



---

Spring 5-12-2019

## An Empirical Examination of Consumer Survey Use in Trademark Litigation

Katie Brown Ph.D  
katie.brown@ttu.edu

Natasha T. Brison  
Texas A&M University, natasha.brison@tamu.edu

Paul Batista  
pbatista@tamu.edu

Follow this and additional works at: <https://digitalcommons.lmu.edu/elr>



Part of the [Entertainment, Arts, and Sports Law Commons](#), and the [Intellectual Property Law Commons](#)

---

### Recommended Citation

Katie Brown Ph.D, Natasha T. Brison, and Paul Batista, *An Empirical Examination of Consumer Survey Use in Trademark Litigation*, 39 Loy. L.A. Ent. L. Rev. 237 (2019).

Available at: <https://digitalcommons.lmu.edu/elr/vol39/iss3/2>

This Article is brought to you for free and open access by the Law Reviews at Digital Commons @ Loyola Marymount University and Loyola Law School. It has been accepted for inclusion in Loyola of Los Angeles Entertainment Law Review by an authorized administrator of Digital Commons@Loyola Marymount University and Loyola Law School. For more information, please contact [digitalcommons@lmu.edu](mailto:digitalcommons@lmu.edu).

# AN EMPIRICAL EXAMINATION OF CONSUMER SURVEY USE IN TRADEMARK LITIGATION

*Katie Brown,\* Natasha T. Brison,\*\* and Paul J. Batista\*\*\**

This Article is a comprehensive examination of the use of consumer surveys in trademark litigation cases at the federal level. Previous research has shown consumer surveys can be critical to the outcome of trademark litigation, as they measure the idiosyncratic mental associations and reactions of prospective consumers. For this Article, this study examined 843 trademark infringement and dilution cases spanning 2007 to 2017. The findings reveal consumer surveys are not utilized in trademark litigation as often as research suggests they should be. While consumer surveys are not required in trademark litigation, nor necessarily easy or inexpensive to commission, this study shows there are situations where it may be most prudent to produce survey evidence.

This study in this Article also provides insight into the potential impact of consumer surveys on the outcome of both trademark infringement and dilution cases in sports. As instances of trademark infringement and dilution are on the rise, sports apparel brands are actively trying to defend themselves

---

\* Katie M. Brown is an Assistant Professor in the Department of Kinesiology and Sport Management at Texas Tech University, with a Ph.D. in Kinesiology: Specialization in Sport Management from Texas A&M University.

\*\* Natasha T. Brison is an Assistant Professor in the Sport Management Division at Texas A&M University. She received both her Ph.D. in Sport Management & Policy and her J.D. from the University of Georgia.

\*\*\* Paul J. Batista, J.D. Baylor Law School 1976; B.S., B.A. Trinity University 1973, is an Associate Professor in the Sport Management Division at Texas A&M University. He was admitted to practice before the U.S. Supreme Court in 1993 and the State Bar of Texas in 1977.

The authors would like to give special thanks to the editors and reviewers of Loyola of Los Angeles Entertainment Law Review, Christina Kan, and Sarah Brown for their assistance and constant support.

against consumer confusion. In most cases, the findings indicate plaintiffs should seriously consider conducting consumer surveys during litigation, as the potential impact of losing a trademark infringement or dilution case could cost the plaintiff its trademark and, ultimately, its brand.

## I. INTRODUCTION

Trademark infringement law seeks to protect consumers by reducing their search costs<sup>1</sup> while also ensuring protection of the mark for the trademark owner.<sup>2</sup> In order to prevail in a trademark infringement claim, the claimant must establish that it holds a valid trademark, the infringing mark is being used in commerce, and the unauthorized use of the mark is likely to confuse consumers.<sup>3</sup> The core infringement standard for trademark law is likelihood of consumer confusion regarding the source of the product or good.<sup>4</sup> An alternative approach to trademark protection is dilution, which is focused on safeguarding the advertising power of the mark.<sup>5</sup> The owner of a famous mark can bring action against any unauthorized use of the mark that may dilute, or diminish, the distinctive quality of the mark through blurring or tarnishment.<sup>6</sup> The burden of proof in a dilution case lies not with consumer confusion, but on proving a likelihood of dilution, or demonstrating there may be a reduction in brand equity due to the non-authorized use of the mark by another.<sup>7</sup> Trademark infringement and dilution are separate claims, and are the two main trademark-related causes of action.<sup>8</sup> To prove either has occurred, there has been a growing tendency to rely on consumer

---

1. Gerard N. Magliocca, *One and Inseparable: Dilution and Infringement in Trademark Law*, 85 MINN. L. REV. 949, 957 (2001).

2. *Resources and Glossary*, U.S. PATENT AND TRADEMARK OFFICE, <https://www.uspto.gov/trademark/resources-and-glossary> [<https://perma.cc/N4E7-ND5J>].

3. Barret R. Arthur, *Always Protect Your Brand: Trademark Infringement Protection for Athletes Using Social Media Sites*, 10 DEPAUL J. SPORTS L. & CONTEMP. PROBS. 83, 86 (2014).

4. Magliocca, *supra* note 1, at 950.

5. *Id.*

6. *Overview of Trademark Law*, BERKMAN KLEIN CTR. FOR INTERNET & SOC'Y AT HARVARD UNIV., <http://cyber.harvard.edu/metaschool/fisher/domain/tm.htm> [<https://perma.cc/2F6X-23F2>].

7. Hannelie Kruger & Christo Boshoff, *The Influence of Trademark Dilution on Brand Attitude: An Empirical Investigation*, 24 MGMT. DYNAMICS: J. SO. AFR. INST. FOR MGMT. SCIENTISTS 50, 51 (2015).

8. BERKMAN KLEIN CTR. FOR INTERNET & SOC'Y AT HARVARD UNIV., *supra* note 6.

survey evidence to measure the likelihood of confusion between similar marks or dilution of the original mark.<sup>9</sup>

However, research has shown courts have been inconsistent with the treatment of survey evidence—or absence thereof—in trademark litigation. The attitude towards surveys varies among jurisdictions.<sup>10</sup> While the courts may not require survey evidence to show the likelihood of consumer confusion, some courts may draw an adverse inference from a party's failure to produce one, especially if that party is the plaintiff.<sup>11</sup> The failure of the plaintiff to commission its own survey when the defendant tenders a survey has led courts to negatively weigh the lack of survey against the plaintiff's argument of consumer confusion, even when an expert for the plaintiff argues against the reliability of the defendant's survey.<sup>12</sup> The absence of survey evidence has weighed prejudicially against plaintiffs on many occasions, especially if they are large corporations with the means to undertake a survey.<sup>13</sup> Conversely, the inconsistency of the courts has even faulted defendants, who bear no burden of proof in trademark infringement cases, for failure to conduct a survey.<sup>14</sup> In other instances, the Court has declined to give controlling weight to either survey on the question of actual confusion when both parties have submitted surveys to bolster their claims.<sup>15</sup>

Though Courts may be unpredictable when it comes to the weight given to a survey, the use of survey evidence has become more prevalent in trademark infringement cases.<sup>16</sup> Various researchers consider surveys crucial to

---

9. George Miaoulis & Nancy D'Amato, *Consumer Confusion & Trademark Infringement*, 42 J. MARKETING 48, 50 (1978).

10. Qian Zhan, *Survey Evidence in China's Trademark Lawsuits: An Empirical Study*, 7 QUEEN MARY J. INTELL. PROP. 306, 308 (2017).

11. Sandra Edelman, *Failure to Conduct a Survey in Trademark Infringement Cases: A Critique of the Adverse Inference*, 90 TRADEMARK REP. 746, 747 (2000).

12. *Rush Indus. v. Garnier LLC*, 496 F. Supp. 2d 220, 227–228 (E.D.N.Y. 2007).

13. Patricia Dyck, Note, *Beyond Confusion – Survey Evidence of Consumer Demand and the Entire Market Value Rule*, 4 HASTINGS SCI. & TECH. L.J. 209, 219 (2012).

14. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1026 (2012).

15. *Adidas Am., Inc. v. Skechers USA, Inc.*, 149 F. Supp. 3d 1222, 1245 (D. Or. 2016).

16. Edelman, *supra* note 11, at 747.

successfully demonstrating a trademark is worthy of protection,<sup>17</sup> and others have asserted that the courts have seen trademark owners as less serious about a case if no consumer survey is presented.<sup>18</sup>

There is a dearth of research regarding the impact surveys have on the outcome of trademark infringement and dilution litigation. The authors found only one sports specific study analyzing survey evidence on the outcome of cases, which is problematic due to the fact that intellectual property rights provide a major source of revenue for the sports industry.<sup>19</sup> The National Football League (NFL) brings in millions of dollars in revenue with the sale of sportswear, athletic equipment, and other NFL trademarked items.<sup>20</sup> Given the significant commercial value of trademarks in the sports industry, brands and organizations are pursuing more aggressive tactics to protect their intellectual property rights.<sup>21</sup> Some of the most valuable brands are sports brands, and these brands have become more attentive and active in enforcing their trademark rights.<sup>22</sup> Nike and adidas control a majority of the sports-related brand market share, and are also extremely proactive in their trademark protection litigation.<sup>23</sup> Nike is one of the top parties listed in amount of damages won from trademark infringement cases filed between 2005 and 2016, while adidas is one of the top plaintiffs in trademark litigation cases filed between 2015 and 2016.<sup>24</sup> Sports brands should take note of

---

17. Joshua M. Dalton & Ilisa Horowitz, *Funny When You Think About It: Double Entendres and Trademark Protectability*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 649, 652 (2006).

18. J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 32:195 (5th ed. 2017).

19. J. Gordon Hylton, *The Over-Protection of Intellectual Property Rights in Sport in the United States and Elsewhere*, 21 J. LEGAL ASPECTS SPORT. 43, 43 (2011).

20. Brett H. Pavony & Jaia Thomas, *For the Love of the Name: Professional Athletes Seek Trademark Protection*, 2 PACE INTELL. PROP. SPORTS & ENT. L.F. 153, 164 (2012).

21. Hylton, *supra* note 19, at 44.

22. Sungho Cho, *Empirical Substantiation of Sport Trademark Dilution: Quasi-Experimental Examination of Dilutive Effects*, 25 J. LEGAL ASPECTS SPORT. 27, 27 (2015).

23. Timothy Au, *As Remarkable Growth of Sports Industry Continues, Exclusive Data Analysis Reveals the Key Trademark Trends*, WORLD TRADEMARK REV. (Oct. 13, 2017), <https://www.lexology.com/library/detail.aspx?g=18a78c6e-4ee9-444c-8889-a039583c54a7> [<https://perma.cc/RBG7-ME34>].

24. *Id.*

trademark litigation trends and the use of survey evidence to provide proof that likelihood of confusion or dilution exists, as trademarks lie at the heart of branding, which is critical in the sports business world.<sup>25</sup>

This study goes beyond the scope of survey use in sports trademark litigation to encompass brands in multiple industries, as all trademark holders can benefit from quantitative analysis examining the best way to protect their trademarks by utilizing consumer surveys. This analysis aims to understand survey use from a broader perspective, which will provide a more robust model for consumer survey evidence and trademark litigation for sports brands. Building on the work from Bird and Steckel,<sup>26</sup> this research focuses on the impact consumer surveys have on the likelihood of confusion aspect in trademark infringement cases. Given that trademark dilution is also a concern for brands, a second study is conducted to measure the impact consumer surveys have on trademark dilution cases. As dilution is still an elusive topic to study, it is becoming more widespread as brands seek to protect their brand equity from potentially harmful free-riders.

Thus, the purpose of this Article is to provide guidance and advice to legal and marketing practitioners, while contributing to the consumer survey literature. Part II of this paper provides a general background of survey evidence, its inconsistent treatment in the courts, and the lack of research on survey evidence regarding sports brands. Part III discusses trademarks and trademark law, outlining the differences between infringement and dilution and how best to protect brands from trademark infringement. Part IV details the research on consumer survey use in marketing and legal literature, along with the types of surveys used in litigation and the admissibility of surveys. Part V discusses the use of survey evidence in trademark infringement litigation, and Part VI examines survey use in trademark dilution litigation. Part VII will evaluate the role of survey evidence between the years 2007-2017. Part VIII reports the findings of the quantitative investigation of survey use for trademark infringement and dilution cases. Finally, Part IX discusses the implications of this study for marketing and legal practitioners.

## II. TRADEMARKS AND TRADEMARK LAW

A trademark is, at its core, a product or service source identifier that enables consumers to determine the source or origin of these products or

---

25. See generally Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks, Dec. 1, 1995 (as amended on Nov. 12, 2007).

26. See generally Bird & Steckel, *supra* note 14.

services and can help them make informed purchasing decisions.<sup>27</sup> Trademarks originally were limited to conventional word marks or image marks, but have expanded to include colors, sounds, and even smells.<sup>28</sup> Accompanied by its goodwill, which is a brand's reputation and patronage,<sup>29</sup> trademarks are a valuable form of intellectual property and one of a brand's most intangible assets.<sup>30</sup> A large body of research has found that a respected brand name or trademark can substantially enhance consumer perceptions of a product's quality.<sup>31</sup> As a consequence, companies possessing respected trademarks reap significant fiscal benefits.<sup>32</sup> Barton Beebe, a legal scholar, thought of trademarks as requiring three elements, also deemed the "triadic structure of the trademark": (1) the perceptible symbol; (2) the type of use; and (3) the function.<sup>33</sup> If consumers are unable to make a connection between the mark and source of the products or services, the trademark does not adequately identify and distinguish the manufacturer's or seller's goods from those made or sold by others.

Trademark law is based in part on the premise that imitation strategies may confuse consumers and cause them to purchase products and services they do not intend to purchase.<sup>34</sup> Free-riders may mimic trademarks or trade dress (packaging, labeling, or containerization) in order to piggyback on the

---

27. Sungho Cho & Anita M. Moorman, *Examination of the Psychometrical Comparability of Survey Evidence in Sport Trademark Litigation Original Research*, 24 J. LEGAL ASPECTS SPORT. 3, 4 (2014).

28. Shari S. Diamond & David J. Franklyn, *Trademark Surveys: An Undulating Path*, 92 TEX. L. REV. 2029, 2074 (2013).

29. Todd Jacobsen, *Trademarks and Goodwill – Relationships and Valuation*, 12 J. CONTEMP. LEGAL ISSUES 193, 193 (2001).

30. Julie Manning Magid et al., *Quantifying Brand Image: Empirical Evidence of Trademark Dilution*, 43 AM. BUS. L.J. 1, 42 (2006).

31. See Jennifer L. Aaker, *Dimensions of Brand Personality*, 34 J. MKTG. RES. 347, 348 (1997).

32. See Leah Chan Grinvald, *Book Review*, 2 IP L. BOOK REV. 23, 42–64 (2008) (reviewing GRAEME B. DINWOODIE & MARK D. JANIES EDS., *TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH* (2008)).

33. *Id.* at 24.

34. Ellen R. Foxman et al., *An Investigation of Factors Contributing to Consumer Brand Confusion*, 24 J. CONSUM. AFF. 170, 171 (1990).



reputation of a mark holder.<sup>35</sup> Nonetheless, similarity does not necessarily constitute trademark infringement. For a trademark owner to prevail in a trademark infringement case, some amount of consumer confusion must be present.<sup>36</sup> The plaintiff bears the burden of proving likelihood of confusion that consumers are likely to be confused (as to source or origin) by the defendant's use of a trademark. The doctrine of likelihood of confusion in trademark law accommodates a legal notion that the schematic association between a trademark and goods or services designated by the mark is the central value of the mark.<sup>37</sup> This psychological link is presumed to influence consumers' repeated purchases of some goods or services based on their positive consumption experience or in response to other marketing efforts conducted by the mark's owner. Therefore, if this association is disrupted by another deceptively similar mark or other allegedly infringing activities, it would devalue the core function of the trademark and consumer confusion would likely ensue.<sup>38</sup>

Trademark dilution is identified as the reduction of the capacity of a famous trademark to identify and distinguish goods and services, regardless of the presence or absence of competition between the products/goods/services, or likelihood of confusion, mistake or deception.<sup>39</sup> The concept was originally introduced by Fred Schechter, a trademark practitioner and academic. Schechter argued the mark actually sells the goods and in cases of unauthorized trademark use on non-competing products, there would be a gradual, whittling away of the identity of the mark in the public's mind.<sup>40</sup> He argued dilution should only apply to truly unique (arbitrary, suggestive, or fanciful) marks, or rather, marks with a high degree of recognition among

---

35. Shashank Upadhye, *Trademark Surveys: Identifying the Relevant Universe of Confused Consumers*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 549, 598 (1997).

36. Mark A. Kahn, *May the Best Merchandise Win: The Law of Non-Trademark Uses of Sports Logos*, 14 MARQ. SPORTS L.J. 283, 318 (2004).

37. Cho & Moorman, *supra* note 27, at 6.

38. Irina D. Manta, *In Search of Validity: A New Model for the Content and Procedural Treatment of Trademark Infringement Surveys*, 24 CARDOZO ARTS & ENT. L.J. 1027, 1030 (2007).

39. Federal Trademark Dilution Act, 15 U.S.C. § 1125(c)(1) (2012).

40. Frank I. Schechter, *The Rational Basis of Trademark Protection*, 40 HARV. L. REV. 813, 833 (1927).

the relevant consumers in the trade.<sup>41</sup> The degree of recognition of a mark in a dilution claim is of utmost importance, as the primary mark holder must first prove the mark is famous to show the trademark has been diluted.

To protect a brand from trademark infringement, litigation is an important strategy. Brands must show the mindset of consumers and how individuals view the original mark after being exposed to the potentially infringing mark. Consumer surveys have become a popular method to assess the mindset of consumers regarding similar products or services. Some courts were hesitant to allow survey evidence even when consumer confusion was the central issue,<sup>42</sup> but proponents of survey use argued the increased use of surveys in court can only enhance the judges' sophistication in evaluating survey methodology.<sup>43</sup> Strong consumer survey results can counter or support a trademark infringement claim.<sup>44</sup> While actual confusion and likelihood of confusion are separate constructs, survey evidence can allow litigants to produce evidence regarding either issue. Although survey evidence plays a critical role in trademark litigation, many disagree on the weight afforded by courts, or if it is actually a necessity. Others have found survey evidence provides no weight towards trademark infringement claims due to the multiple factors utilized in likelihood of confusion analysis.<sup>45</sup> There is also no consensus as to a gatekeeping methodology for survey evidence.<sup>46</sup> Therefore, there is a pressing need for continuous research on consumer survey use in trademark litigation in order to establish additional evidence and to better develop consensus among the methodologies used.

---

41. Upadhye, *supra* note 35, at 557.

42. Robert H. Thornburg, *Trademark Survey Evidence: Review of Current Trends in the Ninth Circuit*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 715, 744 (2005).

43. Fred W. Morgan, *Judicial Standards for Survey Research: An Update and Guidelines*, 54 J. MARKETING 59, 61 (1990).

44. Upadhye, *supra* note 35, at 555–56.

45. Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1642 (2006).

46. Cho & Moorman, *supra* note 27, at 20.

### III. RESEARCH ON CONSUMER SURVEY USE

Consumer confusion is not only examined by legal scholars, but is also important in marketing literature.<sup>47</sup> Marketing research on trademark infringement and consumer confusion has typically focused on the physical similarity of original brand and me-too products, while much of the legal research on consumer confusion has centered on case analyses.<sup>48</sup> Both marketers and lawyers have an interest in promoting and protecting trademarks to build brand equity.<sup>49</sup> The marketing power of a brand lies in its foundations of brand equity, strong favorable brand associations, and high brand awareness by consumers.<sup>50</sup> Similarly, a trademark identifies the brand to consumers and fundamentally contains the same constructs that comprise brand equity,<sup>51</sup> which is vulnerable to harm by competitors. Well-known trademarks are valuable to marketers because they enhance a company's goodwill by creating positive associations with consumers,<sup>52</sup> and should be protected vigorously from potential free-riders.<sup>53</sup> Both marketers and lawyers have argued a trademark has become the key sales association for consumers rather than simply the product itself or the company that makes the product.<sup>54</sup> If one firm uses another's famous trademark in a way that leads to consumer confusion, the value of the brand for the established owner

---

47. See Vincent-Wayne Mitchell & Vassilios Papavassiliou, *Marketing Causes and Implications of Consumer Confusion*, 8 J. PROD. & BRAND MGMT. 319, 319 (1999); Jean-Noël Kapferer, *Brand Confusion: Empirical Study of a Legal Concept*, 12 PSYCHOL. & MARKETING 551, 556 (1995); Ellen R. Foxman et al., *An Investigation of Factors Contributing to Consumer Brand Confusion*, 24 J. CONSUM. AFF. 170, 186 (1990).

48. Markus Schweizer et al., *Scale Development for Consumer Confusion*, 33 ADVANCES IN CONSUMER RES. 184, 184 (2006).

49. Ross D. Petty, *The Codevelopment of Trademark Law and the Concept of Brand Marketing in the United States Before 1946*, 31 J. MACROMARKETING 85, 93 (2011).

50. Joel H. Steckel et al., *Dilution Through the Looking Glass: A Marketing Look at the Trademark Dilution Revision Act of 2005*, 96 TRADEMARK REP. 616, 623 (2006).

51. *Id.*

52. John D. Shakow, Note, *Just Steal It: Political Sloganeering and the Rights of Trademark Holders*, 14 J.L. & POL. 199, 204 (1998).

53. Sungho Cho, *Empirical Substantiation of Sport Trademark Dilution: Quasi-Experimental Examination of Dilutive Effects*, 25 J. LEGAL ASPECTS SPORT. 27, 29 (2015).

54. Petty, *supra* note 49, at 85.

could diminish.<sup>55</sup> For logo and trademark designs, artistic proficiency and marketing expertise are essential, as brands seek to establish an enduring image of a company.<sup>56</sup> Brands spend considerable amounts of time and money “build[ing] brand awareness and association[] among consumers.”<sup>57</sup> Therefore, when others improperly use the mark “for non-authorized purposes, it may [disparage], defame, or dilute the distinctive value of brands.”<sup>58</sup> Trademarks are also seen as strategic marketing tools,<sup>59</sup> and researchers have argued marketers must become more familiar with trademark law.<sup>60</sup> Therefore, legal and marketing research on consumer confusion should intertwine. “Legal developments impact marketing strategies [which], in turn, [lead to] innovations in marketing research [that] influence how courts apply legal protections.”<sup>61</sup>

The consumer survey is one of the most widely studied methods of providing marketers with insight into consumer perception of a brand and purchase intentions.<sup>62</sup> It is also cited by legal researchers. Survey research by experts has ranged from examining admissibility of surveys as evidence at trial<sup>63</sup> to data-driven research on the use of consumer surveys in court.<sup>64</sup> Trademark survey expert Jacob Jacoby and Professor of Marketing Maureen Morrin reviewed numerous federal court cases from 1994 through 1997 and

---

55. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1014 (2012).

56. Cho, *supra* note 53, at 30.

57. Alexander Krasnikov et al., *Evaluating the Financial Impact of Branding Using Trademarks: A Framework and Empirical Evidence*, 73 J. MARKETING 154, 154 (2009).

58. Cho, *supra* note 53, at 30.

59. Dorothy Cohen, *Trademark Strategy*, 50 J. MARKETING 46, 48 (1986).

60. *Id.* at 49.

61. Bird & Steckel, *supra* note 55, at 1023.

62. *Id.* at 1048.

63. See generally Gary T. Ford, *The Impact of the Daubert Decision on Survey Research Used in Litigation*, 24 J. PUB. POL’Y & MARKETING 234 (2005).

64. See generally Jacob Jacoby & Maureen Morrin, “Not Manufactured or Authorized by . . .”: *Recent Federal Cases Involving Trademark Disclaimers*, 17 J. PUB. POL’Y & MARKETING 97 (1998).

found courts heavily discounted survey evidence. The authors also determined that a lack of consensus exists on how to measure the likelihood of confusion in trademark infringement cases. A study by academic researchers, Dan Sarel and Howard Marmorstein, analyzed a larger dataset including federal trademark infringement cases from 2001 through 2006.<sup>65</sup> The study examined the link between the plaintiff's survey presentation and actual confusion evidence and injunction outcomes. The authors reported when plaintiffs submit survey evidence, there is a modest improvement in their litigation outcomes. Furthermore, the authors concluded the probability of winning increased slightly when showing actual confusion using survey evidence.<sup>66</sup>

Barton Beebe examined the varying application of consumer surveys across circuits of multifactor tests for likelihood of confusion in trademark cases from 2000 through 2004.<sup>67</sup> Beebe utilized regression analysis to investigate the factors most influential in determining likelihood of confusion in trademark infringement cases. The study found most courts were not analyzing all of the likelihood of confusion factors.<sup>68</sup> Beebe discovered the court's findings regarding the factors: (1) similarity of marks, (2) proximity of the goods, and (3) strength of plaintiff's marks strongly favored confusion in a majority of plaintiff verdicts.<sup>69</sup>

While Beebe's study only briefly focused on survey data, Bird and Steckel took Beebe's data and expanded the analysis through 2006.<sup>70</sup> The authors built upon Beebe's data and research on multifactor tests of trademark infringement and consumer surveys, and focused on what impact surveys have on the outcome of court cases.<sup>71</sup> The results concluded surveys were used infrequently in trademark infringement cases, treated subjectively

---

65. Dan Sarel & Howard Marmorstein, *The Effect of Consumer Surveys and Actual Confusion Evidence in Trademark Litigation: An Empirical Assessment*, 99 TRADEMARK REP. 1416, 1417 (2009).

66. *Id.* at 1419.

67. Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1581 (2006).

68. *Id.* at 1600.

69. *Id.*

70. Bird & Steckel, *supra* note 55, at 1029.

71. *Id.*

by the courts, and had the potential to be either dispositive or useless depending on the context of the underlying evidence.<sup>72</sup> The types of surveys utilized in courts are also extremely important, as the Fifth Circuit has repeatedly rejected the simple word association survey and refuses to believe these surveys provide legitimate evidence of likelihood of confusion.<sup>73</sup>

### A. *Types of Surveys Used*

There are multiple types of trademark survey question formats that courts find acceptable when testing for likelihood of consumer confusion. The most notable are the Exxon Format, the Eveready Format, and the Squirt Format.<sup>74</sup>

The Exxon Format is based on trademark survey questions from the Fifth Circuit case *Exxon Corp. v. Texas Motor Exchange of Houston, Inc.*<sup>75</sup> This format asks respondents to indicate the first thing that comes to mind when they see the junior mark. A senior user is simply the first business to adopt and use the mark in commerce, any subsequent user of the mark is referred to as a junior user. This test assumes if the senior mark comes to mind when seeing the junior mark, consumers are likely to confuse the two marks.<sup>76</sup> Arguments against this format suggest the results tend to be inflated confusion estimates, and if the junior and senior marks are truly confused, the consumer is unlikely to identify the senior mark. The Fifth Circuit's follow up questions to the consumers' initial responses, such as "what makes you say that" differentiates this test from simple word-based association tests.<sup>77</sup> For a plaintiff seeking to demonstrate likelihood of confusion exists

---

72. *Id.* at 1035.

73. See *Amstar Corp. v. Domino's Pizza, Inc.*, 615 F.2d 252, 264 (5th Cir. 1980); *Holiday Inns, Inc. v. Holiday Out in America*, 481 F.2d 445, 448 (5th Cir. 1973); *Sears, Roebuck & Co. v. All States Life Ins. Co.*, 246 F.2d 161, 171–72 (5th Cir. 1957).

74. Robert H. Thornburg, *Trademark Surveys: Development of Computer-Based Survey Methods*, 4 J. MARSHALL REV. INTEL. PROP. L. [i], 104 (2004).

75. *Exxon Corp. v. Tex. Motor Exch. of Houston, Inc.*, 628 F.2d 500, 508 (5th Cir. 1980).

76. Itamar Simonson, *The Effect of Survey Method on Likelihood of Confusion Estimates: Conceptual Analysis and Empirical Test Articles and Reports*, 83 TRADEMARK REP. 364, 367 (1993).

77. *Id.*

due to similarity of names, this test may persuade a court to rule in their favor.<sup>78</sup>

Unlike the Exxon Format, the Eveready Format involves asking questions more directly focused on the issue of confusion.<sup>79</sup> The Seventh Circuit found this format acceptable in *Union Carbide Corp. v. Ever-ready, Inc.*<sup>80</sup> Survey respondents are shown the junior product and then asked: “(1) Who do you think makes this brand? (2) What makes you think that? and (3) Name any other products put out by this brand.”<sup>81</sup> Survey experts are seeking responses that include the name of the senior mark to connote evidence of likelihood of confusion.<sup>82</sup> Arguments against this format include that the survey creates potentially leading or suggestive questions,<sup>83</sup> and that the Eveready Format suggests confusion when in reality none may exist.<sup>84</sup>

The Squirt Format is the most recently accepted form of trademark survey questions based upon a 1980 decision by the Eighth Circuit.<sup>85</sup> The original format came from *Squirt Co. v. Seven Up Co.*<sup>86</sup> and supporters of this format claim it provides a direct comparison and measure of confusion.<sup>87</sup> One criticism of the format is that it can underestimate the level of consumer confusion when two names are very similar, as consumers may find it illogical for the same company to use both names. The Squirt Format differs from the Eveready Format because the Squirt Format allows consumers to

---

78. Thornburg, *supra* note 74, at 92.

79. Simonson, *supra* note 76, at 385.

80. *Union Carbide Corp. v. Ever-Ready, Inc.*, 531 F.2d 366, 387 (7th Cir. 1976).

81. Simonson, *supra* note 76, at 368–69.

82. Thornburg, *supra* note 74, at 105.

83. Simonson, *supra* note 76, at 369.

84. Thornburg, *supra* note 74, at 105.

85. *Id.*

86. *Squirt Co. v. Seven-Up Co.*, 628 F.2d 1086, 1089 n.4 (8th Cir. 1980).

87. Simonson, *supra* note 76, at 370.

see a side-by-side comparison of the junior and senior marks during the survey.<sup>88</sup> In these surveys, consumers are asked whether the junior and senior marks originate from the same or different companies. For example, “Do you think SQUIRT and QUIRST are from the same or different company?”<sup>89</sup> This format is similar to the Everready Format in that there are criticisms revolving around potentially leading questions about associations between two marks consumers may not have normally considered. Regardless of this criticism, the Squirt Format is one of the most popular and acceptable forms of trademark survey in litigation.<sup>90</sup> However, there are still doubts over the admissibility of this format by courts.

### *B. Admissibility of Surveys*

Doubts over the admissibility of surveys have centered on their use of sampling techniques and status as hearsay evidence.<sup>91</sup> A substantive amount of trademark disputes revolve around proving the reputation of a trademark or the existence of likelihood of consumer confusion.<sup>92</sup> A properly conducted survey is likely to assist litigants in cases, as long as the survey is properly conducted according to judicial standards for survey research.<sup>93</sup> The elements include:

- (i) the universe is properly defined;
- (ii) a proper representative sample is drawn from that universe;
- (iii) questions must be asked in a clear, precise and non-leading manner;
- (iv) surveys must be double-blind;
- (v) data gathered must be accurately reported;

---

88. *Id.*

89. *Squirt Co.*, 628 F.2d at 1090.

90. Thornburg, *supra* note 74, at 105.

91. Sherri S. Diamond, *Reference Guide on Survey Research*, REFERENCE MANUAL ON SCI. EVIDENCE 229, 233 (2d ed. 2000).

92. Qian Zhan, *Survey Evidence in China's Trademark Lawsuits: An Empirical Study*, 7 QUEEN MARY J. INTELL. PROP. 306, 307 (2017).

93. J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 23:170 (5th ed. 2017).



- (vi) data analysis must be done in accordance with accepted statistical principles; and
- (vii) whether the persons conducting the survey are recognized experts.<sup>94</sup>

The admissibility of a consumer survey lies with the “gatekeeper,” the judge, who ascertains whether the survey expert’s findings fall within the acceptable standards of Rules 702 and 703 of the Federal Rule of Evidence (FRE).<sup>95</sup> Expert testimony in trademark litigation is typically used to determine both the validity of the survey’s methodology and the meaning of the outcomes.<sup>96</sup> All expert opinion testimony, whether scientific or technical, falls under the requirements outlined in Rule 702:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.<sup>97</sup>

In other words, Rule 702 requires expert testimony to be reliable as well as relevant and to assist the trier of fact (judge or jury) in reaching a verdict.<sup>98</sup> Rule 703 provides the ability for such expert to rely upon the survey itself in testifying.<sup>99</sup> The rule states:

---

94. *Id.* at § 32:159

95. See CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, *MODERN EVIDENCE: DOCTRINE AND PRACTICE* § 7.8 (1995).

96. Sungho Cho & Anita M. Moorman, *Examination of the Psychometrical Comparability of Survey Evidence in Sport Trademark Litigation Original Research*, 24 J. LEGAL ASPECTS SPORT. 3, 7 (2014).

97. FED. R. EVID. 702.

98. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993).

99. FED. R. EVID. 703.

An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible in evidence . . . .<sup>100</sup>

Surveys fall under Rule 803 when considering admissibility under the hearsay rule.<sup>101</sup> Although consumer surveys testing for likelihood of confusion are offered for the truth of the matter stated, courts have often found these surveys are not hearsay.<sup>102</sup> In *Zippo Manufacturing Co. v. Rogers Imports, Inc.*<sup>103</sup> the court ruled survey evidence was admissible in trademark infringement cases irrespective of the hearsay rule. However, *Zippo* emphasized the admissibility of survey evidence still depends on the “circumstantial guaranty of trustworthiness,” which must be proved by the party introducing the survey evidence.<sup>104</sup> *Piper Aircraft Corp. v. Wag-Aergo, Inc.* found surveys are not hearsay “because the survey merely recorded the present sense impression and existing state of mind of the interviewees . . . .”<sup>105</sup>

The use of surveys in trademark infringement cases can be incredibly important, as these cases virtually demand survey research due to consumer perception being at the core of the claim.<sup>106</sup> Testimonies by experts describing the results of a well-done survey can further give credibility to a trademark infringement claim, and is an efficient way to inform the trier of fact about a large and representative group of potential witnesses.<sup>107</sup> It is common for opposing parties to refute the other expert’s survey collection method and/or analysis. Generally, any alleged technical deficiencies affect

---

100. *Id.*

101. FED. R. EVID. 803.

102. Thornburg, *supra* note 74, at 93.

103. *Zippo Mfg. Co. v. Rogers Imports, Inc.*, 216 F. Supp. 670 (S.D.N.Y. 1963).

104. *Id.* at 683.

105. *Piper Aircraft Corp. v. Wag-Aergo, Inc.*, 741 F.2d 925, 929 (7th Cir. 1984).

106. Diamond, *supra* note 91, at 256.

107. *Id.*

the survey's weight and not its admissibility.<sup>108</sup> Flaws in methodology must be 'serious and pervasive' to justify exclusion under Rule 702.<sup>109</sup>

While survey evidence can provide valuable information and further bolster a litigant's claim, a poorly conducted survey by an unqualified expert can hinder a likelihood of confusion claim. In *Valador, Inc. v. HTC Corporation*, the court found: (1) the expert was not qualified to present his proffered opinions; (2) the survey did not cover the proper universe; (3) the survey did not replicate market conditions; (4) the survey did not employ a control; (5) the survey did not employ recognized methodology; and (6) the survey employed leading or suggestive questions. The defendants moved for, and were granted, the exclusion of the plaintiff's expert on the question of likelihood of confusion.<sup>110</sup>

Survey evidence in trademark litigation is also admissible in terms of the federal standard for scientific evidence expressed in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*<sup>111</sup> The United States Supreme Court provided judges the role of "gatekeeper" when dealing with scientific evidence and emphasized four factors to be used as criteria in considering the reliability of all scientific evidence: (1) whether a technique at issue has been tested in actual field conditions; (2) whether the technique has undergone peer review and publication; (3) whether a technique provides a known or potential error rate; and (4) whether a technique used has been generally accepted by the relevant scientific community.<sup>112</sup> As consumer surveys are a prevalent method in social science research regarding data collection, statistical analysis, manipulation check, etc., most consumer surveys would satisfy *Daubert*.<sup>113</sup>

---

108. *Jellibeans, Inc. v. Skating Clubs of Ga., Inc.*, 716 F.2d 833, 845 (11th Cir. 1983).

109. *1-800 Contacts, Inc. v. Lens.com, Inc.*, 722 F.3d 1229, 1246 (10th Cir. 2013).

110. *Valador, Inc. v. HTC Corp.*, 242 F. Supp. 3d 448, 459 (E.D. Va. 2017).

111. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 594–95 (1993).

112. *Id.* at 593–95.

113. Sungho Cho & Anita M. Moorman, *Examination of the Psychometrical Comparability of Survey Evidence in Sport Trademark Litigation Original Research*, 24 J. LEGAL ASPECTS SPORT. 3, 7 (2014).

#### IV. SURVEY EVIDENCE IN TRADEMARK INFRINGEMENT LITIGATION

Established owners of trademarks can pursue litigation for trademark infringement if they believe there has been a violation of the Federal Trademark Act of 1946 (the “Lanham Act”), which prohibits the unauthorized use of a trademark that may cause confusion or mistake or deceive consumers. Section 1114 permits a trademark owner of a federally registered trademark recourse against another person who:

use[s] in commerce any reproduction, counterfeit, copy, or colorable imitation of a registered mark in conjunction with the sale, offering for sale, distribution or advertising of any goods or services on or in connection with which such use is likely to cause confusion or to cause mistake, or to deceive.<sup>114</sup>

In simpler terms, the purpose of the Lanham Act is two-fold: (1) to protect consumers from confusion in commerce as to the source of goods, and (2) to protect the goodwill associated with a trademark holder’s goods and investment.<sup>115</sup> The Lanham Act permits trademark owners to pursue action against any unauthorized use of protected marks. In trademark infringement cases, the plaintiff bears the burden to show potential consumer confusion regarding the source of a good or service due to the defendant’s unauthorized use of a mark.<sup>116</sup> There are three types of actionable confusion: (1) source confusion, (2) affiliation confusion, and (3) reverse confusion.<sup>117</sup> Source confusion lies at the heart of trademark law<sup>118</sup> and occurs when a consumer mistakenly believes a junior user’s goods originate from the source of the senior user’s mark. To prove infringement in source confusion,

---

114. Lanham Act, 15 U.S.C. § 1114 (2005).

115. Jason Allen Cody, Note, *Initial Interest Confusion: What Ever Happened to Traditional Likelihood of Confusion Analysis?*, 12 FED. CIR. B.J. 643, 648 (2002).

116. Kevin Blum et al., *Consistency or Confusion? A Fifteen-Year Revisiting of Barton Beebe’s Empirical Analysis of Multifactor Tests for Trademark Infringement*, 2010 STAN. TECH. L. REV. 3, 3 (2010).

117. Shashank Upadhye, *Trademark Surveys: Identifying the Relevant Universe of Confused Consumers*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 549, 561 (1997).

118. Robert G. Bone, *Taking the Confusion Out of Likelihood of Confusion: Toward a More Sensible Approach to Trademark Infringement*, 106 NW. U.L. REV. 1307, 1315 (2012).

the public does not necessarily need to know the identity of the senior source, but rather believe both products originate from the same source.<sup>119</sup>

Affiliation, or sponsorship, confusion occurs when the consumer believes the junior user's mark is somehow affiliated, sponsored, or connected with the senior user.<sup>120</sup> Establishing likelihood of confusion in affiliation confusion is not as clear, as courts have given no resolution as to how similar the trademarks must be to be actionable.<sup>121</sup>

Finally, reverse confusion occurs when the marks used in commerce by the infringing party causes the consuming public to believe the senior user's products originate or are sponsored by the junior user.<sup>122</sup> The senior marks, which are first to hit the market and are the more recognizable brands, use their size and goodwill in the mark to overwhelm the junior user. Reverse confusion is difficult to determine for courts. While the senior user may have a property interest in protecting the mark, the public may benefit more from the junior user's adoption of the mark.<sup>123</sup>

For likelihood of confusion, a claimant's evidence of what they believe to be actual confusion may be insufficient to support the burden of proof required by courts.<sup>124</sup> Evidence of actual confusion, such as mistaken purchases, would be the most helpful for trademark infringement cases, but courts generally understand the difficulty of obtaining this type of evidence.<sup>125</sup> Trademark law allows parties in trademark litigation to introduce

---

119. A. Samuel Oddi, *Consumer Motivation in Trademark and Unfair Competition Law: On the Importance of Source*, 31 VILL. L. REV. 1, 48 (1986).

120. Upadhye, *supra* note 117, at 562.

121. *Helene Curtis Indus., Inc. v. Suave Shoe Corp.*, 13 U.S.P.Q.2d (BNA) 1618, 1624 (T.T.A.B. 1989).

122. Upadhye, *supra* note 117, at 563.

123. Joel R. Feldman, *Reverse Confusion in Trademarks: Balancing the Interests of the Public, the Trademark Owner, and the Infringer*, 8 J. TECH. L. & POL'Y 163, 164 (2003).

124. Larry C. Jones, *Developing and Using Survey Evidence in Trademark Litigation*, 19 MEM. ST. U.L. REV. 471, 473 (1989).

125. Michael J. Allen, *The Role of Actual Confusion Evidence in Federal Trademark Infringement Litigation*, 16 CAMPBELL L. REV. 19, 28 (1994).

scientific information assessing the state of mind of consumers such as anecdotal evidence, experimental data, and consumer survey evidence.<sup>126</sup> Consumer surveys may be the most widely used social science methodology out of the three due to the relatively lower cost and the ability to more efficiently measure the consumer's state of mind.<sup>127</sup> A consumer survey is an instrument used to gather data on the beliefs and attitudes of consumers towards trademarks or products.<sup>128</sup> Although survey evidence has previously been rejected as hearsay,<sup>129</sup> or of little material value,<sup>130</sup> many jurisdictions now welcome the use of surveys as their value becomes more noteworthy.

In determining the issue of trademark confusion, plaintiffs not only must show they possess a valid, protectable trademark, but also that the use of the defendant's mark is likely to cause confusion among the consuming public.<sup>131</sup> Courts assess consumer confusion with the likelihood of confusion test, and while the elements of the test vary amongst the thirteen federal circuits, there is an underlying common theme in all of the multi-factor tests.<sup>132</sup> These include an examination of the similarity of the marks, strength of the plaintiff's mark, proximity of the products, whether the defendant acted in bad faith, and the existence of actual confusion.<sup>133</sup> The Ninth Circuit utilizes eight factors to analyze likelihood of confusion that were articulated in *AMF Incorporated v. Sleekcraft Boats* and now commonly referred to as the *Sleekcraft* test:

---

126. Cho & Moorman, *supra* note 113, at 6.

127. *Id.* at 6–7.

128. Robert C. Bird, *Streamlining Consumer Survey Analysis: An Examination of the Concept of Universe in Consumer Surveys Offered in Intellectual Property Litigation*, 88 TRADEMARK REP. 269, 270 (1998).

129. J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 32:167 (5th ed. 2017).

130. David H.B. Bednall et al., *Color, Champagne, and Trademark Secondary Meaning Surveys: Devilish Detail*, 102 TRADEMARK REP. 967, 967 (2012).

131. Bird, *supra* note 128, at 19.

132. Upadhye, *supra* note 35, at 554–55.

133. Sandra Edelman, *Failure to Conduct a Survey in Trademark Infringement Cases: A Critique of the Adverse Inference*, 90 TRADEMARK REP. 746, 760 (2000).

- (i) strength of the mark;
- (ii) proximity of goods;
- (iii) similarity of the marks;
- (iv) degree of care exercised by purchasers;
- (v) evidence of actual confusion;
- (vi) similarity of the marketing channels;
- (vii) defendant's intent in selecting the mark, and;
- (viii) likelihood products will expand and overlap.<sup>134</sup>

The Second Circuit relies on *Polaroid Corp. v. Polaroid Electronics Corp.* (“*Polaroid*”) factors,<sup>135</sup> the Seventh Circuit considers factors developed from *Helene Curtis Industries, Inc. v. Church & Dwight Co.*,<sup>136</sup> and the Federal Circuit utilizes factors from *E.I. DuPont de Nemours & Co* (“*Dupont*”).<sup>137</sup> To prove likelihood of confusion between marks, litigants have typically presented three different types of evidence: expert witnesses, visual comparisons, and survey evidence.<sup>138</sup> The latter, while being touted by courts as the most direct method of showing likelihood of confusion amongst consumers, is used infrequently and treated subjectively.<sup>139</sup> Obtaining and using survey evidence can also be time-consuming, expensive, and some experts may experience logistical issues associated with locating an appropriate universe of individuals to participate in the study.<sup>140</sup> It has also been said trademark survey evidence is “[ ] unreliable, [ ] open to interpretation, and [ ] unable to produce useful results.”<sup>141</sup>

---

134. *AMF Inc. v. Sleekcraft Boats*, 599 F.2d 341, 348–49 (9th Cir. 1979).

135. *Polaroid Corp. v. Polaroid Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961).

136. *Helene Curtis Indus., Inc. v. Church & Dwight Co.*, 560 F.2d 1325, 1330 (7th Cir. 1977).

137. *In re E. I. DuPont de Nemours & Co.*, 476 F.2d 1357, 1361 (C.C.P.A. 1973).

138. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1014–15 (2012).

139. *See id.* at 1017.

140. Edelman, *supra* note 133, at 752, 755–56.

141. Matthew D. Bunker et al., *Proving Dilution: Survey Evidence in Trademark Dilution Actions*, 13 U. BALT. INTELL. PROP. L.J. 37, 49 (2004).

However, courts have called consumer surveys some of the most direct and persuasive evidence available to show trademark infringement.<sup>142</sup> Survey evidence allows litigants the opportunity to provide the court with consumer data showing that actual confusion is prevalent or non-existent. Coupled with occurrences of actual confusion, results from a survey can increase the probability the court finds a likelihood of confusion.<sup>143</sup> This data can be gathered through various means such as shopping mall queries, telephone contacts, and internet surveys.<sup>144</sup>

One study identified two major trademark infringement cases that shaped sports trademark protection policy and involved the use of survey evidence to prove consumer confusion.<sup>145</sup> In *MLB Properties, Inc. v. Sed Non Olet Denarius, Ltd.*, MLB Properties and the Los Angeles Dodgers sued the Brooklyn Dodger Sports Bar and Restaurant in New York City for trademark infringement.<sup>146</sup> The federal district court found in favor of the defendants based on fatal flaws within the survey. The survey evidence was rejected because the plaintiffs were only able to show an associational connection, and determined multiple questions in the survey were suggestive or leading, which resulted in invalid responses. Therefore, without the survey evidence, the court found no proof of actual confusion.

In *Indianapolis Colts, Inc. v. Metropolitan Baltimore Football Club Ltd. Partnership*, survey evidence was successfully used by the Colts to demonstrate consumer confusion.<sup>147</sup> The Appellate Court faulted the defendants for not producing evidence countering the Colt's survey findings. This case showed how survey evidence could be instrumental in a trademark

---

142. Bird and Steckel, *supra* note 138 at 1025.

143. Jones, *supra* note 124, at 473.

144. Gabriel M. Gelb & Betsy D. Gelb, *Internet Surveys for Trademark Litigation: Ready or Not, Here They Come*, 97 TRADEMARK REP. 1073, 1073 (2007).

145. Cho and Moorman, *supra* note 113, at 8.

146. *Major League Baseball Properties, Inc. v. Sed Non Olet Denarius, Ltd.*, 817 F. Supp. 1103, 1108 (S.D.N.Y. 1993), *vacated pursuant to settlement*, 859 F. Supp. 80 (S.D.N.Y. 1994).

147. *Indianapolis Colts, Inc. v. Metro. Baltimore Football Club Ltd. P'ship*, 34 F.3d 410, 415-16 (7th Cir. 1994).



infringement claim in which likelihood of confusion is a central issue.<sup>148</sup> *Colts* was also the only sports trademark case so far to emphasize both the role and admissibility of survey evidence in sports trademark litigation.<sup>149</sup>

A more recent case involved *Board of Supervisors of the Louisiana State University and Agricultural and Mechanical College, et al. v. Smack Apparel Company, et al.*<sup>150</sup> The University and its trademark licensees sued Smack Apparel for trademark infringement, dilution, and common law unfair competition for selling sportswear bearing the school colors, logos and designs. The court concluded the only evidence of actual confusion in the case was the survey evidence presented by the plaintiffs. However, the survey was deemed unnecessary due to the defendants admitting they used the school colors and other indicia with the intent of identifying the University plaintiffs as the subject of the message expressed in the shirt design. While the survey was not considered in this particular case, the plaintiffs still sought to provide as much evidence of confusion as possible. Even though a trademark dilution claim does not require the plaintiff to show a likelihood of consumer confusion, consumer surveys can provide evidence the original mark is being diluted, or harmed, by the use of a non-authorized mark.

## V. SURVEY EVIDENCE IN TRADEMARK DILUTION LITIGATION

In addition to the traditional claim for infringement, trademark dilution law provides mark owners another federal claim against unauthorized users.<sup>151</sup> The Federal Trademark Dilution Act of 1995 (the “FTDA”) entitles owners of famous marks to an injunction against the unauthorized use of a mark in commerce that may cause dilution by blurring or tarnishment, regardless of the presence or absence of actual or likely confusion, competition, or actual economic injury.<sup>152</sup>

---

148. Sean H. Brogan, *Who Are These Colts: The Likelihood of Confusion, Consumer Survey Evidence and Trademark Abandonment* in Indianapolis Colts, Inc. v. Metropolitan Baltimore Football Club, LTD., 7 MARQ. SPORTS L.J. 39, 49 (1996).

149. Cho & Moorman, *supra* note 113, at 3.

150. Bd. of Supervisors of La. State Univ. v. Smack Apparel Co., 438 F. Supp. 2d 653, 661 (E.D. La. 2006).

151. Sungho Cho, *Empirical Substantiation of Sport Trademark Dilution: Quasi-Experimental Examination of Dilutive Effects*, 25 J. LEGAL ASPECTS SPORT. 27, 27 (2015).

152. Federal Trademark Dilution Act, 15 U.S.C. § 1125(c)(1) (2012).

Under the FTDA, a plaintiff who possesses a famous trademark may enjoin another owner which is likely to weaken the unique value of the plaintiff's mark in terms of "blurring" or "tarnishment." The statute provides the definition of "blurring" and "tarnishment":

"[D]ilution by blurring" is association arising from the similarity between a mark or trade name and a famous mark that impairs the distinctiveness of the famous mark. . . . "[D]ilution by tarnishment" is association arising from the similarity between a mark or trade name and a famous mark that harms the reputation of the famous mark.<sup>153</sup>

The issue in trademark law that has been widely debated revolved around whether owners of famous marks had to show likelihood of dilution or actual dilution. In *Moseley v. V. Secret Catalogue, Inc.*, the United States Supreme Court held that the legal standard for federal dilution claims required the plaintiff to show actual dilution.<sup>154</sup> This was amended two years later, as Congress passed the Trademark Dilution Revision Act of 2006 which articulated the burden of proof required under law would be the likelihood of dilution, not actual dilution.<sup>155</sup>

While some courts may find both dilution and traditional trademark infringement in a single case, the two causes of action are actually mutually exclusive, according to J. Thomas McCarthy:

Any one person either does or does not think that the similarly branded products or services are affiliated or connected. If he does not, then dilution may or may not occur in that person's mind, depending on the strength of the senior user's mark, and other factors. If he does mistakenly think there is a connection, then traditional trademark infringement has occurred. 'Dilution is not occurred in that person's mind . . . for dilution . . . [is] a state of mind that recognizes independent sources and affiliation. For dilution to occur, the relevant public must make some connection between the mark and both parties. But that connection is not the kind of mental link between the parties that triggers the

---

153. *Id.*

154. *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418, 418 (2003).

155. Clarisa Long, *Dilution*, 106 COLUM. L. REV. 1029, 1076 (2006).

classic likelihood of confusion test. Rather, the assumption is that the relevant public sees the junior user's use, and intuitively knows, because of the context of the junior user's use, that there is no connection between the owners of the respective marks. However, even with those who perceive distinct sources and no affiliation, the dilution theory says that the ability of the senior user's mark to serve as a unique identifier of the plaintiff's goods or services may be weakened because the relevant public now also associates that designation with a new and different source.<sup>156</sup>

Traditional trademark infringement addresses consumer confusion, but trademark dilution is more focused on protecting against semiotic harm to the owner of a famous trademark. Following the *Moseley* decision, the court gave a backhanded endorsement to the use of survey research by grouping it with other means of establishing actual dilution. Despite the slight validation, dilution surveys have a difficult time surviving admissibility at trial,<sup>157</sup> as there is no standard criteria for surveying dilution. Trademark owners believe dilution to be harmful but have difficulty explaining why, and many courts have been reluctant to enforce dilution laws over the years.<sup>158</sup> Still, the concept of trademark dilution is somewhat elusive,<sup>159</sup> but the lessened capacity can be established by direct evidence, which some may consider survey evidence that can demonstrate the mental associations raised by the senior user's mark.<sup>160</sup>

In 2007, Nike filed a lawsuit against a biotech laboratory supply company for using the name, Nikepal.<sup>161</sup> Nike employed Phillip Johnson of Leo J. Shapiro and Associates, a Chicago-based market research firm, to conduct

---

156. J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 24:72 (5th ed. 2017).

157. Robert H. Thornburg, *Trademark Surveys: Development of Computer-Based Survey Methods*, 4 J. MARSHALL REV. INTELL. PROP. L. [i], 112 (2004).

158. Rebecca Tushnet, *Gone in Sixty Milliseconds: Trademark Law and Cognitive Science*, 86 TEX. L. REV. 507, 507 (2008).

159. Matthew D. Bunker et al., *Proving Dilution: Survey Evidence in Trademark Dilution Actions*, 13 U. BALT. INTELL. PROP. L.J. 37, 38 (2004).

160. See *Moseley* 537 U.S. at 432–434.

161. Nike, Inc. v. Nikepal Int'l, Inc., No. 2:05-cv-1468-GEB-JFM, 2007 WL 2688499, at \*1 (E.D. Cal. Sept. 10, 2007).

a consumer survey to measure the likelihood of dilution of the Nike brand as a result of Nikepal's use of the Nikepal mark.<sup>162</sup> The majority of respondents acknowledged they were not likely to confuse the two marks; however, 87 percent associated Nikepal with Nike, indicating that when exposed to the Nikepal mark, they thought of Nike and its products.<sup>163</sup> The court weighed Mr. Johnson's survey in favor of Nike which, considered in conjunction with the other likelihood of dilution analysis factors, allowed Nike to prevail on its federal and state dilution claims.<sup>164</sup> Cases such as this one show how consumer survey evidence can bolster claims of trademark dilution, and more brands should take note of survey use in trademark litigation. While many brands may not have the resources Nike has, it is imperative to provide a quantitative analysis of the recent trends in how consumer surveys can affect the outcomes of trademark infringement and dilution cases.

## VI. METHODOLOGY

### A. Data Collection

The data for this empirical study was collected from published opinions in trademark infringement and trademark dilution cases involving confusion written by federal trial court judges in the United States between 2007 and 2017. This time period is a continuation of the Bird and Steckel study,<sup>165</sup> which examined cases between 2000 and 2006. Following the same coding methods as Beebe<sup>166</sup> and Bird and Steckel,<sup>167</sup> data was obtained through Westlaw using search terms to capture any opinion which discussed the use, misuse, or lack of survey evidence in each trademark infringement and trademark dilution case.

First, the data was analyzed to determine how often survey evidence was used in trademark infringement and trademark dilution cases. Second,

---

162. *Id.* at \*4.

163. *Id.*

164. *Id.* at \*8.

165. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1029 (2012).

166. Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1597 (2006).

167. Bird & Steckel, *supra* note 165, at 1029.

we utilized logistic regression to quantitatively measure the influence of the survey on the outcome of the case, whether submitted by the plaintiff or defendant. We also investigated the trends of allowing or affording weight to survey evidence in each circuit. Ultimately, we expected to find litigants are more likely to receive favorable outcomes when producing their own consumer survey evidence to support trademark infringement or dilution claims.

### B. Analysis and Justification

The analysis was performed in multiple stages. The first step detailed how often litigants submit surveys as evidence in trademark infringement and trademark dilution cases. We examined the frequency of use of survey evidence in these cases over the past decade. A high frequency of use could indicate support for the belief survey evidence has become *de rigueur*<sup>168</sup> and is necessary to prove likelihood of confusion.<sup>169</sup> This deepens the discussion of the influence of science on judicial decision making,<sup>170</sup> as research has noted judges may be predisposed to “junk science” due to their lack of empirical and mathematical training.<sup>171</sup> The frequency of survey use combined with the frequency of favorable results for the survey submitter allows for the speculation of whether merely submitting a survey, regardless of quality, weighs positively on quality and persuasiveness of other evidence presented.<sup>172</sup>

Only cases containing discussion of survey evidence are included in the remaining analyses. The dataset was coded to note whether the plaintiff or defendant submitted the survey. In a case where both parties submitted a survey, it was coded accordingly. The plaintiffs and defendants were separate analyses, as parties have different motivations for producing survey evidence. For example, in consumer confusion cases, the plaintiffs bear the

---

168. Sandra Edelman, *Failure to Conduct a Survey in Trademark Infringement Cases: A Critique of the Adverse Inference*, 90 TRADEMARK REP. 746, 747 (2000).

169. Itamar Simonson, *The Effect of Survey Method on Likelihood of Confusion Estimates: Conceptual Analysis and Empirical Test*, 83 TRADEMARK REP. 364, 364 (1993).

170. Bird & Steckel, *supra* note 165, at 1031.

171. Michael I. Meyerson & William Meyerson, *Significant Statistics: The Unwitting Policy Making of Mathematically Ignorant Judges*, 37 PEPP. L. REV. 771, 846 (2010).

172. Bird & Steckel, *supra* note 165, at 1032.

burden of persuasion and would be more compelled to produce survey evidence.<sup>173</sup> There is a lower burden of persuasion for defendants, as the defendants only must show the plaintiff's evidence was deficient.<sup>174</sup> Thus, the quantity of surveys and survey effectiveness might differ between parties.<sup>175</sup>

The second step of the analysis includes two studies: Study 1 focuses on trademark infringement outcomes, while Study 2 examines trademark dilution outcomes. Each study contained a series of logistic regressions to produce insight into the effectiveness of surveys. Binary logistic regression was appropriate in this instance as outcomes are binary (i.e. the outcome either occurred or it did not occur):  $\text{Pr}(\text{Confusion Found}) = f(\text{Predictive Variables})$  and  $\text{Pr}(\text{Dilution Found}) = f(\text{Predictive Variables})$ . The dataset reports whether a submitted survey was credited by the court, and if the judge indicated that, despite any flaws, the survey contained some probative value in favor of the party submitting the survey. Previous literature has indicated survey evidence can be a powerful indicator of consumer confusion in the minds of some judges, and submission of survey evidence the court deems to have probative value may influence the outcome of the case.<sup>176</sup>

Our analysis also sought to determine the causal relationship between the strength of a plaintiff's claim on grounds unrelated to survey evidence and the effectiveness of in-court survey evidence (i.e., does a weak overall case for trademark infringement suggest that a consumer survey will be more impactful than a strong case?). The study also determined whether the submission of a survey by a defendant and no submission by a plaintiff adversely affects the plaintiff. Studies have shown courts to make adverse inferences from plaintiffs not submitting a survey, especially when a plaintiff is considered to have the resources and the defendant is the only party to submit survey evidence.<sup>177</sup>

We also analyzed how survey evidence was treated in each Circuit. Quantitative studies focusing on the effectiveness of survey evidence on the outcome of a case have generally focused on how the multifactor likelihood

---

173. Irina D. Manta, *In Search of Validity: A New Model for the Content and Procedural Treatment of Trademark Infringement Surveys*, 24 CARDOZO ARTS & ENT. L.J. 1027, 1062 (2007).

174. *See generally id.*

175. Bird & Steckel, *supra* note 165, at 1032.

176. *Id.* at 1033.

177. Edelman, *supra* note 168, at 750.

of confusion tests varied amongst circuits, but none have analyzed if there is a difference in survey treatment depending upon the circuit.

## VII. RESULTS AND DISCUSSION

This section includes the results of the multiple analyses. For ease of interpretation, we discuss the odds ratios for each significant finding. We also detail how the outcomes expand upon previous research on consumer survey use in trademark litigation. Some of the results contradict previous outcomes,<sup>178</sup> but the results reinforce the notion that survey evidence is still valuable and influential in trademark litigation.

While marketing and legal literature, along with many courts, detail the importance of survey evidence, our data confirm previous quantitative analyses that survey evidence is still not widespread in reported trademark litigation.<sup>179</sup> Out of 843 cases reviewed for the dataset between the years of 2007 and 2017, only sixty-nine (12%) discuss survey evidence. This could indicate companies may not desire to spare the cost for a consumer survey which is not an absolute in achieving a favorable outcome. However, this analysis only accounts for the surveys admitted into evidence and discussed by the judge during litigation, thus we are unaware if companies have previously conducted surveys to force a settlement or received unfavorable results prior to litigation. Data was also collected on judge characteristics, as well as survey type, if available. However, both variables were eliminated as each produced too small of a sample size for analysis.

### *A. Likelihood of Confusion in Trademark Infringement Cases*

Table 1 includes eleven regression models for trademark infringement cases where consumer confusion surveys were conducted by either the plaintiff, defendant, or both. Each model tests the impact of different survey-related variables on the court's finding of a likelihood of confusion, including whether a survey was credited by the court or not. A credited survey is when the judge has indicated that, despite any innate flaws within the survey, the evidence contained as least some probative value in the case. Model 1 examines the relationship between the probability of a court finding a likelihood of confusion and whether or not the plaintiff submitted the survey. This

---

178. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1035 (2012).

179. *Id.* at 1041.

model tests only the submission of the survey, with no consideration of other factors that may impact an outcome of likelihood of confusion. The results show a positive and significant relationship between a plaintiff submitting a survey and a finding of likelihood of confusion. This finding is in contrast to Bird and Steckel's analysis,<sup>180</sup> and shows courts may be more favorable to plaintiff submitted surveys. Without taking other non-survey evidence into account, and regardless of whether the survey was credited by the court, plaintiffs were more likely to receive a likelihood of confusion decision when submitting a survey than when they did not.

Model 2 examines the relationship between not only a plaintiff submitting survey evidence and the likelihood of confusion outcomes, but also the presence of a defendant's survey. Bird and Steckel found a plaintiff-submitted survey in this model did not yield significant results and a defendant's submission of a survey was negatively correlated with a likelihood of confusion outcome. However, our analysis concluded that while the defendant-submitted survey did not produce significant results, a plaintiff submitting a survey was more likely to receive a favorable outcome. As previously discussed, plaintiffs and defendants have different evidentiary burdens in trademark litigation cases. When a plaintiff is the only party submitting a survey, the courts may treat this evidence differently and more favorably. A defendant bears no burden in a trademark infringement case, so intuition would assume the submission of a survey by both parties may cause the courts to view the evidence differently. Previous research has found a defendant-submitted survey may counterbalance the "halo-effect" a plaintiff-submitted survey has when there is no other scientific evidence to rebut the infringement claim.<sup>181</sup> However, these results, without accounting for credited surveys or the circuits, show courts may become more favorable to plaintiff-submitted surveys, regardless of whether defendant submits their own survey evidence.

In Model 3, plaintiff and defendant credited surveys are included as variables in the regression. While each party may submit a survey, the courts may rule one or both as inadmissible due to methodological issues. This model takes into account when both parties have submitted surveys and the surveys have also been credited by the courts as being admissible into evidence. Bird and Steckel found significant relationships between a plaintiff-

---

180. *See generally id.*

181. *Id.* at 1038.



submitted survey, defendant's survey, and a plaintiff-credited survey regarding a likelihood of confusion decision.<sup>182</sup> Unsurprisingly, our results indicate when a plaintiff submits a survey that is credited, the credited survey is strongly and significantly correlated with an outcome of likelihood of confusion. When a plaintiff survey is credited, the outcome is more favorable to the plaintiff. For defendants, Model 3 shows a court-credited survey submitted by a defendant has no statistically significant impact on the outcome of the dispute. Defendants may take note of these findings, that while basic methodology is important, surveys submitted by defendants are not subjected to the same rigor as the plaintiff. Therefore, it may not matter whether the defendant survey is credited or not, as the presence of a defendant-submitted survey may be enough to neutralize the plaintiff's survey, contingent upon if the plaintiff's survey is credited or not.

Model 4 examines the impact of non-survey evidence on a likelihood of confusion outcome, with the three *Polaroid* factors determined by Beebe as being universally examined by all circuits.<sup>183</sup> As previously noted, each circuit has its own factors to examine in trademark infringement cases, but there are four factors shared by all federal circuits. Actual confusion was eliminated from the analysis because some courts view consumer surveys to be evidence of actual confusion.<sup>184</sup> These variables include the similarity of the two marks, similarity of the products, and the proximity of the goods in the marketplace. This model tests whether a given factor favoring or disfavoring a likelihood of confusion outcome has an impact on the case. Bird and Steckel found positive and significant relationships between the factors favoring confusion with a likelihood of confusion, as well as negative and significant correlations between the likelihood of confusion outcome and the factors not favoring confusion.<sup>185</sup> The current results show that all three factors are positively and significantly correlated with a finding of likelihood of confusion. Each factor is influential, demonstrating when a court finds the marks are similar, the plaintiff's mark is strong, or the proximity of the goods

---

182. *Id.*

183. Leah Chan Grinvald, Book Review, 2 IP L. BOOK REV. 23, 1582–83 (2008) (reviewing GRAEME B. DINWOODIE & MARK D. JANIS EDS., TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH (2008)).

184. Bird & Steckel, *supra* note 165, at 1034.

185. *Id.* at 1037–38.

in the marketplace favors confusion, the court is more likely to reach a favorable conclusion of likelihood of confusion for the plaintiff. Conversely, when the court determines these factors favor no confusion between the marks, there was no significant impact on the outcome. This seems counter-intuitive, as one would expect when the three factors are found to not favor confusion, the results would be negatively correlated with a likelihood of confusion outcome. This may indicate that the plaintiffs in the survey evidence data were more likely to partake in litigation when they had a stronger case for showing the similarity of the marks, the strength of their mark, and could provide evidence that the goods were in close proximity.

Model 5 builds upon the previous model by including the plaintiff-submitted survey variable. In conjunction with the non-survey evidence, the court was over twelve times more likely to find an outcome of likelihood of confusion when a plaintiff submitted a survey, along with the similarity of the two marks and the strength of the plaintiff's marks favoring confusion. The proximity of goods was not significant, signifying courts may be more likely to rely on the similarity and strength factors when a consumer confusion survey is involved. Model 6 includes the addition of the defendant-submitted survey, with no change in relationships between the variables and a likelihood of confusion finding. The defendant-submitted survey was not significant, which demonstrates when the plaintiff-submitted survey is taken into account with mark similarity and strength of the mark, courts were nine times more likely to find a likelihood of confusion.

Model 7 is a continuation of the previous two models, as we add the presence of credited surveys by each party. Bird and Steckel found all variables to be statistically significant except for the defendant's credited survey, and that survey evidence remained influential in likelihood of confusion cases even when the influence of the *Polaroid* factors were taken into account separately.<sup>186</sup> This analysis shows the strength of the plaintiff's mark amongst the public is the only significant variable, which suggests that the courts are more likely to find an outcome of likelihood of confusion when they consider the mark to be strong. This implies courts may rely heavily on the strength of the plaintiff's mark, when the other factors are considered separately, along with both parties submitting surveys that are credited.

Model 8 deviates from previous quantitative analyses of consumer surveys in trademark infringement, but expands the analyses by examining the relationship between a likelihood of confusion outcome and a plaintiff-submitted survey, depending upon the circuit the case was litigated. The results

---

186. *Id.* at 1039.

are homogenous across the circuits, as there are no significant correlations between each circuit and the outcome. As show in Model 1, a plaintiff submitting a survey, independent of other considerations, is more likely to receive a favorable outcome of likelihood of confusion. Model 9 considers both plaintiff and defendant-submitted surveys along with the circuits. This model is in stark contrast to Model 2, where the plaintiff-submitted survey produced significant results, without taking in account whether the survey was credited, other non-survey evidence, and the circuits. In this model, there were no statistically significant findings. The results are analogous to previous research where a defendant submitting a survey alongside a plaintiff may produce a scientific neutralizing effect, notwithstanding accreditation or other factors. These results confirm previous analyses<sup>187</sup> that it is the presence of the defendant-submitted survey, not its quality or methodology, which has a favorable impact for the defense. When circuits are accounted for, courts may not give weight to either survey in favor of a likelihood of confusion outcome when both parties have submitted surveys.

Model 10 analyzed the relationship between both plaintiff and defendant-submitted surveys, each being credited, along with the circuit variables. The model produced only one positive and statistically significant result. A credited plaintiff submitted survey was more likely to result in an outcome of likelihood of confusion. Model 11 extends this examination, and includes all variables in the data: (1) plaintiff-submitted; (2) defendant-submitted; (3) plaintiff survey credited; (4) defendant survey credited; (5) similarity of marks favoring confusion; (6) similarity of marks favoring no confusion; (7) strength of plaintiff's mark favoring confusion; (8) strength of plaintiff's mark favoring no confusion; (9) proximity of goods favoring confusion; (10) proximity of goods favor no confusion; (11) First Circuit; (12) Second Circuit; (13) Third Circuit; (14) Fourth Circuit; (15) Fifth Circuit; (16) Sixth Circuit; (17) Seventh Circuit; (18) Eighth Circuit; (19) Ninth Circuit; (20) Tenth Circuit; (21) Eleventh Circuit. When a plaintiff survey was credited, in consideration with the non-survey evidence and the circuits, plaintiffs were more likely to receive a favorable outcome of likelihood of confusion. The results from Models 10 and 11 indicate that survey evidence remains influential in likelihood of confusion cases, and credited plaintiff surveys continue to increase the probability of a likelihood of confusion finding. Overall, these models show that while survey evidence is still not prevalent

---

187. *Id.* at 1038.

in trademark infringement cases, the use of surveys can still be very persuasive and should be part of the cost-benefit analysis conducted by brands prior to pursuing litigation.

Table 2 provides more insight into how the strength of the likelihood of confusion factors combined with a plaintiff-submitted survey affect the outcome. The results are interesting, revealing that in our data, plaintiffs were more likely to present survey evidence even when they had a strong case or a weak case regarding the confusion factors. Previous research has shown consumer surveys are most impactful when the likelihood of confusion factors are of middling strength.<sup>188</sup> These findings show in cases where plaintiff's submit surveys and can show strong evidence of similarity of marks, the strength of their mark, and how close in proximity the goods are in the marketplace, courts typically find in favor of confusion. That is not unexpected and supports the research by Bird and Steckel<sup>189</sup> and Beebe,<sup>190</sup> as the surveys may be used by plaintiffs to ensure the courts understand they are serious about pursuing an injunction against potential infringers.

The plaintiffs involved in litigation where courts found the similarity evidence and strength of the mark to be weak, surveys did not appear to help as much. However, over 30 percent of cases identified as having weak evidence were able to show confusion through consumer surveys. This is a fascinating finding, as courts are to take into consideration multiple factors prior to a decision on whether likelihood of confusion exists between the marks. The results indicate courts may be extremely favorable to plaintiff-submitted surveys in trademark infringement cases, and even with a weak case, surveys retain significant persuasive power with the courts.

### *B. Likelihood of Dilution in Trademark Dilution Cases*

There were 134 federal cases involving trademark dilution claims and survey discussions available in Westlaw from 2007 to 2017, with only 59 providing survey evidence. Table 3 details the results of fourteen regression models for trademark dilution cases where consumer surveys were mentioned or conducted by either the plaintiff, defendant, or both. Each model tests the impact of surveys on the court's finding of a likelihood of dilution. In trademark dilution litigation, proof of fame is required. Survey evidence

---

188. *Id.* at 1041.

189. *Id.* at 1046.

190. Grinvald, *supra* note 183, at 1646–47.

can be helpful in testing whether a mark is famous.<sup>191</sup> Truly famous brands, such as Nike, may not have to use surveys to prove nationwide fame, as they are able to provide evidence of long-term use and widespread press coverage. However, just because a mark is famous does not necessarily mean a court will find in favor of dilution. Courts may consider other factors, such as the defendant's use in commerce, whether it was used after the mark was famous, or whether the distinctiveness of the mark is impaired by the defendant's use.<sup>192</sup> Data was collected on each of these variables, but due to multicollinearity issues the last two variables, use after mark was famous and whether the distinctiveness of the mark was impaired, were not included in the analysis.

Models 1 and 2 mirror the results from the first two models in the trademark infringement cases, as the submission of only a plaintiff survey is more likely to result in a likelihood of dilution outcome. Once a claimant has proven their mark to be famous, submitting a survey to show how the other mark is dilutive only strengthens a case. The submission of a defendant survey did not produce significant results, but the plaintiff-submitted survey was still more probable to result in a favorable outcome. Model 3 considers surveys submitted by both parties and each credited by the courts, which provides further evidence that when courts consider and credit both surveys, they may negate the submission of the other. Therefore, when both are credited, neutralization of the scientific "halo effect" of plaintiff-submitted surveys by a defendant submitting a survey is still prevalent in trademark dilution litigation, without consideration of other factors.

Model 4 shows the relationship between a court finding a mark has achieved fame and a likelihood of dilution outcome. When brands can show they own a famous mark in dilution litigation, they are more likely to receive a favorable result of likelihood of dilution. This is intuitive, as brands must show their mark is famous in order to successfully make a dilution claim. Model 5 expands on the previous model with the addition of the court finding the defendant used the mark in commerce. If a plaintiff can show their mark is not only famous, but the defendant has used the mark in commerce, the case is more likely to result in a likelihood of dilution outcome. This is not unexpected, as these two factors are essential in a dilution claim.

---

191. Jacob Jacoby & Lynda Zadra-Symes, *Legal Issues That Can Be Examined via Surveys*, TRADEMARK SURVEYS, VOLUME 1: DESIGNING, IMPLEMENTING, AND EVALUATION SURVEY 3, 30 (2013).

192. See generally Keola R. Whittaker, Comment, *Trademark Dilution in a Global Age*, 27 U. PA. J. INT'L ECON. L. 907 (2006).

Model 6 examines the correlation of a plaintiff-submitted survey, alongside a mark deemed famous by the courts, and a finding of likelihood of dilution. A plaintiff-submitted survey, when accounting for fame, was more likely to result in a likelihood of dilution outcome. Model 7 produced similar results, with the addition of the defendant-submitted survey. These results are not unexpected, as the mark being recognized as famous is required, and should not change the significance of the submission variables from previous models. Courts appear to favor a likelihood of dilution outcome when plaintiffs provide proof of fame, along with surveys showing evidence of dilution.

Model 8 shows the relationship between a plaintiff-submitted survey and a likelihood of dilution with the addition of variables identifying the mark as famous, and whether the defendant used the mark in commerce. The plaintiff-submitted survey was not significant, but fame and use in commerce produced statistically significant findings. The results indicate when a court finds the mark is famous and the mark is being used in commerce by the defendant, a likelihood of dilution was even more probable. The results for Model 9 were similar, as the addition of the defendant-submitted survey did not produce significant results. This is not unanticipated, as a defendant-submitted survey is rare for litigation, so courts may decide to not give weight to either when both parties submit surveys contradicting the opposition. When the court found a mark to be famous and determined the defendant was using the mark in commerce, consideration of the submission of surveys did not appear to have an effect on the outcome.

Model 10 includes when both parties submit survey evidence and each are credited by the courts, if the plaintiff's mark is famous, and whether the defendant used the mark in commerce. This model produced anticipated results, however, the probability of a likelihood of dilution outcome jumped exponentially when the plaintiff's survey was credited. When a plaintiff's survey was credited, the court was more likely to rule in favor of likelihood of dilution. This shows a trend that a plaintiff submitting a survey into evidence that is credited, along with proof of fame and use by defendant in commerce, signals to the court they have ample proof to show a likelihood of dilution.

Models 11 and 12 analyze plaintiff-submitted and defendant-submitted surveys in conjunction with circuits. The circuits were not statistically significant, but plaintiff-submitted survey was positive and significantly correlated with a finding of likelihood of dilution. These results are similar to Model 1 and 2, demonstrating courts respond favorably to plaintiff-submitted surveys, without deference to other dilution factors. The circuit does not seem to matter in dilution cases, which is an interesting finding in its own

right. One would expect there may be differences in circuits regarding dilution cases, as there are no guidelines on how to determine likelihood of dilution. However, the circuits were not significant in any model in Table 3.

Model 13 examines the relationships between both parties submitting surveys that are credited, along with the circuits. None of the variables were significant, but when the dilution factors, fame and use in commerce, were added into Model 14, the court determining the mark was famous produced significant results. When courts take into account both credited surveys, along with the dilution factors, the fame of the mark appears to be the most persuasive. Factoring all variables into consideration, the mark being famous was over sixty times more likely to provide an outcome of likelihood of dilution. These findings throughout the models show survey evidence is influential in trademark dilution litigation. A brand must be able to prove their mark is famous, and if they are able to provide a consumer survey to show potential dilution, they have a higher probability of succeeding in a dilution claim.

### *C. Survey Evidence in Sports Trademark Litigation*

Out of the trademark infringement and dilution cases analyzed, only seven involved sports brands and survey evidence. However, two of the cases had only one party submit, while the other five involved both parties submitting surveys. Due to the small sample size, it is inappropriate to analyze the data with the selected regression. Nonetheless, there are still interesting observations to note. Sports brands are increasingly involved in trademark infringement and dilution disputes, but could potentially be utilizing survey evidence to force settlements prior to litigation. Also, this analysis only examined consumer surveys admitted and discussed during litigation, whereas sports brands may be more likely to employ surveys prior to litigation that involve brand awareness or level of recognition surveys that display the strength of their marks.

Sports brands are also gaining wider national and global recognition,<sup>193</sup> and may be better positioned to provide evidence of the strength of their

---

193. Nike is not only the most valuable sports apparel brand, but the most valuable apparel brand in the world. See Vanessa Friedman, *Nike is the Most Valuable Apparel Brand in the World*, N.Y. TIMES (May 29, 2015), <https://www.nytimes.com/2015/05/30/fashion/nike-is-the-most-valuable-apparel-brand-in-the-world.html> [https://perma.cc/7F4T-STDV].

mark, which is one of the essential factors in determining likelihood of infringement.<sup>194</sup> Many sports brands may also possess the funds to pursue litigation against potential infringers and dilutive uses of their marks,<sup>195</sup> whereas their counterparts may be forced to relinquish use of the mark without litigation. This is not to say sports brands are more likely to win an infringement case, just that the trend indicates sports brands are no more likely to use survey evidence than brands in other industries.

## VIII. EVALUATING THE ROLE OF SURVEY EVIDENCE IN TRADEMARK LITIGATION

Consumer surveys in trademark litigation can be used to sway a court that likelihood consumer confusion exists (or does not) between trademarks. Courts have even noted the importance of survey evidence in likelihood of confusion cases.<sup>196</sup> Some research has called surveys crucial in successfully demonstrating a trademark is worthy of federal protection.<sup>197</sup> Other research identified consumer survey evidence in a trademark dispute represented one of the most important decisions a trial counsel would make.<sup>198</sup>

The abundance of literature detailing the importance and use of consumer surveys in trademark litigation would suggest conducting and submitting surveys has become a universally accepted common practice. While not widespread, there is an upward trend in courts discussing survey evidence. Our data showed 182 cases where the federal trial court judge mentioned consumer surveys in their opinions. Between 2000 and 2006, Robert Bird and Joel Steckel found surveys were mentioned in only 17 percent of

---

194. Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1589 (2006).

195. Timothy Au, *As Remarkable Growth of Sports Industry Continues, Exclusive Data Analysis Reveals the Key Trademark Trends*, WORLD TRADEMARK REV. (Oct. 13, 2017), <https://www.lexology.com/library/detail.aspx?g=18a78c6e-4ec9-444c-8889-a039583c54a7> [<https://perma.cc/RBG7-ME34>].

196. *McNeil Nutritionals, LLC v. Heartland Sweeteners, LLC*, 566 F. Supp. 2d 378, 392 (E.D. Pa. 2008).

197. Joshua M. Dalton & Ilisa Horowitz, *Funny When You Think About It: Double Entendres and Trademark Protectability*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 649, 652 (2006).

198. Robert H. Thornburg, *Trademark Surveys: Development of Computer-Based Survey Methods*, 4 J. MARSHALL REV. INTELL. PROP. L. [i], 91 (2004).



cases,<sup>199</sup> which reveals courts may becoming more reliant on surveys in trademark litigation as that number has increased to over 20 percent for 2007 through 2017.

Research on consumer surveys has also indicated courts may make an adverse inference when litigants do not submit surveys to provide further evidence of confusion.<sup>200</sup> Based on these findings, judges are not as quick to denounce litigants' claims of infringement or dilution based on the absence of a survey. Our data collection showed less than 4 percent of judges inferred there was a weak case due to the absence of a survey. Nonetheless, the submission of surveys, especially by plaintiffs, can make or break a case due to methodological issues. Judges have not been reluctant to exclude or give little weight to consumer surveys if they are methodologically flawed.<sup>201</sup> Poorly conducted surveys have even caused trial courts to toss out multi-million dollar verdicts in trademark cases.<sup>202</sup> Accordingly, plaintiffs should ensure they are following proper methodological guidelines when conducting their survey, as the findings in this paper show they are much more likely to receive a favorable outcome when their survey is credited.

Although our trademark infringement data shows defendant-submitted surveys may not normally be subjected to the same methodological rigor as plaintiff surveys, there have been instances where poorly conducted surveys by defendants have also negatively impacted their case.<sup>203</sup> Based on the analysis, defendants should be careful when choosing to submit surveys. Courts should treat survey evidence equally, but this study finds surveys are treated

---

199. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1035 (2012).

200. Sandra Edelman, *Failure to Conduct a Survey in Trademark Infringement Cases: A Critique of the Adverse Inference*, 90 TRADEMARK REP. 746, 747 (2000).

201. Joel Steckel et al., *Is It Worth Anything? Using Surveys in Intellectual Property Cases* 1, 3 (2013), [https://www.analysisgroup.com/globalassets/content/insights/publishing/aipia\\_white\\_paper\\_steckel\\_03-11-13.pdf](https://www.analysisgroup.com/globalassets/content/insights/publishing/aipia_white_paper_steckel_03-11-13.pdf) [<https://perma.cc/B47R-CGSR>].

202. See *Black & Decker Corp. v. Positec USA Inc.*, No. 11-cv-5426, 2015 WL 1543262, at \*27–30 (N.D. Ill. July 10, 2015). The Plaintiff's survey showed 47% confusion and the jury returned a verdict of \$54 million in favor of Black & Decker. However, the judge found the expert's survey lacked causation and did not properly replicate market conditions. The Defendants were granted a new trial due to significant flaws in the survey.

203. Defendants were unable to prove their smiley face mark had acquired secondary meaning. The judge also ruled the survey to measure consumer confusion was overly inclusive and did not approximate real-world marketplace conditions. See *Smith v. Wal-Mart Stores, Inc.*, 537 F.Supp.2d 1302, 1315; 1334 (N.D. Ga. 2008).

differently dependent upon which party submitted the evidence. Plaintiffs bear the burden of proof in trademark litigation, and the results show courts afford more favoritism to plaintiff credited surveys than to defendants' surveys. This leads the researchers to question whether defendants should spend the resources conducting surveys, or instead, hire experts to testify against methodological flaws in the plaintiff's survey.

Our findings regarding the submission and accreditation of surveys in trademark dilution litigation differs somewhat from the infringement survey results. When both parties submit surveys that are credited by the court, the effect on the outcome is neutralized. These results suggest companies, on both sides of the aisle, involved in dilution claims should embrace a legal strategy of using survey research to support their cases. However, these should not be retroactive, instead, companies should consider commissioning surveys proactively. This can be done in conjunction with the legal and marketing teams for a brand. Marketers and lawyers should be working together throughout the process of creating the trademark, as lawyers will be able to conduct and evaluate preliminary searches prior to the team committing to a specific mark.<sup>204</sup> This allows the implementation of the mark into commerce to be smoother, and provides the legal team with valuable information and evidence to protect their mark from potential infringement and dilution.

Frequently obtaining perceptions of the strength of a mark can be done by the marketing and legal teams. Regular and systematic surveys regarding a trademark, whether a senior or junior user, enables a company to provide evidence of established or growing fame as well as brand awareness. Surveys are important in trademark dilution cases, as protection only applies to "famous" trademarks, yet there is no universal standard for determining fame. Senior users of a mark can intermittently establish fame of their mark by conducting surveys to understand how well their mark is established in the minds of the public.<sup>205</sup> A junior user, however, can utilize surveys to establish a senior mark is not sufficiently famous to merit dilution protection.<sup>206</sup> Both parties should understand the trend shows survey research in

---

204. James A. Dimitrijevs, *IP and Business: The Synergy of Trademarks and Marketing*, WIPO MAGAZINE (June 2006), [http://www.wipo.int/wipo\\_magazine/en/2006/03/article\\_0003.html](http://www.wipo.int/wipo_magazine/en/2006/03/article_0003.html) [<https://perma.cc/A69K-FF2S>]

205. Adam Omar Shanti, *Measuring Fame: The Use of Empirical Evidence in Dilution Actions*, 5 MARQ. INTELL. PROP. L. REV. 177, 209 (2001).

206. Matthew D. Bunker et al., *Proving Dilution: Survey Evidence in Trademark Dilution Actions*, 13 U. BALT. INTELL. PROP. L.J. 37, 53 (2004).

dilution cases can provide strong evidence to bolster their case. Marketing and legal teams for companies should work together internally to conduct surveys that provide not only the brand with valuable information, but follow legal guidelines so these surveys can also be admissible in trademark cases. Commissioning surveys together may spare the expense of having to conduct new and expensive surveys strictly for litigation.

## IX. IMPLICATIONS AND FUTURE RESEARCH

The probative value of a comprehensive trademark survey may not always justify the cost, and the issue with courts interpreting survey data in legal cases is that there are no universal standards by which to make the interpretations.<sup>207</sup> This study provides insight into the potential impact consumer surveys can have on the outcome of trademark infringement and dilution cases. Courts still appear to display litigant-status preference, as plaintiffs are still more heavily favored when submitting surveys. This provides valuable information for brands, that surveys can strengthen a plaintiff's case, even when courts do not find confusion for each variable in the multi-factor tests. Regarding trademark infringement cases, it may be in the best interest of the plaintiff to provide the court with survey evidence. Defendants, on the other hand, may want to conduct further cost-benefit analyses to determine if the value of conducting the survey is worth more than providing an expert to dispute the plaintiff's survey methodology and admissibility.

Our research also adds another element to the literature on survey evidence by quantitatively analyzing the effect consumer surveys have on a likelihood of dilution outcome. These findings show that, if both parties' surveys are credited, the courts may not give favorable weight to either. This is essential for litigants in trademark dilution cases to understand. Plaintiffs must prove their mark is famous, which is typically done through consumer surveys. The defendants can utilize surveys in multiple ways: (1) conduct a survey to show the plaintiff's mark has not acquired fame; or (2) show their mark has no effect on the senior mark's distinctiveness. The Supreme Court has previously dismissed the difficulty and expense of producing evidence to prove dilution,<sup>208</sup> and this study recommends that both parties should consider submitting surveys in order to prove or disprove dilution.

---

207. *Id.* at 51.

208. *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418, 434 (2003).

Brands are essential for creating commercial value, and sports businesses are no exception.<sup>209</sup> Intellectual property lies at the heart of the marketable opportunities offered by the sports world; it also helps to secure the economic value of sports.<sup>210</sup> With potentially millions of dollars at stake in the value of a brand,<sup>211</sup> firms should be consistently monitoring unsanctioned uses of their marks in commerce. As sports brands become more well-known, they are more vulnerable to abusive and unauthorized use of their marks.<sup>212</sup> Sports brands, as well as individual athletes managing their own brands, should take note of the trends regarding survey evidence in trademark litigation. A recent successful infringement case for an athlete involved Michael Jordan, who used a survey in a trademark dispute with Qiaodan in China.<sup>213</sup> The more successful a team or an athlete is, the more recognizable and valuable the brand. The value associated with their mark may be more than worth it to periodically conduct consumer surveys to assess brand perception and awareness. The surveys would not only track the mark's place in the minds of consumers, but help establish a baseline to make it easier to argue infringement and dilution of their mark. These surveys could, in turn, be used prior to litigation to deter potential infringers and diluters from continued use of their marks.

Future research should include a more in-depth cost-benefit analysis of using consumer surveys in trademark litigation, dependent upon the strength of the other likelihood of confusion or dilution factors. Also, it would be interesting to examine all trademark litigation involving sports brands, and determine if their legal strategies follow the overall trends in trademark protection. Future studies should investigate the strengths and weakness of consumer surveys used in trademark litigation, in order to create consumer surveys that have higher persuasion with the courts.

---

209. *Sport and Branding*, WORLD INTELLECTUAL PROPERTY ORGANIZATION, <http://www.wipo.int/ip-sport/en/branding.html> [<https://perma.cc/6BD2-SA8J>] [hereinafter *Sport and Branding*].

210. *Id.*

211. Robert C. Bird & Joel H. Steckel, *The Role of Consumer Surveys in Trademark Infringement: Empirical Evidence from the Federal Courts*, 14 U. PA. J. BUS. L. 1013, 1013 (2012).

212. *Sport and Branding*, *supra* note 209, at 1.

213. Michael Jordan v. Trademark Review and Adjudication Board of the State Administration for Industry & Commerce of the People's Republic of China and Qiaodan Sport Co., Ltd., (Beijing Mun. Ct. June 18, 2015).

## X. CONCLUSION

Consumer surveys are still not used in trademark litigation as often as research would suggest. This does not mean surveys are not valuable, as some brands may be using surveys prior to pursuing litigation or in order to force the other party to abandon use of their mark, if they are using surveys at all. In order for brands to conduct a meaningful cost-benefit analysis, they must understand the relationship between multi-factor tests, survey evidence and actual outcomes. While consumer surveys are not required in trademark litigation, nor necessarily easy or inexpensive to commission, this study shows there are situations where it may be most prudent to produce survey evidence. In most cases, the findings indicate plaintiffs should seriously consider conducting a survey, as the potential impact of not prevailing in a trademark infringement case could cost the plaintiff their trademark, i.e. their brand.

This Article also provides insightful information to both marketers and trademark lawyers, as well as contributing to the consumer survey literature. Every brand name or image used in commerce is a trademark, and the management issues of these involves trademark law. Trademark protection is the core of an effective brand protection strategy.<sup>214</sup> Brands should not simply rely on their own perceptions of their mark when fighting against trademark infringement and dilution. Trademark infringement and dilution surveys, conducted by marketing and legal experts, can provide direct evidence about consumer confusion or dilution that may be difficult to obtain by visual comparisons or expert testimony alone. Continued assessment of the use and receptiveness of survey evidence will be vital in understanding the most cost-beneficial methods for brands protecting their marks.

---

214. Brett Gold, *Your Brand and Nine Legal Issues Related to Patent, Trademark, and Copyright*, MARKETINGPROFS (Dec. 11, 2012), <http://www.marketingprofs.com/articles/2012/9674/branding-and-nine-legal-issues-related-to-patent-trademark-and-copyright> [<https://perma.cc/8WYX-J9TQ>].

Table 1. Binary Logistic Regression Relating Surveys to Probability of Finding Likelihood of Confusion.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Plaintiff Submitted	1.727(5.626)***	1.322(3.750)*	0.117(1.123)		2.548(12.778)**	2.219(2.218)*	1.085(2.960)	1.765(5.839)*	1.300(3.671)	0.836(2.307)	2.187(8.911)
Defendant Submitted		-0.560(0.571)	0.371(1.449)			-0.336(0.714)	-0.146(0.864)		-0.593(0.553)	18.302(8.880)	20.111(5.422)
Plaintiff Survey Credited			2.215(9.158)**			1.438(4.298)				2.642(14.044)*	5.033(133.373)***
Defendant Survey Credited			-1.376(0.253)			-0.723(0.486)				-19.052(6.320)	-20.489(1.266)
Similarity of Marks											
Favoring Confusion				1.699(5.469)***	2.137(8.471)**	1.974(7.197)*	1.703(5.488)				0.256(1.292)
Similarity of Marks											
Favoring No Confusion				0.144(1.155)	-0.953(0.385)	-0.972(0.378)	-1.055(0.348)				-1.706(0.182)
Strength of Plaintiff's Mark											
Favoring Confusion				1.871(6.492)***	1.612(5.014)*	1.726(5.620)*	1.925(6.833)*				6.624(752.913)
Strength of Plaintiff's Mark											
Favoring No Confusion				-0.556(0.573)	-0.264(0.768)	0.005(1.005)	0.718(2.051)				4.170(64.744)
Proximity of Goods											
Favoring Confusion				1.156(3.179)*	0.612(1.844)	0.594(1.811)	0.154(1.166)				-2.659(0.071)
Proximity of Goods											
Favoring No Confusion				-1.272(0.280)	-0.505(0.603)	-0.680(0.507)	-0.867(0.420)				-
First Circuit											
Second Circuit								1.256(3.51)	-0.800(0.923)	0.195(1.215)	0.383(1.467)
Third Circuit											
Fourth Circuit								1.684(5.590)	0.139(1.149)	1.749(5.751)	0.658(1.890)
Fifth Circuit								1.619(5.0496)	0.123(1.131)	1.229(3.418)	3.282(26.629)
Sixth Circuit								1.203(3.329)	-0.384(0.681)	0.113(1.119)	4.749(115.435)
Seventh Circuit											
Eighth Circuit								1.684(5.390)	0.139(1.149)	0.818(2.265)	-
Ninth Circuit								1.407(4.084)			-
Tenth Circuit											-
Eleventh Circuit											-
Constant	-1.322(2.267)*	-0.762(0.467)	-0.602(0.548)	-1.651(0.192)***	-3.302(0.037)*	-2.929(0.053)	-2.406(0.090)	-2.657(0.076)	-0.492(0.611)	-1.792(0.167)	-6.881(0.001)
-2 LOG LIKELIHOOD	43.429	42.500	35.042	57.037	23.001	22.696	21.380	36.269	34.003	23.438	12.188
Pseudo R2	0.092	0.098	0.256	0.463	0.497	0.496	0.525	0.113	0.106	0.384	0.6796

\* p&lt;0.10, \*\* p&lt;0.05, \*\*\*p&lt;0.01

Table 2. Plaintiff Confusion Survey with Multi-Factor Test Variables &amp; Likelihood of Confusion Outcome.

<i>Variable</i>	<i>Strong Similarity</i>	<i>Middling Similarity</i>	<i>Weak Similarity</i>
No Survey - Confusion	2	2	3
Survey - Confusion	14	5	6
Survey - No Confusion	2	4	11
No Survey - No Confusion	3	3	5
<i>Observations</i>	<i>25</i>	<i>14</i>	<i>19</i>

