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## Criminal Law: Voiceprint Evidence is Being Heard

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cially where a constitutional limitation is involved. Even though the court seemingly based its decision on the constitutional limitations, it was primarily influenced by the broader policy arguments, as evidenced by the court's emphasis on pragmatism and fairness. Thus, future constructions of the statute involving preparatory or preliminary activities of the public agency will likely find this aspect of the executive process beyond the reach of the sunshine law, regardless of whether a convenient constitutional limitation can be discerned.

JOSEPH S. GILLIN, JR.

#### CRIMINAL LAW: VOICEPRINT EVIDENCE IS BEING HEARD

*Worley v. State*, 263 So. 2d 613 (4th D.C.A. Fla. 1972)

Police received two anonymous phone calls that bombs had been hidden in the police station and in a utilities building. The second call was traced to a phone booth near which defendant was apprehended. At trial, defendant was convicted of telephoning false bomb threats upon evidence that included voiceprints.<sup>1</sup> On appeal, the Fourth District Court of Appeal affirmed and HELD, voiceprints were properly admitted to corroborate defendant's identification where sufficient evidence was available to sustain his conviction without the use of voiceprints.<sup>2</sup>

Like most jurisdictions,<sup>3</sup> Florida has long permitted identification of individuals by voice recognition.<sup>4</sup> Whether directly<sup>5</sup> or indirectly by use of sound recordings,<sup>6</sup> identification of the human voice has been admissible

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1. Tape recordings made of the voice of the caller and the defendant were transformed into voiceprints, which upon analysis were determined to be the same. 263 So. 2d 613, 614 (4th D.C.A. Fla. 1972).

2. 263 So. 2d 613 (4th D.C.A. Fla. 1972) (Mager, J., concurring specially; White, J., dissenting).

3. *See, e.g.*, *Ogden v. People*, 134 Ill. 599, 25 N.E. 755 (1890); *State v. Herbert*, 63 Kan. 516, 66 P. 235 (1901); *Price v. State*, 35 Tex. Crim. 501, 34 S.W. 622 (1896).

4. *Mack v. State*, 54 Fla. 55, 44 So. 706 (1907).

5. *Id.*

6. *Parnell v. State*, 218 So. 2d 535 (3d D.C.A. Fla. 1969). For a tape recording to be admissible it must be shown to the trial court's satisfaction that: (1) the recording device was operating properly, (2) it was operated in a proper manner, (3) the recording was accurate, and (4) the voices of the persons speaking were identified. *Id.* at 541.

evidence not merely as a matter of opinion but as a conclusion reached directly from the sense of hearing.<sup>7</sup> However, the reliability and credibility of such evidence has been a question for the jury.<sup>8</sup>

Although testimony regarding voice identification poses problems of reliability, the recent advent of the science of sound spectrography promises a potentially reliable technique of voice identification.<sup>9</sup> Proponents claim that, like fingerprints, no two human voices are identical.<sup>10</sup> The sound spectrographic technique consists of recording a speech sample as a spectrogram on electrically sensitive paper.<sup>11</sup> These graphic representations, or voiceprints, are then compared with those sought to be identified. This method of voice identification is purported to be ninety-eight per cent reliable.<sup>12</sup>

As a scientific innovation voiceprints have presented courts with questions of admissibility.<sup>13</sup> To determine the admissibility of scientific evidence many jurisdictions,<sup>14</sup> including Florida,<sup>15</sup> apply a special quantitative test that requires "general acceptance in the particular field in which it belongs."<sup>16</sup> This test confronts the courts with several problems: distinguishing scientific evidence from other expert testimony, deciding what is the particular field to which the evidence belongs, and determining what is general acceptance.<sup>17</sup> After resolving these difficulties, the court must also determine the sufficiency of the qualifications of experts who are to render opinions on the results of applications of scientific devices or techniques that have been judicially accepted.<sup>18</sup>

Since the admissibility of scientific evidence is largely a matter of judicial discretion,<sup>19</sup> it is difficult to ascertain what factors weigh most heavily in a court's determination of admissibility. Thus, in attempting to ascertain a test for the admissibility of voiceprints, the principal court found conflicting standards<sup>20</sup> as well as contradictory judicial dispositions of the question.<sup>21</sup>

7. Mack v. State, 54 Fla. 55, 62, 44 So. 706, 709 (1907).

8. *Id.*

9. See Kersta, *Voiceprint Identification*, 196 NATURE 1253 (1962).

10. *Id.* at 1255. Known as the theory of "invariant speech," it is hypothesized that any given individual's speech pattern is sufficiently different from all others that the normal variance in the pattern does not cause coincidence with another's pattern.

11. Potter, *Visible Patterns of Sound*, 102 SCIENCE 463, 465 (1945).

12. Tosi, Oyer, Lashbrook, Pedrey, Nichol & Nash, *Voice Identification Through Acoustic Spectrography*, Report SHSLR 171, Michigan State University (1971) [hereinafter cited as Tosi].

13. See, e.g., *State ex rel. Trimble v. Hedman*, 291 Minn. 442, 192 N.W.2d 432 (1971); *State v. Cary*, 99 N.J. Super. 323, 239 A.2d 680, *aff'd*, 56 N.J. 16, 264 A.2d 209 (1970).

14. See, e.g., *People v. Wochnik*, 98 Cal. App. 2d 124, 219 P.2d 70 (1950); *People v. Forte*, 279 N.Y. 204, 18 N.E.2d 31 (1938).

15. See *Kaminiski v. State*, 63 So. 2d 339, 340 (Fla. 1952).

16. *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923).

17. See *People v. King*, 266 Cal. App. 2d 437, 72 Cal. Rptr. 478 (2d Dist. 1968).

18. See *id.* at 456-59, 72 Cal. Rptr. at 490-95.

19. See *United States v. Raymond*, 337 F. Supp. 641 (D.D.C. 1972); *State ex rel. Trimble v. Hedman*, 291 Minn. 442, 192 N.W.2d 432 (1971).

20. See 263 So. 2d at 614.

For example, in *State v. Cary*<sup>22</sup> voiceprint evidence was held inadmissible to permit identification.<sup>23</sup> The court variously referred to the test of admissibility as "general scientific acceptance,"<sup>24</sup> "general scientific acceptance of its reliability in the field concerned,"<sup>25</sup> and "where a scientific principle or discovery passes from the experimental to the demonstrable stage."<sup>26</sup> Although it did not delineate the relevant factors it would consider in determining the admissibility of voiceprint evidence,<sup>27</sup> the court refused admission of voiceprints, since it thought the testimony of one expert witness was not sufficient to establish the technique's scientific acceptability and accuracy.<sup>28</sup>

A different approach was used in *People v. King*,<sup>29</sup> which also held identification testimony based on voiceprints inadmissible.<sup>30</sup> The court not only found that sound spectrography had not attained general acceptance by the scientific community,<sup>31</sup> but also questioned the admissibility of the opinion of the state's expert witness.<sup>32</sup> The court found that the witness's expertise in electrical engineering and physics had not qualified him as an expert in sound spectrography and, therefore, his opinion as an expert was inadmissible.<sup>33</sup> In other words, by exercising its discretion as the general acceptance test permits,<sup>34</sup> the court excluded voiceprint evidence based not only upon the unreliability of the technique, but the lack of relevant expertise of the witness whose opinion was adduced to support the process.<sup>35</sup>

The instant court rejected the holdings of both *Cary* and *King*, speculating that they would have been decided differently had those courts had the advantage of present scientific data.<sup>36</sup> Instead, the court followed the precedent of several other courts that had admitted voiceprints.<sup>37</sup> In *State ex rel. Trimble v. Hedman*<sup>38</sup> voiceprints were held admissible, but only for the purpose of corroborating voice identification by aural means.<sup>39</sup> No such

21. Compare *State v. Cary*, 99 N.J. Super. 323, 239 A.2d 684 (1968), *aff'd*, 56 N.J. 16, 264 A.2d 209 (1970), with *State ex rel. Trimble v. Hedman*, 291 Minn. 442, 192 N.W.2d 432 (1971).

22. 99 N.J. Super. 323, 239 A.2d 680 (1968), *aff'd*, 56 N.J. 16, 264 A.2d 209 (1970).

23. *State v. Cary*, 99 N.J. Super. 323, 334, 239 A.2d 680, 685 (1968).

24. *Id.* at 332, 239 A.2d at 684.

25. *Id.* at 333, 239 A.2d at 685.

26. *Id.* at 334, 239 A.2d at 685.

27. See *State v. Cary*, 99 N.J. Super. 323, 239 A.2d 680 (1968), *aff'd*, 56 N.J. 16, 264 A.2d 209 (1970).

28. *Id.* at 333, 239 A.2d at 685.

29. 266 Cal. App. 2d 437, 72 Cal. Rptr. 478 (1968).

30. *Id.* at 461, 72 Cal. Rptr. at 493.

31. *Id.* at 456, 72 Cal. Rptr. at 488.

32. *Id.* at 459, 72 Cal. Rptr. at 491.

33. *Id.* at 458, 72 Cal. Rptr. at 491.

34. *Id.* at 443, 72 Cal. Rptr. at 482.

35. *Id.* at 460, 72 Cal. Rptr. at 493.

36. 263 So. 2d at 614.

37. *Id.*

38. 291 Minn. 442, 192 N.W.2d 432 (1971).

39. *Id.* at 458, 192 N.W.2d at 441.

restriction was placed on voiceprint evidence in *United States v. Raymond*.<sup>40</sup> Voice prints were admitted for their own evidentiary value and not merely to corroborate aural identification.<sup>41</sup> Though the test of admissibility in *Raymond* was apparently that of "general acceptance,"<sup>42</sup> the *Trimble* court held voiceprint evidence admissible despite conflicting testimony of the parties' experts as to the reliability of voiceprint identification.<sup>43</sup>

While citing *Trimble* and *Raymond* as authority for the admissibility of voiceprint evidence,<sup>44</sup> the principal court left unanswered the question of what standard it followed or what factors were determinative of admissibility.<sup>45</sup> Instead, the court merely pointed out that Florida courts have broad discretion in the admission of novel or experimental evidence if they think certain standards of scientific reliability have been attained.<sup>46</sup> The court found such standards were met.<sup>47</sup> The court's use of the term "standards"<sup>48</sup> suggests at least two and possibly more requirements must be met to admit voiceprint evidence. However, the court did not delineate any particular requisites.<sup>49</sup>

In addition, the majority did not deal squarely with the objections to voiceprint evidence raised by the dissent.<sup>50</sup> As the dissent notes, one expert witness for the state<sup>51</sup> had never examined the tape recordings, which were alleged to be those of the defendant's voice.<sup>52</sup> Also, the state's second expert witness did not possess the relevant expertise to qualify him as an expert in sound spectrography.<sup>53</sup>

Moreover, the majority did not deal with the possibility of error in making false identification by voiceprints. Critics contend that the high

40. 337 F. Supp. 641 (D.D.C. 1972).

41. *Id.* at 645.

42. *See id.* at 643.

43. *See State ex rel. Trimble v. Hedman*, 291 Minn. 442, 192 N.W.2d 432 (1971).

44. 263 So. 2d at 614.

45. *See id.*

46. *Id.*

47. *Id.* The court cited *Coppolino v. State*, 223 So. 2d 68 (2d D.C.A. Fla. 1968), as its source for the test of admissibility for scientific proof. In *Coppolino*, the court purported to use the general acceptance test. However, that court held that the trial judge had not abused his discretion in admitting the evidence, even though there was conflicting testimony of the parties' experts as to the reliability of scientific proof. *Id.* at 71.

48. 263 So. 2d at 614.

49. *Id.*

50. *Id.* at 618-19.

51. The prosecution used the testimony of two expert witnesses. One expert qualified the voiceprint technique as valid and the other testified as to the results of the application of the technique. The court was thus following the procedure used in *State ex rel. Trimble v. Hedman*, 291 Minn. 442, 192 N.W.2d 432 (1971).

52. 263 So. 2d at 617 (4th D.C.A. Fla. 1972).

53. One expert gave testimony that in his opinion the voice on each tape was that of the defendant. However, the dissent contended that his testimony was inadmissible, since he was not trained in phonetics, electronics, or sound spectrography and, therefore, he did not qualify as an expert for purposes of giving opinion testimony on voiceprints. *Id.*

degree of reliability shown by studies of voiceprint identifications has been established, in part, by permitting elimination of those identifications in which the examiner was unable to make a positive identification.<sup>54</sup> Also, the number of tests<sup>55</sup> made in determining the technique's reliability was asserted to be too small to accept as proof that no two voices in the world are alike.<sup>56</sup>

The reliability of voiceprint identification was questioned for two additional reasons: voices, unlike fingerprints, are not yet classified by type,<sup>57</sup> and it has not been established that a person cannot defeat the procedure by disguising his voice.<sup>58</sup> These factors demonstrate that the process is still in the developmental stage and further studies are required to eliminate deficiencies.<sup>59</sup> These defects, contended the dissent, raise serious questions as to the reliability of the process and reveal it as a potentially dangerous and unsafe form of proof.<sup>60</sup> Nevertheless, the instant decision establishes voiceprint identification as corroborative evidence with no definitive standards of admission.<sup>61</sup>

A more satisfactory test than "general acceptance" is needed for determining admissibility of scientific proof in order to provide standards for the application of judicial discretion in determining the reliability of such evidence. Initially, the court should ascertain what scientific disciplines are relevant to an evaluation of the data presented in support of the new device or technique.<sup>62</sup> Next, it should determine which, if any, of the experts available has the necessary expertise and background.<sup>63</sup> Thus, the proponent of the evidence not only would be required to present experts, but also to show that the discipline in which their expertise lies is the relevant one. This would reduce the possibility of courts rejecting the voiceprint technique simply because of a disagreement among the experts as to its reliability, while also aiding in the selection of those who are most qualified to give voiceprint identification testimony.<sup>64</sup>

54. Tosi, *supra* note 12.

55. A total of 34,996 tests were conducted. *See id.*

56. 263 So. 2d at 617-18.

57. *Id.* at 617.

58. Since the state's expert admitted more studies are necessary to permit classification of voices, 263 So. 2d at 618, the dissent is apparently suggesting that this shows a lack of present knowledge concerning the voiceprint technique and, therefore, it cannot be relied upon. *Id.*

59. *See* 263 So. 2d at 618.

60. *Id.*

61. In *Alea v. State*, 265 So. 2d 96, 98 (3d D.C.A. Fla. 1972), the court cited the instant decision as authority for admitting voiceprint evidence as corroboration of the defendant's identification by other means.

62. The relevant disciplines that were suggested in *People v. King*, 266 Cal. App. 2d 437, 456, 72 Cal. Rptr. 478, 491 (2d Dist. 1968) include electronics, anatomy, medicine, physiology, phonetics, and linguistics.

63. *See id.* at 460-61, 72 Cal. Rptr. at 493.

64. *See State v. Cary*, 99 N.J. Super. 323, 239 A.2d 680 (1968).

In the instant case voiceprint evidence was employed only for corroboration of evidence already sufficient to sustain the defendant's conviction.<sup>65</sup> Consequently, it is not dispositive of the question whether voiceprint evidence, standing alone, would support a conviction.<sup>66</sup> Under the "general acceptance" test, it would be within the court's discretion to ascertain whether voiceprint evidence is reliable enough to be admitted into evidence.<sup>67</sup> The jury would then have to determine the proper weight to be given to such evidence.<sup>68</sup> However, in order to afford a defendant the assurance that the jury would not be misled, those experts who do not possess the relevant expertise should be precluded from testifying.<sup>69</sup>

Voiceprint identification promises to be a valuable tool in combating crime, not only as a deterrent, but also as an aid in prosecution and conviction. It can further serve to exonerate those who find themselves wrongly charged with criminal violations. Therefore, the technique merits further study.

Its present use, however, must be closely scrutinized by the courts, since it is uncertain that no two voices are identical<sup>70</sup> and that the process cannot be defeated by voice disguise.<sup>71</sup> Until further studies of the reliability of voiceprint identification are made, limiting voiceprint evidence for corroborative purposes seems necessary to insure that the state meets its burden of proving guilt beyond a reasonable doubt.

DAVID RAY MILLER

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65. 263 So. 2d at 614-15.

66. *Id.* The court expressly limited its decision to the facts of the case.

67. *See* *United States v. Raymond*, 337 F. Supp. 641, 645 (D.D.C. 1972).

68. *Id.*

69. *See* *People v. King*, 266 Cal. App. 2d 437, 461, 72 Cal. Rptr., 478, 493 (2d Dist. 1968).

70. *See* Bolt, *Speaker Identification by Speech Spectrograms: A Scientist's View of Its Reliability for Legal Purposes*, 47 J. ACCOUSTICAL SOC'Y OF AM. 597, 602, 612 (1970). The author asserts that the number of people tested to date is insignificant to serve as a basis of proof that voices are unique.

71. 263 So. 2d at 618.