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Forensic Linguistics: Applying the Science of Linguistics to Issues of the Law

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I. INTRODUCTION

The well-established science of linguistics analyzes all aspects of human language. Linguistics has many subfields, including the study of language structure, sound patterns, the dynamics of language in interpersonal and intergroup communication, and the interplay of meaning, grammar, and context.[1] In academic departments it is often paired with other neighboring disciplines such as cognitive science.[2]

The branch of linguistics known as "forensic linguistics" applies the science of linguistic investigation to issues of the law.[3] Forensic linguistics augments legal analysis by applying rigorous, scientifically accepted principles of language analysis to legal evidence such as e-mails, text messages, contracts, letters, confessions, and recorded speech.[4]

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1.   *See What Is Linguistics?*, LINGUISTIC SOC'Y AM., http://www.linguisticsociety.org/resource/what-linguistics (last visited Apr. 10, 2017).

2.   *The Science of Linguistics*, LINGUISTIC SOC'Y AM., http://www.linguisticsociety.org/resource/science-linguistics (last visited Apr. 10, 2017).

3.   ROGER W. SHUY, LINGUISTICS IN THE COURTROOM: A PRACTICAL GUIDE 3-4 (2006).

4.   Robert A. Leonard, *Applying the Scientific Principles of Language Analysis to Issues of the Law*, INT'L J. HUMAN., Mar. 2006, at 65, 65-66.

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Linguists seek, as do other scientists, to explain the non-random distribution of data.[5] Bullets do not randomly discharge from firearms, chemical concentrations do not randomly spread throughout a human body, and words are not randomly found to issue from the keyboards and mouths of speakers of English or any other language.[6] Words adhere to patterns, and linguists are trained to identify, analyze, and explain these patterns.[7] In common with all other sciences, linguists solve problems by constructing competing hypotheses and then testing which hypothesis best explains patterns found in the data.[8]

In legal systems, language is key.[9] Through language we promulgate laws, issue subpoenas and warrants, question suspects, provide testimony, write contracts, and confess to crimes.[10] All of these acts have significant consequences, and understanding the characteristics of the language used to perform them can often provide important insights.[11] As biology and physics play crucial roles in the interpretation of medical and ballistic data, forensic linguistics offers comparable insights into the understanding of legally significant language data.[12]

The scientific analysis in which forensic linguists engage has been increasingly utilized:

> Now linguists are applying their field's knowledge to such areas as statutory law and interpretation, voice and authorship identification, jury instructions, the asymmetry of power in courtroom exchanges, lawyer-client communication, police interrogation practices, contract disputes, legal discourse, defamation, trademark infringement, courtroom interpretation and translation, copyright disputes, discrimination, commercial warning messages, and various types of criminal charges such as perjury, bribery, solicitation, money laundering, threatening, and fraud. Virtually all of such cases involve

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5. *See The Science of Linguistics, supra* note 2 ("[A]s other scientists, [linguists] formulate hypotheses, catalog observations, and work to support explanatory theories.").

6. *Studying Linguistics*, LINGUISTIC SOC'Y AM., http://www.linguisticsociety.org/resource/studying-linguistics (last visited Apr. 10, 2017).

7. *See id.*

8. *Linguistics as a Profession*, LINGUISTIC SOC'Y AM., http://www.linguisticsociety.org/resource/linguistics-profession (last visited Apr. 10, 2017).

9. SPEAKING OF LANGUAGE AND LAW: CONVERSATIONS ON THE WORK OF PETER TIERSMA 82 (Lawrence M. Solan et al. eds., 2015); *see* PETER M. TIERSMA, LEGAL LANGUAGE 51-69 (1999).

10. LAWRENCE M. SOLAN & PETER M. TIERSMA, SPEAKING OF CRIME: THE LANGUAGE OF CRIMINAL JUSTICE 4-6 (2005); *see* LAWRENCE M. SOLAN, THE LANGUAGE OF STATUTES: LAWS AND THEIR INTERPRETATIONS 5, 9-13 (2010).

11. *See* discussion *infra* Parts III–IX.

12. *See infra* note 15. *See generally* Leonard, *supra* note 4.

written or spoken language evidence, making linguistic analysis very relevant.[13]

In contract disputes, the meaning of individual words and phrases (as well as syntactic relations) can form issues of contention.[14] In plagiarism cases, which are a subset of authorship analyses, the question is whether the text or content was lifted by a defendant from an author's or company's document (e.g., a novel, judicial opinion, screenplay, or patent application) onto another document without proper citation and passed off as the defendant's own. In copyright cases, the linguistic issues can include not only straightforward borrowing of words but also copied discourse structure such as topic sequencing.[15] In a related area of the law, trademark infringement cases regularly turn on linguistic similarities between a junior and a senior trademark (e.g., phonological analysis can demonstrate whether they *sound* similar, and semantic and pragmatic analysis can elucidate whether their *meanings* are similar.[16] Even in cases of product liability, linguists can offer important testimony, for example, showing that the product had an insufficient, incomprehensible, or unreadable warning label). Roger W. Shuy of Georgetown University has demonstrated in several cases that while the usage instructions on a product were written clearly and precisely, the warning sections were imprecise, unclear, and ambiguous.[17] Other types of cases in which linguistic analysis can be pivotal are discrimination and defamation cases where a defendant's language use can be subjected to scrutiny, for example, regarding its meaning in context.[18]

The courts recognize the validity of the field of forensic linguistics and allow experts to offer testimony.[19] The field is applicable to a wide range of cases and situations.[20] Yet, regardless of its already extensive

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13. Roger W. Shuy, *Language and the Law*, *in* THE HANDBOOK OF LINGUISTICS (Mark Aronoff & Janie Rees-Miller eds., 2d ed. forthcoming May 2017).

14. Lawrence M. Solan, *Pernicious Ambiguity in Contracts and Statutes*, 79 CHI.-KENT L. REV. 859, 879-83 (2004).

15. ROGER W. SHUY, FIGHTING OVER WORDS: LANGUAGE AND CIVIL LAW CASES 133-41 (2008).

16. ROGER W. SHUY, LINGUISTIC BATTLES IN TRADEMARK DISPUTES 23 (2002); Shuy, *supra* note 13.

17. Roger W. Shuy, *Warning Labels: Language, Law, and Comprehensibility*, 65 AM. SPEECH 291, 301-02 (1990).

18. SHUY, *supra* note 15, at 133-41; ROGER W. SHUY, THE LANGUAGE OF DEFAMATION CASES 34 (2010).

19. *See infra* notes 20, 85.

20. A wide range of cases in which linguistic experts had testified or consulted are described and analyzed in scores of books such as those written by Roger Shuy, a pioneer of the field and the foremost forensic linguist in the United States. *See generally* ROGER W. SHUY, BUREAUCRATIC LANGUAGE IN GOVERNMENT AND BUSINESS (1998) [hereinafter SHUY, BUREAUCRATIC

use, forensic linguistics is still an underutilized tool; it can be applied to virtually any case in which language could be considered evidence, and that of course covers many more cases than those in which it has presently been used.[21]

This Article focuses on criminal cases, presenting six examples in which language is important evidence, each case highlighting a different aspect of forensic linguistic analysis. The first case demonstrates the intelligence that can be harvested from close analysis of an author's writing (or a person's spoken language).[22] The next two are authorship cases in which testimony or consultation for the prosecution sought to aid the jury in deciding whether the defendants authored certain documents.[23] An analogous type of case follows, in which the hope of the defense was a mitigation of the death penalty.[24] The final two are potential exoneration cases.[25]

LANGUAGE]; SHUY, *supra* note 15; SHUY, *supra* note 16; SHUY, *supra* note 3; SPEAKING OF LANGUAGE AND LAW: CONVERSATIONS ON THE WORK OF PETER TIERSMA, *supra* note 9; ROGER W. SHUY, THE LANGUAGE OF BRIBERY CASES (2013) [hereinafter SHUY, BRIBERY CASES]; ROGER W. SHUY, THE LANGUAGE OF CONFESSION, INTERROGATION, AND DECEPTION (1998) [hereinafter SHUY, CONFESSION, INTERROGATION, AND DECEPTION]; SHUY, *supra* note 18; ROGER W. SHUY, THE LANGUAGE OF FRAUD CASES (2015) [SHUY, FRAUD CASES]; ROGER W. SHUY, THE LANGUAGE OF MURDER CASES (2014) [hereinafter SHUY, MURDER CASES]; ROGER W. SHUY, THE LANGUAGE OF PERJURY CASES (2011) [hereinafter SHUY, PERJURY CASES]; ROGER W. SHUY, THE LANGUAGE OF SEXUAL MISCONDUCT CASES (2012) [hereinafter SHUY, SEXUAL MISCONDUCT CASES]. Shuy has consulted or testified at trial in over 500 cases in the past thirty-five years and published numerous books on various aspects of language and the law. *See* ROGER W. SHUY, http://www.rogershuy.com (last visited Apr. 10, 2017); *Academic Experience – Forensic Books*, ROGER W. SHUY, http://www.rogershuy.com/ae_forensic.html (last visited Apr. 10, 2017). Further, Shuy is the series editor of *Oxford Studies in Language and Law*. *See* SPEAKING OF LANGUAGE AND LAW: CONVERSATIONS ON THE WORK OF PETER TIERSMA, *supra* note 9, at ii.

21.   *See* Janet E. Ainsworth, *Linguistics as a Knowledge Domain in the Law*, 54 DRAKE L. REV. 651, 659, 666 (2006) (describing the use of linguistics as being increasingly used by litigants, but underutilized as a doctrinal tool amongst courts). Of course, from the viewpoint of a criminal defense lawyer, there may be other valuable testimony that a forensic linguist could provide. For example, supporting an attack on jury instructions for being incomprehensible or supporting a claim that trial counsel was ineffective to properly prepare the client for an allocution, by failing to assist the client in presenting his statement as a persuasive narrative. Comparable examples do not lead to exoneration, but nonetheless, they are very important. Hofstra University's Forensic Linguistics Capital Case Innocence Project deals with cases not limited to the question of innocence. *See The Institute for Forensic Linguistics, Threat Assessment, and Strategic Analysis at Hofstra University*, HOFSTRA U., http://www.hofstra.edu/academics/colleges/hclas/cll/linguistics/forensic-linguistic-institute.html (last visited Apr. 10, 2017).

22.   *See infra* Part II.

23.   *See infra* Parts IV–VI.

24.   *See infra* Part VI.

25.   *See infra* Parts VII–VIII.

II. FORENSIC LINGUISTIC PROFILING: UNABOMBER

The Federal Bureau of Investigation ("FBI") sketch below and its behavioral profile of the Unabomber both were famously inaccurate, but the forensic linguistic profiling was quite accurate.[26] The FBI sketch and a contemporaneous photograph of Theodore Kaczynski, who was convicted of being the Unabomber, are provided:

Roger Shuy was asked by the FBI to analyze the Unabomber's notes and manifesto in order to ascertain possible demographic features.[27] Among the linguistic features recognized by Shuy was the vocabulary present in the notes and letters that accompanied the bombs, as well as in the Unabomber's later manifesto.[28] For instance, the use of "learned vocabulary, including words such as *surrogate, over specialization*, and *tautology*,"[29] as well as complex grammar, called into question the belief generally held by the FBI that the bomber was poorly educated. On the other hand, Shuy noted, the texts would not have been acceptable in the humanities or social sciences but suggested instead a background in the natural sciences.[30] Other aspects of the vocabulary placed the writer as someone who had lived in northern California but probably not all of his life (the texts referred to a type of mountain as sierras, while other local terms like ranch or mesa were never used).[31] Thematically, the manifesto often returned to the concept of sin and used terms such as God's will, unclean thoughts, and sublimation,[32] which contributed to Shuy's opinion that the bomber had likely had a "religious

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26. *See* Jack Hitt, *Words on Trial: Can Linguists Solve Crimes That Stump the Police*, NEW YORKER, July 23, 2012, at 24, 25.

27. ROGER W. SHUY, CREATING LANGUAGE CRIMES: HOW LAW ENFORCEMENT USES (AND MISUSES) LANGUAGE 181-82 (2005); SHUY, MURDER CASES, *supra* note 20, at 75-86.

28. For the text of the 35,000-word manifesto as submitted by the Unabomber, see FC, *Industrial Society and Its Future*, WASH. POST (Sept. 19, 1995), http://www.washingtonpost.com/wp-srv/national/longterm/unabomber/manifesto.text.htm.

29. Roger W. Shuy, *DARE's Role in Linguistic Profiling*, DARE NEWSLETTER (Dictionary of Am. Reg'l English, Madison, Wis.), Summer 2001, at 1, 4.

30. *Id.* at 4-5.

31. *Id.* at 4; *see* SHUY, *supra* note 27, at 182.

32. *See* FC, *supra* note 28.

upbringing, possibly Catholic."[33] A very interesting feature that required in-depth knowledge of American spelling systems to even recognize was some consistent spelling variations that matched a spelling reform put forth by the *Chicago Tribune* in the 1940s and 1950s, although it had never widely caught on.[34] On this basis Shuy suggested that the writer was likely from the Chicago area.

When Kaczynski was finally apprehended in April 1996, it was confirmed that Shuy's analysis had been accurate for the age of the suspect, his geographic origin, geographic residences, education level, educational specialization, and religious background.[35]

III.   AUTHORSHIP ANALYSIS CASES

Authorship cases involve anonymous or pseudonymic documents, the authorship of which is questioned ("questioned document"). Forensic linguists are retained as experts to compare questioned documents with documents of known authorship ("known documents")—i.e., known to have been produced by one or more suspects. The linguistic analysis aims to discern patterns indicating whether a hypothesis of common authorship better explains the data than hypothesizing independent authorship.[36] To investigate the data, linguists may examine features such as follows:

- dialect;
- underlying native language;
- grammar (e.g., clause embedding, preposition usage, discourse markers, *that* complementizer deletion);
- patterns of usage and errors in spelling, mechanics, and punctuation;
- management of narrative time structures and departures from the narrative sequence;
- word choice;
- register type (e.g., letter, ransom note, detective novel);
- formality level; and
- peculiarities of style (e.g., parallel structures).

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33.   Shuy, *supra* note 29, at 4.

34.   *Id.*

35.   *Id.*

36.   Robert A. Leonard, *Communicating Linguistic Theory and Analyses to Judge and Jury in the Highly Adversarial U.S. Justice System: Theatrical Cross Examinations vs. the Facts, in* LEGAL DISCOURSE AND COMMUNICATION (Girolamo Tessuto ed., forthcoming 2017); Robert A. Leonard, *Forensic Linguistics, in* HANDBOOK OF BEHAVIORAL CRIMINOLOGY: CONTEMPORARY STRATEGIES AND ISSUES (Vincent B. Van Hasselt & M. L. Bourke eds, forthcoming 2017).

Both qualitative and quantitative methods are used.[37] Qualitative methods are largely inductive and proceed by identifying unusual features or features that reoccur within or between documents in a non-random fashion. Interestingly, our experience has shown that even writers who seek to conceal their identity by manipulating features of their language are often unable to control all of these types of features in a coherent way. For example, if a writer tries to sound less educated than he actually is, although he may purposely misspell or misuse words, he may still forget to "dumb down" his punctuation (or, in any event, to a level commensurate with his manipulated spelling level). Indeed, several features are typically below the level of consciousness for most language users—for example, patterns in the use of punctuation such as hyphens or apostrophes, the number of spaces one leaves after a period and the beginning of the next sentence, the grouping of topics, or the structure of narrative events.

Qualitative analyses are complemented by quantitative wherever relevant. Variant patterns can be measured within the questioned and known documents themselves and then compared to the distribution of similar features in comparable text corpora or databases. This can demonstrate how individualistic certain features are that link the questioned and known documents.

IV.   HUMMERT "STALKER/SERIAL KILLER" CASE

In *Commonwealth v. Hummert*,[38] two very different types of language patterns were identified that, through close linguistic analyses, propelled investigation and provided crucial evidence for the prosecution. Brian Hummert of York, Pennsylvania, had received letters written by an alleged stalker that threatened his wife, Charlene Hummert, and accused her of infidelity.[39] She was later found strangled in her own vehicle in a parking lot.[40] The police suspected Mr. Hummert and charged him with the murder.[41] While he was under scrutiny, the press and the police received a letter from a person claiming to be the murderer—a self-confessed serial killer who stated that Mrs. Hummert

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37. Jo Angouri, *Quantitative, Qualitative or Both? Combining Research Methods in Linguistic Research, in* RESEARCH METHODS IN LINGUISTICS 29, 31-34 (Lia Litosseliti ed., 2010).

38. No. 1549 MDA 2012, 2013 WL 11253455 (Pa. Super. Ct. Oct. 9, 2013).

39. *Id.* at *3; *see* Brief of Appellee, Commonwealth of Pennsylvania at 3, Commonwealth v. Hummert, No. 2195 MDA 2006 (Pa. Super. Ct. July 2, 2007).

40. *Hummert*, 2013 WL 11253455, at *2.

41. *Id.* at *1.

had been his lover; that she had wanted to break off the affair; and, as a result, he had killed her, making her his fifth murder victim.[42]

At this point, the Pennsylvania State Police Criminal Investigation Assessment Unit decided they needed expert advice and retained Robert Leonard Associates to perform a forensic linguistic analysis of the questioned documents (the "stalker letter" and the "serial killer letter").[43] The serial killer letter appeared to be a post-offense manipulation of investigation communication ("POMIC").[44] A POMIC is an after-the-fact "red herring" communication, typically intended to divert suspicion from a prime suspect to some other real or fictional person.[45] Commonly, a POMIC combines disinformation with specific information that is not publically known but would be known to the perpetrator. This was also the case here. The serial killer letter provided details about where the victim was murdered and how she was dragged from her house to her car, thus explaining the presence of small pieces of driveway gravel in the skin of her lower back—gravel that was shown to originate from the Hummert driveway.[46] Yet, at the same time, the letter falsely claimed that the strangulation instrument was a "white nylon rope" instead of the red dog leash the police had retrieved from the Hummert residence.[47]

There were obvious differences between the questioned documents, such as length, formality, and grammar. The stalker letter was lengthy, typewritten, and used complex syntax. The serial killer letter was short, handwritten, and almost exclusively composed of simple main clauses. It contained several grammatical "mistakes," later judged to be attempted obfuscations, camouflaging language characteristics. But the letters also shared features such as well-executed, complex narrative patterns and, importantly, an unusual rhetorical device: repeating the same verb in two consecutive sentences and changing the context to express irony and cruel humor. This device was rare enough that experts in rhetoric who were consulted had no ready label for it. The stalker letter stated the writer had slept with Mrs. Hummert and, referencing rumors of her further sexual proclivities, wrote, "I would have loved to have found out.

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42. *See* Brief of Appellee, *supra* note 39, at 3-4; *Hummert Letters*, ROBERT LEONARD ASSOCIATES, http://www.robertleonardassociates.com/PDF/NewYorker_iPad_extra.pdf (last visited Apr. 10, 2017).

43. *See* Brief of Appellee, *supra* note 39, at 4; *Hummert Letters*, *supra* note 42.

44. This is a term and acronym used by the FBI Behavioral Analysis Unit. James R. Fitzgerald, *The FBI's Communicated Threat Assessment Database: History, Design, and Implementation*, FBI L. ENF'T BULL., Feb. 2007, at 6, 8.

45. *See id.*

46. *Compare Hummert*, 2013 WL 11253455 at *3, *with Hummert Letters*, *supra* note 42.

47. *Hummert Letters*, *supra* note 42.

A couple of days later she made sure my fiancée found out. She dumped me and then had an abortion." In the serial killer letter: "I killed Charlene Hummert, not her husband. We had an affair for the past nine months. She wanted to break it off. So I broke her neck!"[48] The linguists termed this device "ironic repetition." Eventually, this analysis contributed to obtaining a search warrant for Mr. Hummert's computer and office, a search that produced a quantity of work-related e-mails and other documents written by him (known documents). Detailed analysis revealed an unusual, but consistent, pattern of contraction that linked the questioned and known documents. In both sets of documents, positive verbs were never contracted (e.g., "I am" never contracted to "I'm") while negated verbs varied between occurring in contracted and non-contracted versions (e.g., both "do not" and "don't" appeared). Corpus linguistic searches of similar word strings confirmed that this pattern was highly unusual. Thus, the superior hypothesis was that the linguistic patterns in the questioned documents were best explained as being instances of the linguistic patterns in the known documents, known to have been written by the chief suspect, Brian Hummert. Several other forensic experts also testified, and Mr. Hummert was convicted.

V.   COLEMAN TRIPLE HOMICIDE

People v. Coleman[49] proves the advantage of having access to specialized corpora such as the FBI's Communicated Threat Assessment Database ("CTAD").[50] Christopher Coleman, bodyguard to a wealthy fundamentalist television preacher, received a series of death threats against himself and his family that displayed intimate knowledge of their whereabouts. Despite newly installed surveillance equipment, he went to the gym one morning and, unable to reach his wife on the phone, called the detective who lived across the street to check on them. The detective went and found the defendant's wife and two little boys strangled in their beds.[51] Importantly, spray-painted messages at the murder scene reprised the language of the previously communicated threats.[52]

Police discovered that Coleman had been having an affair with a friend of his wife.[53] As one magazine headline pithily asked: "Could a

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48. *Id.*
49. 24 N.E.3d 373 (Ill. App. Ct. 2014).
50. For additional discussion on the CTAD, see Fitzgerald, *supra* note 44, at 6-9.
51. *Coleman*, 24 N.E.3d at 379-82.
52. *Id.* at 379-82, 395-96.
53. *Id.* at 379.

father strangle his wife and young sons just to keep a high salary and a sexy mistress? And if not, who did?"[54]

A computer forensics expert testified that the emails had come from Coleman's work computer.[55] That was one strong link of the threatening messages to Coleman. But the defense argued that it merely showed the message had been sent from his computer, not Coleman himself writing: "The defense pointed out that 6 people had log-on id's for that computer."[56]

The testimony provided by co-author Robert A. Leonard not only tied together all the threats but also linked the linguistic patterns in the threats to the linguistic patterns of Coleman. In other words, the forensic linguistic analysis tested two sets of hypotheses. The first dealt with just the questioned documents (i.e., the threats and the spray-painted messages) and whether their linguistic features indicated common authorship. While a series of linguistic features linked together the threats and the murder scene spray-painted messages, a particularly interesting feature linking all the questioned documents was the presence of the obscenity "fuck" to begin both the threats and spray-painted messages. This obscenity might not strike one as an unusual feature in criminal communications, but a search of the CTAD showed its *placement* to be highly unusual. The analysis showed that of over 4400 criminal documents in the CTAD, only 18 (.4%) began with the word, and of those, only 8 (less than .2%) contained overt threats.[57] A very rare feature, but one shared by all the questioned documents.

The second analysis compared the questioned to the known documents and identified a range of features linking the two sets, among them a pattern of spelling "you" as "U" and a frequent pattern of fused spelling confusion (e.g., in a questioned document, "[h]ave a *goodtime*," and, in the known documents, "spend *sometime* together" and "to feel in *anyway* obligated"). In short, the following hypotheses were found to be superior to others: (1) that each of the questioned documents shared similarities that could be traced to a single author and (2) that the questioned documents and known documents also shared similarities that were consistent with a single author. The defendant was

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54. Jeannette Cooperman, *A Family Erased: The Chris Coleman Story*, ST. LOUIS MAG. (July 22, 2011, 2:44 PM), https://www.stlmag.com/A-Family-Erased-The-Chris-Coleman-Story.

55. *Prosecution Rests Case in Coleman Triple Murder Trial*, KMOV.COM (Mar. 13, 2015, 7:07 AM), http://www.kmov.com/story/28449153/prosecution-rests-case-in-coleman-triple-murder-trial.

56. *Id.*

57. *Id.*

found guilty due to "overwhelming" circumstantial evidence, from linguistics and several other forensic fields.[58]

VI.   PAVATT AND ANDREW

A habeas death penalty case argued that James Pavatt, sentenced to death for murder, should be spared execution because he had been under the "substantial control" of his accomplice Brenda Andrew, who wielded enough power over him to compel him to write a confession that inculpated him and exculpated her.[59]

The background of the case was that Andrew had taken Pavatt as a lover, and Pavatt then sold a large insurance policy to Andrew's husband, whom the two lovers killed.[60] At trial, Andrew produced Pavatt's handwritten, signed confession.[61] In the confession, he claimed full, and sole, responsibility.[62] The confession was discounted, and both were found guilty and sentenced to death.[63]

Leonard was asked by the federal public defender whether the confession could be analyzed to determine whether it contained language that was Andrew's as opposed to Pavatt's, as this would be evidence that she had dictated at least some of the confession to Pavatt. This, in turn, would show that the confession was not his own spontaneous product.[64] Leonard and his colleague Dr. Benji Wald analyzed the grammar; punctuation; spelling; lexical choice; formality level; genre of language; word, sentence, and paragraph structure; and syntactic, semantic, and pragmatic features of the confession; and compared it to the known writings of Pavatt and Andrew.

Here the challenge was to bifurcate double authorship from one document. This can pose significant challenges when both putative authors share many demographic characteristics because such authors tend to share similar linguistic features. It proved possible, through an examination of complementary grammatical systems. That is, analysis of the known documents of each defendant revealed that although they

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58.   Joel Christie, *Court Upholds Life Sentence for Televangelist's Bodyguard Who Strangled His Family to Death While They Slept After Starting an Affair with His Wife's Childhood Friend*, DAILY MAIL (Jan. 4, 2015, 10:09 AM), http://www.dailymail.co.uk/news/article-2895728/Court-upholds-life-sentence-televangelist-s-bodyguard-strangled-family-death-slept-starting-affair-wife-s-childhood-friend.html#ixzz3qVW9mIQC.

59.   *See* Pavatt v. Trammell, No. CIV-08-470-R, 2014 WL 1745019, at *15-16 (W.D. Okla. May 1, 2014).

60.   *Id.* at *5.

61.   *Id.* at *88-89.

62.   *See id.* at *15-16.

63.   *See id.* at *1.

64.   *Id.* at *60.

indeed shared many features, there was one systemic feature characterizing Andrew's language patterns that was not present in Pavatt's language patterns. Whenever Andrew used a construction with what are called "conjoined subjects," she would follow standard grammar rules and use personal pronouns in the subjective (nominative) case (e.g., "the woman and *I* went" or "Lisa and *he* talked"). Conversely, Pavatt would only use the objective case pronoun (e.g., "the woman and *me* went" or "Lisa and *him* talked").[65] It is very common in English, as in other languages with similar grammatical systems, that people vary between the two case forms, correlating with the formality of the context. In more formal writings, people typically adhere more strongly to norms of spelling and grammar (e.g., "the woman and *I* went").[66] But Pavatt always used the non-standard, "and me" pattern—even in the most formal of contexts (e.g., in a letter to his attorney, Pavatt wrote, "The young lady says Andrew and *me* should talk"). Pavatt does not exhibit that he ever commands the standard "and I" pattern. The confession letter had only the "and I" pattern, thus matching Andrew's grammar but not Pavatt's, regardless of the fact that the letter was in his handwriting.

The following two cases are ones in which forensic linguistic analyses were requested in an attempt to exonerate the convicted.[67] In this area, too, forensic linguistics has been underutilized. While DNA tests have successfully proven many wrongfully convicted defendants to be innocent, many possible exoneration cases involve no DNA samples. But, often, there is crucial language evidence.

VII.   ANTWAUN CUBIE

In 1996, at the age of eighteen, Antwaun Cubie allegedly shot and killed his friend in a Chicago neighborhood.[68] Three years later, he received a life sentence.[69] An important piece of evidence brought to bear in his trial was a two-page, typed confession with Cubie's signature below.[70] Cubie claimed not to have given either a voluntary or coerced confession—indeed, he claimed not to have given a confession at all, denying that he dictated or in any other way authored what was called

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65. Declaration Under Penalty of Perjury of Robert A. Leonard, Pavatt v. Sirmons, No. 5:08-cv-00470-R, 2009 WL 8542774, at *2-7 (W.D. Okla. Oct. 14, 2009).
66. *See id.* at *3-4.
67. *See infra* Parts VII–VIII.
68. Art Barnum, *Man Gets Life in Student's Murder*, CHI. TRIB. (Apr. 29, 1999), http://articles.chicagotribune.com/1999-04-29/news/9904290316_1_penalty-oak-park-shooting.
69. *Id.*
70. *See id.*

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his confession.[71] He asserted that he was severely beaten, interrogated, and then told to sign blank forms in order to make a phone call. The next time Cubie saw those forms, he said they contained a concocted confession typed over his signatures.[72] The government maintained that Cubie dictated the confession, which was transcribed word-for-word.[73] Accordingly, a detective involved in the matter had testified as follows:

Q. And as to the statements being written down, were police reports drafted that memorialized each and every one of these words?

A. Yes.[74]

Thus, the competing hypotheses to test were that the language patterns of the questioned confession were better explained as being instances (1) of the language patterns of Cubie's known writings or (2) of *other than* the language patterns of Cubie's known writings. Leonard and Hofstra University interns compared the questioned confession document with the known documents of Cubie and also examined the language data obtained from possible government authors, notably the detective quoted above.

The analysis revealed five notable features of the questioned confession document: (1) use of *then* in structuring narratives; (2) use of complementizers; (3) variation in the contraction patterns; (4) inclusion of features of formality, dialect, and formal police register; and (5) use of discourse markers.[75]

These features in the confession do not resemble Cubie's writings. For example, the phrase *at an unknown time*: the confession has Cubie saying, "I met Jeremy at Cass Avenue and 63rd Street in Westmont *at an unknown time* on Saturday the 1st of June."[76] Given the research that has been done on American dialects, one must assess a low likelihood

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71. Art Barnum, *Ex-Prep Basketball Star Convicted in Death*, CHI. TRIB. (Mar. 27, 1999), http://articles.chicagotribune.com/1999-03-27/news/9903270084_1_fatal-shooting-face-trial-cook-county-jury [hereinafter Barnum, *Ex-Prep Basketball Star Convicted*]; Art Barnum, *Trial Starts in 3-Year-Old Murder Case*, CHI. TRIB. (Mar. 24, 1999), http://articles.chicagotribune.com/1999-03-24/news/9903240177_1_trial-oak-park-school-year [hereinafter Barnum, *Trial Starts*].

72. *See* Barnum, *Ex-Prep Basketball Star Convicted, supra* note 71.

73. Letter from Robert A. Leonard to the Ill. Torture Inquiry & Relief Comm'n (Nov. 18, 2016) (on file with author) (providing support for Cubie).

74. Transcript of Record at E187-88, People v. Cubie, No. 96 CR 15758 (Ill. Cir. Ct. Mar. 26, 1999); *see* Letter from Robert A. Leonard to the Ill. Torture Inquiry & Relief Comm'n, *supra* note 73.

75. Letter from Robert A. Leonard to the Ill. Torture Inquiry & Relief Comm'n, *supra* note 73.

76. *Id.*

of eighteen-year-old Cubie spontaneously generating the phrase *at an unknown time.*[77]

Regarding the patterns of use of *then*, the confession had a number of sentences in which *then* followed the subject—for example, "I *then* told Jeremy to move his jeep to the end of the alley" and "[w]e both *then* went into the building after ringing Jamie's bell."[78] Note that *then* followed the subjects *I* and *we*.[79] The detective used the same construction in his testimony: "[a]ll three *then* went out to the front" and "[h]e *then* walked away and put- and dumped the handgun into a garbage can that was down the alley."[80] But in the assembled known, contemporaneous documents of Cubie, 3256 words long, this construction cannot be found even once.[81] When Cubie did use *then*, it *preceded* the subject, such as in "[s]o I told him if I get out of my bed I'm going to kick his ass very well, so *then* he shut up" and "but *then* I said what am I going to write *then* the little guy inside said write what you feel inside."[82]

In sum, the evidence shows that the confession closely resembles the patterns of language exemplified by the detective's testimony at Cubie's trial and not the language patterns of Cubie's known writings.

These findings support Cubie's contention that he was not the author of the questioned confession. The results of the analysis, plus other apparently exculpatory evidence, are at the present time before the Illinois Torture Inquiry and Relief Commission.[83]

VIII.   BYRON CASE

The analysis of language evidence in *State v. Case*[84] relied heavily on what linguists call pragmatics, which, in brief, brings knowledge of the situational context to bear on the interpretation of all parts of a text. Important tools are conversation analysis (how turns-at-talk are distributed among the participants)[85] and speech act analysis (and

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77. *Id.*
78. *Id.*
79. *Id.*
80. *Id.*
81. *Id.*
82. *Id.*
83. Letter from Robert Olmstead, Exec. Dir., Ill. Torture Inquiry & Relief Comm'n, to Robert A. Leonard (Aug. 31, 2016) (on file with author).
84. 140 S.W.3d 80, 83 (Mo. Ct. App. 2004).
85. Pragmatic analysis has proven useful in both civil and criminal cases of many kinds. For example, Leonard testified in a U.S. district court in Florida on the contextual meaning of words claimed as trademarks and in state court in Florida on the meaning of internal company-related communications; in state courts in New Jersey, Arizona, and Nevada on the meaning of language

especially whether the intended meaning differs from the explicitly expressed meaning.[86]

In 1997, Anastasia WitbolsFeugen was found shot in a Missouri cemetery after a night of driving around with her boyfriend and another couple.[87] The boyfriend, Justin Bruton, was found two days later, having taken his own life by shotgun, some miles away.[88] The surviving couple, Kelly Moffett and Byron Case, initially gave corroborating accounts that WitbolsFeugen had stormed off after getting into an argument with Bruton, and they dropped Bruton off at his own house.[89]

Three years later, Moffet accused Case of WitbolsFeugen's murder.[90] Based on her new testimony against him—now claiming to have seen Case shoot WitbolsFeugen—and an audio recording that she made of one of their phone calls containing a so-called "tacit admission," Case was eventually tried and convicted of WitbolsFeugen's murder.[91] In Missouri, a tacit admission is one in which an accusation is not overtly denied.[92] On the government transcript, Moffet asks Case, "Why did you have to kill her?" and is met by silence.[93] She continues, "So, I mean, if you could seriously explain to me as to why you actually felt the need to kill her then that would really help me feel better about the whole fucking thing. I mean, was there seriously any reason for all of this?"[94] to which Case responds, "We shouldn't talk about this."[95] This

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claimed to be confessions, in Montana on the meaning of language claimed to be a suicide communication, and in Michigan on the meaning of a conversation claimed to be a solicitation to murder; and in Paris before the World Bank on the meaning of an English-language bilateral trade agreement between Turkey and Turkmenistan. Co-author Tanya Karoli Christensen testified in Glostrup, Denmark, in a city court case brought against a so-called Syrian warrior, where pragmatic analysis supported the prosecution's contention that the veiled language of chat messages detailed the defendant's plans to return to Syria and ISIS.

86. Take, for example, the following transcript excerpt, in which the question, "How's David?" was deemed evidence of a threat; a prosecution ensued:

> *Tyner*: How's David?
> *Hyde*: You mean my son?
> *Tyner*: Yep.
> *Hyde*: Don, don't you threaten my son. Do a lot of thing but don't ever threaten my son.
> *Tyner*: I didn't threaten anybody. I just said, "How's David?"

ROGER W. SHUY, LANGUAGE CRIMES: THE USE AND ABUSE OF LANGUAGE EVIDENCE IN THE COURTROOM 109 (1996). Shuy walks through this case and notes: "As usual, the context of the conversations gives many clues to their meaning, which the words alone may not make clear to later listeners, such as juries. *Id.* at 104-11.

87. *Case*, 140 S.W.3d at 83.
88. *Id.*
89. *Id.*
90. *Id.*
91. *Id.* at 94 (affirming conviction).
92. *See, e.g.*, State v. Merrill, 846 S.W.2d 225, 228-29 (Mo. Ct. App. 1993).
93. *Case*, 140 S.W.3d at 84.
94. *Id.*

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last sentence was cited by a reviewing judge in upholding Case's sentence. But the actual circumstances of that call are far more complicated. After a detailed analysis was undertaken by Leonard and Hofstra University interns, it was evident that the quality of the recording was poor and exacerbated by Moffett's breathing heavily into the phone, static, and background noises. There were places in the conversation where Case was clearly speaking but not being heard, such as follows:

14:36 *Moffett*: I can be there. I know how to drive a stick shift now.
　　　　　　　　[laughter]
14:39 *Case*: [inaudible]
14:40 *Moffett*: I know.
14:42 *Case*: [unintelligible] true [unintelligible]
14:46 *Moffett*: [laughter] Above him?
14:49 *Case*: Yeah.[96]

Thus, even if Case had overtly denied killing WitbolsFeugen in the section in which it is claimed he made his tacit admission, the denial might well not have been audible on the recording. There are also several other problems with the interpretation of the conversation as a tacit admission, which present themselves when the conversation is examined turn-by-turn. The linguists further conducted an analysis of Moffet's new inculpating testimony against Case, comparing both Moffet's and Case's original accounts of the murder and Moffet's varying accounts to each other.

Close analysis of Moffet's and Case's original accounts of the night of the murder demonstrated that the narratives were in agreement on virtually every detail, but not so similar as to suggest collusion and rehearsal (i.e., they were not so close as to demonstrate a single script).[97] Moreover, and importantly, these original accounts were consistent with all externally established facts of the case.[98] Moffet's later accounts accusing Case, however, were not only inconsistent with the facts of the case (such as the times of day certain events occurred) but also internally contradictory from one iteration to the next.[99] Case remains in prison at this time. His lawyers, from the Midwest Innocence Project, are mounting a new appeal.[100]

95. *Id.*

96. *Listen to Kelly's Late-Night 06-05-01 Phone Call to Byron*, FREE BYRON CASE, http://freebyroncase.com/what-went-wrong/index.html#fifth (last visited Apr. 10, 2017).

97. *Case*, 140 S.W.3d at 83.

98. *See id.* at 83-84.

99. *Id.*

100. *See* Offender Data of Byron Case, MO. DEP'T CORRECTIONS, https://web.mo.gov/doc/

FORENSIC LINGUISTICS

IX. CONCLUSION

As these examples demonstrate, in many circumstances, forensic linguistics offers powerful tools to test the validity of criminal charges or convictions. As discussed in Part I, forensic linguistics can similarly serve in civil cases, to support or challenge legal conclusions.

In sum, although forensic linguistics has been used to advantage in a multiplicity of cases, it is still underutilized in both criminal and civil matters. As we have argued, forensic linguistic analysis can be of value in virtually any case in which language can be considered evidence.

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offSearchWeb/offenderInfoAction.do (enter captcha; then search for first name "Byron," last name "Case") (last visited Apr. 10, 2017).

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