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# Evidence of Producer's Due Care in a Products Liability Action

Robert A. Bernstein\*

## I. INTRODUCTION

In a products liability case, evidence of defendant's due care in the manufacturing or processing operation can be a potent and sometimes critical factor in the decision of a judge or jury.<sup>1</sup> The question remains, however, whether such evidence is properly admissible under contemporary versions of the implied warranty and strict liability theories that have fashioned the recent revolution in consumer product law.<sup>2</sup> The leading chronicler of the revolution, Dean Prosser, has noted the practical importance of the issue<sup>3</sup> and has concluded, apparently without reservation, that in the ordinary case evidence of the defendant's due care is immaterial.<sup>4</sup> The reasoning is superficially compelling: since strict liability eliminates any question of negligence, it simply is not relevant whether the defendant did or did not exercise due care.<sup>5</sup> This conclusion is supported by a leading Washington decision, *Pulley v. Pacific Coca-Cola Bottling Co.*,<sup>6</sup> and several other cases.<sup>7</sup>

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1. See, e.g., Tozer, *Preparation and Use of Technical Evidence in Products Liability Cases*, 16 DEFENSE L.J. 669, 670-72 (1967). See also note 3 *infra*.

2. By definition, when liability is predicated on conventional negligence grounds there is no question regarding the competence of evidence of the defendant's due care.

3. "[S]o long as the defendant can introduce evidence of his own due care, the possibility remains that it may influence the size of the verdict, as jurymen impressed with it stubbornly hold out for no liability, or a smaller sum." Prosser, *The Assault on the Citadel*, 69 YALE L.J. 1099 (1960). In the latest edition of his *Law of Torts*, however, Prosser appears to downplay the role of due care evidence; he notes that by and large, once the proof reaches the point at which a jury is permitted to find for the plaintiff, the jury ordinarily will in fact do so. W. PROSSER, TORTS § 103 at 672 (4th ed. 1971).

4. W. PROSSER, *supra* note 3, § 103 at 672.

5. "Strict liability has eliminated any question of negligence, and in the ordinary case has made evidence of the defendant's due care immaterial." *Id.*

6. 68 Wash. 2d 778, 415 P.2d 636 (1966).

7. *Hessler v. Hillwood Mfg. Co.*, 302 F.2d 61 (6th Cir. 1962); *Simmons v. Wichita Coca-Cola Bottling Co.*, 181 Kan. 35, 309 P.2d 633 (1957); *Coca-Cola Bottling Works v. Lyons*, 145 Miss. 876, 111 So. 305 (1927). See also *Russell v. Community Blood Bank*, 185 So. 2d 749 (Fla. Ct. App. 1966), *aff'd*, 196 So. 2d 115 (Fla. 1967) (stating in dictum that "a showing of due care on the manufacturer's part is not a defense to a breach of implied warranty"); *Snead v. Waite*, 306 Ky. 587, 208 S.W.2d 749 (1948) (affirming the trial court's refusal to instruct that defendants

Analysis indicates, however, that the question is not so simple, and that evidence of due care probably should be admitted under many circumstances.

Preliminarily, it should be noted that Prosser and *Pulley* do not stand uncontradicted by other authority. Some earlier cases, based on the law of implied warranty and decided prior to the full development of the theory of strict liability in tort, favor admissibility.<sup>8</sup> And a comment to the Uniform Commercial Code states unequivocally that evidence of due care in the manufacture, processing or selection of goods "is relevant to the issue of whether the warranty was in fact broken"—whether the product at the time of delivery by the defendant was in fact defective.<sup>9</sup>

One might glean from these divergent authorities that admissibility of due care evidence will turn on the theory of recovery—that it is admissible when the action is based on breach of implied warranty but inadmissible when based on strict liability in tort. This conclusion, however, is unwarranted, since the strict liability and warranty theories probably are identical in substance, differing principally in the degree to which the strict liability theory ignores such traditional Code limitations as privity of contract, disclaimers, and notice requirements.<sup>10</sup> Indeed, many cases tried on the warranty theory have disregarded the Code comment and opted for the Prosserian view of irrelevancy.<sup>11</sup>

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would not be liable if they had exercised reasonable care in preparation of the offending food, because "the exercise of reasonable care is not a defense to a suit for breach of warranty"). These cited cases were tried on a warranty theory, as was *Pulley*. The evidentiary considerations should be the same in warranty as in strict tort liability actions. See note 10 *infra* and accompanying text.

8. *Nichols v. Continental Baking Co.*, 34 F.2d 141 (3d Cir. 1929); *Barefield v. LaSalle Coca-Cola Bottling Co.*, 370 Mich. 1, 120 N.W.2d 786 (1963); *Swenson v. Purity Baking Co.*, 183 Minn. 289, 236 N.W. 310 (1931); *Smith v. Salem Coca-Cola Bottling Co.*, 92 N.H. 97, 25 A.2d 125 (1942); *Simon v. Graham Bakery*, 17 N.J. 525, 111 A.2d 884 (1955); *Conklin v. Ossining Food Center, Inc.*, 48 N.Y.S.2d 716 (Westchester County Ct. 1944); *cf. Grudt v. City of Los Angeles*, 2 Cal. 3d 575, 468 P.2d 825, 86 Cal. Rptr. 465 (1970).

9. UNIFORM COMMERCIAL CODE § 2-314, Comment 13.

10. RESTATEMENT (SECOND) OF TORTS § 402A, comment *m* at 355 (1964). This comment sets forth the strict tort liability rule and notes that "[t]here is nothing in this Section which would prevent any court from treating the rule stated as a matter of 'warranty' to the user or consumer," but that strict liability in tort "is not subject to the various contract rules which have grown up to surround . . . sales." This thought is developed in the leading case of *Greenman v. Yuba Power Prods., Inc.*, 59 Cal. 2d 67, 377 P.2d 897, 27 Cal. Rptr. 697 (1963), and a series of New Jersey cases. *Rosenau v. City of New Brunswick*, 51 N.J. 130, 238 A.2d 169 (1968); *Santor v. A & M Karagheusian, Inc.*, 44 N.J. 52, 207 A.2d 305 (1965); *Henningsen v. Bloomfield Motors, Inc.*, 32 N.J. 358, 161 A.2d 69 (1960). The *Rosenau* case underscores the haziness of any hypothetical line between warranty and tort by holding that a breach of warranty action is subject to the tort, rather than contract, statute of limitations.

11. *Pulley v. Pacific Coca-Cola Bottling Co.*, 68 Wash. 2d 778, 415 P.2d 636 (1966); *cf. cases cited note 7 supra*.

## II. WHEN SHOULD EVIDENCE OF DEFENDANT'S DUE CARE BE ADMISSIBLE?

*Pulley v. Pacific Coca-Cola Bottling Co.*<sup>12</sup> sets out the major arguments against the admission of defendant's evidence that due care was exercised in the production of the product. Plaintiff brought an action based on breach of implied warranty, alleging that she became violently ill after discovering a cigarette in a partially consumed bottle of Coca-Cola. The Washington Supreme Court held that defendant's offer of testimony relating to its processing and bottling methods had been properly excluded. The court stated that the mere assertion by a consumer-plaintiff of harm from a foreign object in food or drink is sufficient to render inadmissible any showing "by indirect and circumstantial evidence that it was improbable or even impossible that the defendants were responsible for the presence of the harmful object."<sup>13</sup> According to the court, plaintiff's assertion had the practical effect of shifting the burden to defendant manufacturer and defendant retailer to show the way in which the contamination occurred.<sup>14</sup> Evidence of due care was held to be incompetent for this purpose under reasoning that runs as follows: the function of due care testimony would be to impeach the plaintiff's testimony that the defect existed; one "cannot impeach the credibility of an opposing party's testimony by testimony collateral to the issues of the case;"<sup>15</sup> and due care evidence is collateral because it is indirect and circumstantial—"not directly refutative of the plaintiff's relation of the incident involved."<sup>16</sup>

So stated, it is apparent that the reasoning is questionable. First, testimony by a plaintiff on the existence of a defect cannot shift the ultimate burden of persuasion, but at most can shift only the burden of producing evidence.<sup>17</sup> Further, whether evidence is collateral is determined by its relation to the issues of the case, and not by its characterization as direct or circumstantial.<sup>18</sup> Finally, the opinion offers no reason

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12. 68 Wash. 2d 778, 415 P.2d 636 (1966).

13. *Id.* at 783, 415 P.2d at 640.

14. *Id.*

15. *Id.* at 784, 415 P.2d at 640.

16. *Id.*

17. *See* C. MCCORMICK, EVIDENCE 639 (1954).

18. McCormick describes noncollateral facts as those "which would have been independently provable" and divides them into 2 categories: (1) those that are relevant to the substantive issues in the case; and (2) those such as bias, interest, and want of capacity that, regardless of the substantive issues, would be independently provable by extrinsic evidence to impeach or disqualify the witness. *Id.* at 101-02. In any event, whether due care evidence is characterized as "collateral" would not affect its admissibility. The significance of labeling relevant evidence "collateral" is that it precludes impeachment of *that* evidence by other, extrinsic evidence. *Id.* Thus, if *Pulley* is correct

for excluding evidence, whatever its function, simply because it is circumstantial.

The *Pulley* case nevertheless is interesting because it suggests an argument against admissibility that is worthy of detailed analysis. The court noted that "despite the investment of large sums of money, manpower, and scientific expertise, the manufacturers of this carbonated beverage apparently have as yet been unable to develop a bottling or manufacturing process which is *infallible* in terms of the purity and wholesomeness of the manufactured product."<sup>19</sup> This observation is equally applicable to the manufacturers of other products. One hundred percent quality control probably does not exist,<sup>20</sup> and anything too closely approaching it might well price out of the market the product to which it is applied.<sup>21</sup> A prime function of industrial engineers is to determine the desired level of the so-called "consumer's risk,"<sup>22</sup> or "allowable percent defective,"<sup>23</sup> by balancing the costs of quality control against the number of defective products the market will bear. The result is the percentage of inevitable defects that will occur under any given degree of sampling or other quality control technique.<sup>24</sup> By any name, this mathematical percentage describes the obvious fact that a prudent, careful manufacturer deliberately assigns to each consumer a specific known risk that the product he buys will be defective. One authority has stated that most quality control planners will accept a level of risk of five to ten percent—that is, a risk that the control plan

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when it describes due care evidence as collateral because its function is to impeach the plaintiff's evidence of defectiveness, this action simply raises the wholly separate question whether plaintiff would be entitled to attack the credibility of the due care evidence. Since, presumably, due care evidence would be presented by defendant on direct rather than cross examination, many courts would permit the attack even after the due care evidence is classified "collateral." *Id.* at 101; see cases cited note 6 *supra* and accompanying text.

19. 68 Wash. 2d at 779, 415 P. 2d at 637 (emphasis in original).

20. The purpose of quality control has been described as designing the manufacturing process so that "the proportion of unsatisfactory or defective units is not *excessive*." D. COWDEN, *STATISTICAL METHODS IN QUALITY CONTROL I* (1957) (emphasis added).

21. One authority has estimated that "if a perfect product is to be guaranteed, it will usually be necessary to do at least 200 per cent inspection unless some completely mechanical inspection device can be used." N. ENRICK, *QUALITY CONTROL I* (4th ed. 1962). The same author also observes: "Under the speed of mass production, it is often impossible to continually turn out 100 per cent satisfactory products. One must assume a certain percentage of defectives will always occur on certain processes; however, if the percentage does not exceed a certain limit, it is often more economical to allow the defectives to go through rather than to screen each lot." *Id.* at 7.

22. See Cowan, *Some Policy Bases of Products Liability*, 17 *STAN. L. REV.* 1077, 1090-93 (1965).

23. D. COWDEN, *supra* note 20, at 5, 101, 489; N. ENRICK, *supra* note 21, at 6.

24. Cowan, *supra* note 22, at 1091.

will fail to detect five or ten percent of the processing defects.<sup>25</sup> In other words, a prudent manufacturer or processor will not seek a lower risk because of the inordinate increase in cost. While the careful manufacturer will produce *fewer* defective items than his careless counterpart, he inevitably will produce *some* that are defective. It is on the basis of the inherent fallibility of quality control plans that the strongest argument can be made in support of the *Pulley-Prosser* conclusion that the producer's evidence of due care is irrelevant.

Preliminarily, it is helpful to clarify the meaning of "relevance." Generally, relevant evidence is that which tends to establish the inference for which it is offered.<sup>26</sup> How strong must this tendency be? One largely discredited view is that the evidence must render the inference more likely than any competing inferences.<sup>27</sup> That this standard is too harsh is readily apparent. Most competent evidence is simply cumulative; while in itself it could not justify a jury in drawing the desired inference, it will permit the inference when considered in conjunction with all the other evidence tending to support the same inference. If a victim were killed by a man wearing a red shirt, then evidence that the defendant owned a red shirt at the time of the event probably would be admissible, but this evidence, without more, clearly would not justify a finding that the defendant was the culprit. The better view, then, is that evidence is relevant if it renders the inference more likely than it would be without the evidence.<sup>28</sup>

Assume a simple products liability case in which the plaintiff bought the item from the defendant; the principal evidence that the product was defective comes from the testimony of the plaintiff; and the only rebuttal available to defendant is that due care was used in the manufacture and processing of the item. Perhaps the defendant can show that his quality control efficiency is .999—of every 1,000 items marketed, only one is likely to be defective. Standing alone, this evidence would not seem to be sufficient to support a finding that any one particular defect, such as the one in question, was not created by the

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25. C. SMITH, *QUALITY AND RELIABILITY: AN INTEGRATED APPROACH* 94 (1969). D. COWDEN, *supra* note 20, at 489, notes that consumer's risk is "often" given a value of 10%.

26. C. MCCORMICK, *supra* note 17, at 317.

27. *See Engel v. United Traction Co.*, 203 N.Y. 321, 323, 96 N.E. 731, 732 (1911); *cf. State ex rel. District Attorney v. Ingram*, 179 Miss. 485, 491, 176 So. 392, 394 (1937) (circumstantial evidence is admissible in civil cases when consistent with the theory sought to be established, and inconsistent with any other theory, and when it amounts to a high degree of probability); *People v. Nitzberg*, 287 N.Y. 183, 187, 38 N.E. 2d 490, 493 (1941) (holding that a fact is relevant to another fact when the existence of the one renders the existence of the other highly probable).

28. *Mutual Life Ins. Co. v. Hillmon*, 145 U.S. 285 (1892); *Riss & Co. v. Galloway*, 108 Colo. 93, 97, 114 P.2d 550, 552 (1941); *Ames v. MacPhail*, 289 Mich. 185, 192, 286 N.W. 206, 208 (1939).

manufacturing process. To the contrary, given that the item was defective, and absent any other explanation of the way in which the defect was created, the evidence might well compel a finding that the item simply was one of the inevitable production line deviations. The seller's position is not unlike that of a defendant who, to rebut prosecution testimony that defendant was the murderer and that he was wearing a red shirt at the time of the crime offers to show that only one of his 50 shirts was red, and that he was therefore unlikely to have been wearing a red shirt on the day of the crime. The significant aspect of the evidence is that the defendant did own a red shirt, not that he owned shirts of 49 other hues. Similarly, in the products liability case it can be argued that it is more important that the manufacturer does in fact produce some defective items than that he produces a larger number of good ones.

The preceding analysis leads to the quite proper conclusion that evidence of due care alone does not tend to prove affirmatively that the defendant sold a nondefective product, but this does not necessarily mean that the due care evidence is irrelevant. The analysis is incomplete because it assumes that the evidence of defectiveness is credible. Of course, evidence tending to prove that the product is defective will be offered in every case, even if it consists solely of plaintiff's testimony; but if the invalidity of plaintiff's evidence is a permissible inference, then it is made more likely by evidence that the manufacturer utilized effective quality control methods. The inference that the plaintiff is lying or mistaken as to what he found in his Coca-Cola bottle, for example, is strengthened by evidence that the bottler employs production techniques that reduce to a practical minimum the probability that foreign objects will find their way into bottles.

This reasoning would lead to a tentative conclusion that evidence of due care is competent for the purpose of attacking the credibility or probative force of plaintiff's evidence, even though it would not alone permit an inference that the item was not defective when sold by the defendant. The distinction is hardly a powerful one. Since no amount of care will eliminate the production of some defective items, evidence that the defendant was careful is at best of weak probative value—regardless of the purpose for which it is admitted—when the issue is whether one particular item was or was not one of the inevitable processing aberrations. In actual practice, however, it seems that courts are in fact more willing to admit due care evidence when they are doubtful of plaintiff's credibility.<sup>29</sup> In at least one instance, admissibility

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29. See *Simon v. Graham Bakery*, 17 N.J. 525, 111 A.2d 884 (1955); *Barefield v. LaSalle Coca-Cola Bottling Co.*, 370 Mich. 1, 120 N.W.2d 786 (1963). In *Simon*, plaintiff testified that

was expressly defended because it was defendant's only means of defending against and of casting doubt on plaintiff's testimony.<sup>30</sup> Even *Pulley* acknowledged the persuasiveness of the contention that the defendants' "only possible course of action—and defense—is to impeach the credibility of the plaintiff's story by demonstrating the improbability of a foreign object escaping the assorted methods and techniques utilized to insure the wholesomeness of the finished product."<sup>31</sup>

We have examined the situation in which the product was purchased directly from the defendant, and the defect, if any, necessarily existed at the time of the sale. There remain for discussion those cases in which (1) plaintiff does not buy the product from defendant but from a retailer who buys it directly or indirectly from defendant, or (2) plaintiff purchases directly from defendant, but the defect, if any, may have been created after the sale. In either event, the defendant can avoid liability, as explained by the drafters of the UCC, via "an affirmative showing . . . that the loss resulted from some action or event following his own delivery of the goods . . . ."<sup>32</sup> In Code terms, the defendant under these circumstances would not have breached any warranty;<sup>33</sup> in the language of strict tort liability, the item could not be said to have been unreasonably dangerous when sold by the defendant.<sup>34</sup>

In these kinds of cases, the function of the jury is to weigh the probability of three possible inferences: (1) the item was defective when sold by defendant, (2) the item became defective after the sale by defendant, and (3) the item was not defective at any relevant time. A verdict for plaintiff will occur if the jury believes that the probability of inference (1) is greater than the combined probabilities of inferences (2) and (3). This idea can be expressed simply in formula terms: when P1 is the probability of inference (1), P2 of inference (2), and P3 of inference (3),

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she cut her mouth on glass contained in a loaf of bread that she had purchased 4 days earlier from defendant bakery. It was held error for the trial court to have excluded testimony of care used by the bakery, because the purpose of the testimony was "to refute the inference that the jury might otherwise draw that the piece of glass was in the bread when it was purchased." 17 N.J. at 529, 111 A.2d at 886. The *Barefield* case approved evidence of the defendant's processing methods and techniques for excluding impurities from its bottles, "for the purpose of negating the probability that the glass particles entered the bottle of Coca-Cola at defendant's plant . . . ." 370 Mich. at 6, 120 N.W. 2d at 789. In each instance the evidence would appear to be helpful only for the purpose of evaluating plaintiff's credibility.

30. *Conklin v. Ossining Food Center, Inc.*, 48 N.Y.S.2d 716 (Westchester County Ct. 1944).

31. 68 Wash. 2d at 783, 415 P.2d at 639.

32. UNIFORM COMMERCIAL CODE § 2-314, Comment 13.

33. *Id.* § 2-314.

34. RESTATEMENT (SECOND) OF TORTS § 402A (1964).



the plaintiff wins if the jury finds that  $P1 > P2 + P3$ , and the defendant wins if  $P1 \leq P2 + P3$ .<sup>35</sup>

P1, the probability that the item was defective when sold by the defendant, is influenced largely by the consumer's risk<sup>36</sup> or allowable percent defective<sup>37</sup> established by the quality control techniques of the defendant and any earlier processor or handler in the chain of distribution. Thus, evidence of due care is directly relevant to the jury's estimate of the probative value of P1.

P2, the probability that the item was made defective after the sale by defendant, will vary depending upon the nature of the product, the distribution methods employed, and a potentially infinite variety of circumstances and events relevant to the period between sale by defendant and injury to plaintiff. If defendant is a soft drink bottler, P2 is the probability that the bottle was tampered with and a foreign object inserted into the bottle during that period between sale by defendant and injury to plaintiff. If defendant is the manufacturer of an automobile with allegedly defective brakes, P2 will depend upon such matters as whether any part of the braking system had been worked on by other parties after delivery by the defendant, whether the automobile was subjected to misuse by the buyer or any other drivers, and whether the defect was of a type ordinarily associated with mishandling on the one hand or production line negligence on the other.

P3, the probability that the product was not in fact defective, usually will depend upon the credibility of plaintiff and his other witnesses, including experts. In the soft drink case, the crucial testimony generally will be that of plaintiff who allegedly discovered the foreign objects;<sup>38</sup> a disintegrated grinding wheel case can turn on the credibility of an expert witness who explains why, in his opinion, the wheel was damaged during manufacture.<sup>39</sup> In other cases, P3 may hinge on the inferences a jury chooses to draw from undisputed facts, for example, occurrence of the accident a short time after sale, or the improbability

35. Mathematicians familiar with the laws of probability inform the author that a more precise mathematical statement is that plaintiff wins if  $P1 > P2 + \frac{P3}{1-P3}$ . Since the correct formula is somewhat cumbersome, and does not affect the analysis or conclusions concerning relevance of the evidence of due care, the simplified formula will continue to be used in the text.

36. See note 22 *supra* and accompanying text.

37. See note 23 *supra* and accompanying text.

38. See, e.g., *Sharp v. Pittsburg Coca-Cola Bottling Co.*, 180 Kan. 845, 308 P.2d 150 (1957); *Barefield v. LaSalle Coca-Cola Bottling Co.*, 370 Mich. 1, 120 N.W.2d 786 (1963).

39. See *Kuzma v. United States Rubber Co.*, 323 F.2d 657 (3d Cir. 1963). For other cases in which expert testimony was used to establish plaintiff's case see *Vandermark v. Ford Motor Co.*, 61 Cal. 2d 256, 391 P.2d 168, 37 Cal. Rptr. 896 (1964) (defective brakes); *Smith v. Hencir-Nichols, Inc.*, 276 Minn. 390, 150 N.W. 2d 556 (1967) (defective steering gear).

of alternative explanations.<sup>40</sup>

Sometimes both P2 and P3 will be variables, because a jury could assign varying degrees of weight to the evidence both that a defect in fact did exist and that it came into being before rather than after sale by defendant. In the landmark case of *Henningsen v. Bloomfield Motors, Inc.*,<sup>41</sup> for example, the issue was whether the accident was caused by a steering system that was defective at the time the car was bought from the defendant dealer. In finding for plaintiff, the jury first had to believe evidence tending to establish that the steering system was defective (expert testimony plus plaintiff's testimony that she heard a crack and that the wheel spun in her hands) and, secondly, had to infer from the circumstances that the car had not become defective after the sale (it had 468 miles on the speedometer and had been bought just ten days before the accident).

Clearly, if there is reason for disputing the weight to be assigned either P2, P3, or both, evidence bearing on the value of P1 ordinarily should be competent because it can aid the jury in determining whether P1 is greater than the sum of P2 and P3. In other words, when the defectiveness of the product is a jury question, or when the dispute revolves around the point in time at which the product became defective, evidence of due care exercised by the defendant or some earlier processor or handler will be relevant. If the evidence will not permit conflicting inferences on either P2 or P3, by definition the question is moot because a directed verdict is in order.

Contaminated food cases often may present situations in which conflicting inferences are not permissible. Suppose the plaintiff testifies he bit into the remains of a dead mouse buried in a can of sardines, and five disinterested witnesses corroborate his story in clear and convincing testimony. The defendant cannery hardly could contend that the mouse somehow got into the can after it left the processing plant. Since no reasonable juror could find other than that the mouse was in the can when it was sold by the defendant, it is not relevant how careful a canner the defendant might be. In formula terms, P2 and P3 for all practical purposes are equal to zero (that is, they are not variables) and the value of P1, therefore, is not in issue. Since no jury question remains, a verdict for plaintiff is compelled.

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40. See, e.g., *Vaccarezza v. Sanguinetti*, 71 Cal. App. 2d 687, 163 P.2d 470 (1945) (plaintiff need not preclude all other possible inferences as long as he establishes reasonableness of his inference by a preponderance of the evidence); *Patterson v. George H. Weyer, Inc.*, 189 Kan. 501, 370 P.2d 116 (1962); *Jacobson v. Broadway Motors, Inc.*, 430 S.W.2d 602 (Mo. Ct. App. 1968) (fire in automobile engine driven 1,100 miles after sale).

41. 32 N.J. 358, 161 A.2d 69 (1960).

The contaminated soft drink cases may present somewhat different considerations. If the hypothetical mouse were undeniably present in a Coca-Cola bottle, then a defendant bottler might contend that the mouse was there because someone tampered with the container after it left the plant.<sup>42</sup> In support, defendant might offer evidence of the care employed in the bottling process. While the probability of subsequent tampering in this case is not zero, in the absence of some affirmative evidence common sense dictates that the likelihood of tampering is less than the probability that the mouse entered the bottle before the cap was first sealed, regardless of the degree of care used in the bottling process.<sup>43</sup> Although P2 is a variable, because jurors reasonably could differ in their estimates of the likelihood of interim tampering, there is no evidence to support an inference that its maximum value reasonably could exceed that of P1.<sup>44</sup> Thus, in the absence of affirmative evidence of subsequent tampering, evidence of due care probably should be excluded because alone it could afford no rational basis for a finding that P1 is less than P2.<sup>45</sup>

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42. See, e.g., *Crystal Coca-Cola Bottling Co. v. Cathey*, 83 Ariz. 163, 317 P.2d 1094 (1957); *Harris v. Coca-Cola Bottling Co.*, 35 Ill. App. 2d 406, 183 N.E.2d 56 (1962); *Heimsoth v. Falstaff Brewing Corp.*, 1 Ill. App. 2d 38, 116 N.E.2d 193 (1953); *Strawn v. Coca-Cola Bottling Co.*, 234 S.W.2d 223 (Mo. Ct. App. 1950).

43. "[I]t seems to us more probable that in spite of the defendant's precautions the body of the mouse in some way escaped detection by the defendant's employees and was in the bottle when it was filled with the beverage at the defendant's plant than that it was inserted in the bottle by some malicious person while it was stored in Ruiz' shed." *Coca-Cola Bottling Co. v. Torres*, 255 F.2d 149, 153 (1st Cir. 1958) (holding that plaintiff need not prove absence of tampering, despite evidence of opportunity to tamper).

44. See *id.*; *Crystal Coca-Cola Bottling Co. v. Cathey*, 83 Ariz. 163, 317 P.2d 1094 (1957).

45. Some warranty cases require plaintiff to prove a lack of reasonable opportunity for tampering by third persons or, if such an opportunity existed, that there actually was no tampering. E.g., *Sharpe v. Danville Coca-Cola Bottling Co.*, 9 Ill. App. 2d 17, 132 N.E.2d 442 (1956); *Williams v. Coca-Cola Bottling Co.*, 285 S.W.2d 53 (Mo. Ct. App. 1955). The better view recognizes the inherent unlikelihood of tampering. *Simmons v. Wichita Coca-Cola Bottling Co.*, 181 Kan. 35, 390 P.2d 633 (1957); *Le Blanc v. Louisiana Coca-Cola Bottling Co.*, 221 La. 919, 60 So. 2d 873 (1952); *Ada Coca-Cola Bottling Co. v. Ashbury*, 206 Okla. 269, 242 P.2d 497 (1952); *Wichita Coca-Cola Bottling Co. v. Tyler*, 288 S.W.2d 903 (Tex. Civ. App. 1956). Nevertheless, courts generally perceive tampering as a jury issue, even in the total absence of any affirmative evidence. It is submitted that this is wrong, and that in view of the inherent unlikelihood of tampering, a rebuttable presumption against tampering would better comport with reality. Consider, for example, the inherent inconsistency of the reasoning of *Crystal Coca-Cola Bottling Co. v. Cathey*, 83 Ariz. 163, 317 P.2d 1094 (1957). The court approved an instruction by the trial court, asking the jury to determine whether the fly got into the bottle as a result of tampering, and concluded that "the jury might reasonably have decided that under the circumstances there was no tampering with the bottle after it left the bottler's control." *Id.* at 1099. This observation is followed, without apology, by a statement which necessarily implied that the issue of tampering should not have been submitted to the jury at all: "To decide that there was a tampering would require the jury to believe in this case that a person would go unobserved to the cooler behind the

One other variant suggests itself—when the only issue is whether the defect was created before or after the product left defendant's possession, and there is no affirmative evidence or common-sense assumption to aid the jury in its finding. Suppose it is undisputed that the accident was caused by defective brakes, that it occurred when the car had been driven only 300 miles, and that there was no evidence that the car had been serviced or otherwise tampered with. Presumably, the jury could infer that the product was defective at the time of sale. Should the manufacturer and dealer be permitted to introduce testimony of their due care in normal production, inspection, and make-ready techniques? In formula terms, P3, the probability that no defect existed, by hypothesis is zero and thus drops out of the formula; P2, the probability that the defect came into existence after the sale, is a variable, and jurors can give it more or less weight as they see fit. P2, however, is a variable only because absolutely nothing is known about it, not because it is the subject of conflicting evidence or of one-sided evidence that may or may not be given credence. If there is no evidence with respect to what happened *after* the sale, is it relevant to show that due care was exercised *before* the sale? If there is no affirmative evidence regarding P2, is affirmative evidence of P1 relevant?

While the question is not free from doubt, it seems that the evidence should be admitted. The defect *could* have been created because the car hit a chuck-hole, it was tampered with by vandals, or the braking system was dismantled and improperly reassembled by plaintiff, although he has declined to so testify. While the jury would not be allowed to conclude that one of these post-sale events was the specific cause of the defect, the jury could conclude that the mere existence of these speculative possibilities makes it more likely than not that the defect did not exist prior to sale. It seems to follow that this inference would be more likely in the case of a careful manufacturer than in that of a careless one, and that evidence of due care therefore would be relevant.

### III. CONCLUSION

Evidence of due care is technically relevant whenever the evidence permits conflicting inferences on the following issues: (1) whether a defect existed, or (2) whether, if it did, it was created prior to the time

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counter in a drugstore or the druggist or one of his employees would go to the cooler and place therein a bottle of coca-cola in which he had put a fly by removing and replacing the cap and this without being able to foretell who might be served that bottle or when it might be served. This, we submit, is too far-fetched for reasonable men to consider seriously." *Id.* By definition, inferences that are too far-fetched for reasonable men to consider seriously should not be submitted to juries in the first instance.

of sale by defendant. If neither of these issues is in dispute, or if the evidence compels but one finding with respect to each issue, the question ordinarily will be moot since the case will be subject to a directed verdict; but when either of these two questions are disputed, there is little doubt that as to mere relevance, the position of the drafters of the comment to the Uniform Commercial Code<sup>46</sup> is superior to that of the *Pulley* case.<sup>47</sup> Admittedly, the probative force of the evidence is not great.<sup>48</sup> In the individual case, therefore, its relevance might be outweighed by counterbalancing factors such as undue potential for prejudice or distraction from the main issue; if so, the evidence always can properly be excluded within the sound discretion of the trial court.<sup>49</sup>

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46. See note 9 *supra* and accompanying text.

47. 68 Wash. 2d 778, 415 P.2d 636 (1966).

48. See note 29 *supra* and accompanying text.

49. *Thompson v. American Steel & Wire Co.*, 317 Pa. 7, 11, 175 A. 541, 544 (1934)