser. In the course of negotiations, A discloses the secret to B solely for the purpose of enabling him to appraise its value. Or, A requests a loan from B, a banker, for the purpose of aiding the manufacture of A's secret process. In order to assure B about the soundness of the loan, A discloses the secret to him in confidence. In both cases B is under a duty not to disclose the secret or use it adversely to A. Again, this confidence may exist even when no business relation between A and B exists or is contemplated, as when A comes to B, his former teacher, for free advice which B is willing to give with respect to the secret and discloses the secret to him in confidence. But in all these cases A cannot impose a confidence on B without B's consent. If A discloses the secret to B despite B's protest that he does not wish to hold it in confidence and will not so hold it if it is disclosed, the confidence requisite for liability under the rule stated in Clause (b) does not

arise. Likewise, the confidence does not arise if B has no notice of the confidential character of the disclosure. But no particular form of notice is required. The question is simply whether in the circumstances B knows or should know that the information is A's trade secret and that its disclosure is made in confidence . . . .

*Comment on Clause (c):*

*k. Limitations of Clause (c).* The Clause applies only to the cases in which the actor has stated notice when he first learns the secret . . . . Again, Clause (c) deals primarily with the situations in which the actor does not knowingly procure the third person to use improper means or to violate his duty otherwise. But such cases are not excluded from this Clause, and the rules stated in both this Clause and Clause (a) may be applicable to them.

*l. What is notice.* One has notice of facts under the rule stated in this Section when he knows of them or when he should know of them. He should know of them if, from the information that he has, a reasonable man would infer the facts in question, or if, under the circumstances, a reasonable man would be put on inquiry and an inquiry pursued with reasonable diligence would disclose the facts. One may have notice of a fact because he has been given a notification of it. Under the rule stated in the Restatement of Agency, § 9, a person is given notification of a fact by another if the latter (a) informs him of the fact or of other facts from which he has reason to know or should know the fact, or (b) does an act which, under the rules applicable to the transaction, has the same effect on the legal relations of the parties as the acquisition of knowledge. Notification by the second method includes, for example, recordation, which is generally not applicable to the situations dealt with in this Section, and delivery of a letter to a person's office where it is subsequently lost without having been read by him.

*m. Notice of secrecy and of breach of duty.* The actor is subject to liability under the rule stated in this Clause only if he has notice of both the fact that the information is secret and the fact that the disclosure by the third person is a breach of his duty. But frequently the two facts are mutually dependent and notice of one is also notice of the other. Thus, if the actor knows that the information proffered to him by one person is the trade secret of another he is put on inquiry as to the former's authority to disclose the information.

*n. Third person's breach of duty.* The breach of duty by the third person under the rule stated in this Clause is a breach which subjects him to liability for disclosing the trade secret. His duty not to disclose may arise out of a contract made by him or it may be based on the rules stated in Clauses (a), (b) and (d) of this Section.

*Comment on Clause (d):*

*o. Knowledge of secret acquired by mistake.* In the situation covered by Clause (d), the actor need not be guilty of improper conduct in discovering

the secret. If he makes the mistake, as, for example, in opening a letter not addressed to him, his mistake may be innocent or careless. Or the mistake may be made by another person, as, for example, in addressing the letter to him when someone else is intended. However the mistake is committed, if the actor has notice that the information is disclosed to him by mistake and that it is another's trade secret, good faith requires that he do not take advantage of the mistake and he is under a duty not to disclose or use the secret.

