



Forensic Psycholinguistics Using Language Analysis for Identifying and Assessing Offenders

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Early one Friday afternoon, police officials from a midsized city contacted the local office of the FBI. A 911 caller had just left a message: seven bombs had been planted at a petroleum facility, and it would blow up within 24 hours. The male caller left no information about his identity or motive.

Police officers began gathering evidence from the area around the petroleum facility while the local FBI office quickly contacted the National Center for the Analysis of Violent Crime (NCAVC) at Quantico, Virginia. Realizing that these bombs had the potential to kill or injure hundreds of employees

and cause millions of dollars in damage, FBI agents from the NCAVC and the FBI Academy's Behavioral Science Unit immediately began analyzing the recording of the call.¹ Within hours, they advised local authorities of their assessment of the offender's possible characteristics and the potential risk of the threat's legitimacy. What had the agents discovered in the recording of the telephone call? How did they find it?

ANALYZING LANGUAGE

Law enforcement agencies routinely train their new recruits to recognize crime scene evidence. Hairs and fibers, DNA, and ballistic

patterns represent examples of forensic evidence that can provide investigative leads and tie offenders to their crimes. On the other hand, criminal investigative analysis, formerly known as criminal profiling, is an investigative tool that can link offenders to their crimes by analyzing their behavior.

Criminal Investigative Analysis

Criminal investigative analysis originally was designed for, and works best in, investigations of serial criminal acts, such as serial homicides, rapes, or arsons, but it also can be used to analyze individual crimes. This process examines the crime scene evidence and

information about the victim to assess the offender's behavior. The offender's behavior at the crime scene and interaction with victims can help reveal the motive for committing the crime. It also can help investigators construct a description of the offender's personality and demographic characteristics.

One type of behavior often overlooked, or underused, exists in the offender's actual language. The offender's written or spoken language can provide investigators with a wealth of information. This information, in turn, suggests the types of analyses investigators may request when referring their cases to the FBI for criminal investigative analysis. What kind of information does language provide?

Sociolinguistics

Both written and spoken language have features that may reveal an individual's geographical origins; ethnicity or race; age; sex; and occupation, education level, and religious orientation or background. Sociolinguistics is the study of language variability, including the relationships between social characteristics and linguistic features.

Geographic Origins

Although Americans tend to move frequently, their speech often retains remnants of the regional dialect of the area where they were reared. For example, most Americans easily can distinguish the late president John F. Kennedy's Massachusetts accent from former president Jimmy Carter's Georgia accent. Some sociolinguists can distinguish even more subtle regional

dialects, such as differences in the speech of native Virginians from Norfolk as opposed to those from Fairfax. Written communications offer fewer clues, although vocabulary (word choice) and grammar can sometimes indicate geographic origin. In Pennsylvania, when people from Philadelphia want a carbonated soft drink, they tend to ask for a "soda," whereas those from Pittsburgh more likely request a "pop."

Ethnicity or Race

Native ethnic groups, as well as immigrants from various countries, may retain remnants of their native language. In one case in which a business owner received anonymous threat letters, the writer seemed comfortable with English, but wrote some sentences in a way that indicated a specific non-English language influence,

such as using a word order with a subject-object-verb sequence ("he finally will the seriousness of the problem recognize") rather than the typical English subject-verb-object order ("he finally will recognize the seriousness of the problem"). This clue, along with others from the letters, led investigators to focus on a foreign national.

Age

Different generations find linguistic ways of separating themselves from other age groups. Parents know that teenagers develop their own vocabulary and sometimes even grammatical patterns. Different generations also are likely to retain expressions and references that they used when they were younger. As technological changes occur, many older people resist adopting them and their associated vocabulary. As a result, they



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preserve language that marks them to their general age group. Referring to the Internet as an “invention,” rather than “technology,” for example, would indicate that the writer more likely is middle-aged or older. References to specific advertisements, products, and music groups also tend to give clues to a person’s age range.

Sex

Research has demonstrated that men and women may have slightly different language patterns.² Occasionally, offenders even will use overt male and female markers. For example, in one case, the author of a threat letter talked about being pregnant. Although overt clues like this often are legitimate, investigators should examine them for the possibility that a male writer is trying to disguise his identity by claiming to be a woman. Fortunately for investigators, as authors become more immersed in the documents that they create, they tend to drop their guard and reveal language patterns indicative of their sex and other demographic characteristics. Compared with male writers, females are more likely to express tentativeness, such as “it *seems* like...” and “I *suppose* I should have....” Their language may rely more heavily on expressions of feeling, such as “I *felt* compelled...,” “I was *upset*...,” and “I *hope*....” Females, more than males, tend to use polite speech acts, such as thanking someone and apologizing. Intensifiers also mark female language more often, such as “I was *so* upset...” and “we had *such* a good time....”

Occupation, Education Level, and Religious Orientation

Language sometimes contains clues to the writer’s occupation, education level, or religious orientation. Use of nautical terms, such as *port* or *starboard*, can reflect knowledge of boating or even service in the military. Consistent use of sophisticated language or correct grammar and punctuation skills may reflect at least a high school education, if not some college. References to biblical figures in one threat case narrowed the list of suspects to an individual in the victim’s workplace who often spoke of his faith and exhorted his coworkers to repent their sins.

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EXPLORING FORENSIC PSYCHOLINGUISTICS

Psycholinguistics is the study of the relationship between linguistic behavior and psychological processes of the speaker or writer that underlie that behavior.³ Forensic psycholinguistics applies the field of psycholinguistics to criminal or civil cases. A young discipline, forensic psycholinguistics combines the practical experience of seasoned investigators with knowledge gained from the research of

experts within the disciplines of psychology and linguistics, including sociolinguistics.

The law enforcement community can learn a great deal from these disciplines. In 1979, an FBI agent and a professor joined forces to write an article on psycholinguistic analysis of threatening communications, one of the first that combined knowledge from both law enforcement and academia.⁴ Also, research done by a forensic sociolinguist spans four decades and a variety of topics, such as detecting deception in interviews and analyzing threats.⁵

In the last 30 years, psychologists have increased their research on discourse analysis⁶ because of the wealth of information it offers about understanding personality. Psychiatrists and political psychologists, for example, have identified language features associated with personality traits, such as impulsivity, anxiety, depression, paranoia, and the need for power and control. For several years, political psychologists have used these analysis systems for predicting the behavior of national leaders.⁷ Information like this also may prove valuable for understanding criminal behavior. This knowledge can, in turn, suggest more effective investigative strategies and interview techniques.

Current Applications of Forensic Psycholinguistics

At present, investigators are using forensic psycholinguistic analysis of language in several types of cases to help them make more informed decisions. These cases include threat assessment, authorship

identification, false allegations, workplace violence, and statement analysis.

Threat Assessment

The exact words in spoken or written threats, such as the 911 call described at the beginning of this article, can assist investigators in determining the offender's motivation, personality, and demographic features, as well as the risk of the threatener carrying out the threat. Currently, the FBI's Behavioral Science Unit is conducting research on the relationship between language in threatening communications and the threatener's potential risk for violence. The results may offer law enforcement agencies more information on evaluating threats.

Authorship Identification

Trained personnel can analyze stylistic features (e.g., sentence construction, word choice, spelling, and punctuation) in documents, such as threatening communications. Then, they can compare these features with those from the writings of a suspect to determine if the suspect could have authored them. In one case, investigators identified a stalker as the author of threat letters after they compared them with love letters that he had written to the victim when they were dating.

False Allegations

Occasionally, rape or stalking victims make false allegations of victimization. Notes or threatening letters analyzed for clues to the identity of the offender may provide indications that, in reality, the victim is writing them. In one case,

the victim received seven threatening letters that a stalker left at her residence over a period of a few weeks. The seventh letter stated that the writer was considering raping the victim. The victim provided the identities of two men who had shown an interest in her and, therefore, might be her stalker. The local



police referred the case to the FBI and requested an assessment of the threatener's potential for violence and any personality and demographic characteristics that could lead to his identification. When agents began the case consultation, they concentrated on the task of identifying characteristics of a male offender and then planned to examine the two suspects to see if either might be a good match. It soon became clear, however, that the clues provided by the language in the threats led back to the victim (a female) as the probable writer. At the conclusion of the consultation, agents contacted the police investigators who had requested the threat assessment. When they asked the investigators if the victim had experienced any major stressful event

just before the letters started, the investigators mentioned that she had been dating one of the officers in their department. Four days before the letters began, this officer, who had been separated from his wife, broke off his relationship with the victim and moved back in with his wife. The investigators went on to say that, when the officer heard about the threats from the unknown stalker, he left his wife again and reinitiated a relationship with the victim. This information revealed the victim's motivation for authoring the stalker letters. Recognizing this case as a false allegation may have prevented two innocent men from being erroneously accused and publicly embarrassed.

Workplace Violence

In recent years, media attention has focused on the danger of violence erupting in the workplace. Disgruntled or terminated employees have killed their co-workers. Estranged spouses or partners who have taken revenge at their target's job site also have murdered employees. The "snap" theory ("he just snapped") has gained some favor in the media, but law enforcement officers frequently have found that the offenders' language has provided clues that they were thinking about acting violently long before they committed the act. Disgruntled employees often express displeasure in the workplace. That displeasure is directed at, or at least vocalized about, the eventual target of the violence. As the employees' anger escalates over time, their comments reflect this. Some offenders eventually make specific comments about buying or

possessing weapons. They talk about committing some violent act against the target of their anger, such as “Someday, I’m going to stick a gun in his face and kill him.” Unfortunately, these clues often are ignored until the violence occurs. Afterward, coworkers sometimes say that they felt uncomfortable, or even fearful, in the offender’s presence. Law enforcement officials and business managers can work together to train employees to recognize and report danger signals before such tragedies take place. Careful assessment of language clues can allow employers to initiate procedures to defuse and get help for the would-be perpetrator and, thereby, prevent violence from occurring.

Statement Analysis

Many investigators currently use statement analysis to determine if an interviewee is being deceptive or telling the truth. Statement analysis represents a tool that investigators employ to help them examine the words that offenders use and the information that they omit. Then, investigators can analyze these word choices and missing information and determine the best approach to take during the interview.⁸ Once again, language can play an important part in solving crimes.

Potential Applications of Forensic Psycholinguistics

Future uses of forensic psycholinguistics in law enforcement investigations may prove equally, or even more, valuable. While further research is needed, some potential applications include

examining suicide notes to determine whether such deaths could be disguised homicides and studying computer codes employed by criminals who exploit technology.

Homicides Disguised as Suicides

Cases have occurred where husbands have killed their wives and then forged suicide notes to cover their crimes. In one of these cases, the husband shot and killed

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his wife and two teenaged children. By placing the forged suicide note near his wife’s body, the husband escaped responsibility for 20 years. After his first wife’s death, he remarried twice, and both of these wives died in questionable ways. Recently, the husband, now dying, admitted that he killed his first and third wives and his children. He still claims that he is not responsible for the death of his second wife. How many more suicide notes have been fabricated to cover homicides? Taking time to do a personality assessment of the victim and examining all of the evidence, including the language of the suicide note, can assist in identifying these cases.⁹

However, more research is needed on the features of this type of false suicide note.

Computer Crimes

As technology has become increasingly essential to everyone’s standard of living, computer criminals have become more and more proficient. Computer criminals who are “insiders” (those who work for the company) and “outsiders” (those who do not) have broken into the computer systems of government organizations and private companies to steal secrets. Sophisticated computer criminals are careful to cover their trails, but language, even in the form of computer codes, may leave clues that knowledgeable investigators can use to identify and pursue offenders. The FBI’s National Infrastructure Protection Center (NIPC) currently works with agents in FBI field offices to investigate hacker cases, but more research on these types of offenders also is needed. Members of the FBI’s Behavioral Science Unit have initiated research on computer criminals and expect results in the near future.

CONCLUSION

Law enforcement officers know that they must examine all kinds of evidence to solve crimes. One type, which some investigators may overlook, involves the written and spoken words of the criminals. When a subject’s written or oral language is available, it can assist officers significantly.

To this end, forensic psycholinguistic analysis can extract vital clues from language in many types of crimes. This process may offer

information useful in determining offenders' identities, their truthfulness, their personality characteristics, and their potential for violence. This knowledge, in turn, can help law enforcement develop investigative leads, construct interview strategies, and perform more effective searches for evidence. Forensic psycholinguistics constitutes an important investigative tool and one that, with additional research and use, may provide the law enforcement community with another way to resolve crimes that prove difficult to solve through conventional techniques. ♦

Endnotes

¹ Dr. Roger W. Shuy, coauthor of this article, assisted the FBI with this investigation.

² Deborah Tannen, *You Just Don't Understand: Men and Women in Conversation* (New York, NY: Ballantine Books, 1990).

³ David Crystal, *The Cambridge Encyclopedia of Language*, 2d ed. (Cambridge: MA Cambridge University Press, 1998).

⁴ Murray S. Miron and John O. Douglas, "Threat Analysis: The Psycholinguistics Approach," *FBI Law Enforcement Bulletin*, September 1979, 5-9.

⁵ Roger W. Shuy, *Language Crimes: The Use and Abuse of Language Evidence in the Courtroom* (Oxford, UK: Blackwell Publishers, 1993); and *The Language of Confession, Interrogation, and Deception* (Thousand Oaks, CA: Sage Publications, 1998).

⁶ The study of linguistic relations and structures in discourse; *Merriam-Webster's*

Collegiate Dictionary, 10th ed. (1996), s.v. "discourse analysis."

⁷ Walter Weintraub, *Verbal Behavior in Everyday Life* (New York, NY: Springer Publishing Company, 1989); and Margaret G. Hermann, "Explaining Foreign Policy Behavior Using the Personal Characteristics of Political Leaders," *International Studies Quarterly*, March 1980, 7-46.

⁸ Susan H. Adams, "Statement Analysis: What Do Suspects' Words Really Reveal?" *FBI Law Enforcement Bulletin*, October 1996, 12-20.

⁹ Adam Gregory, "The Decision to Die," *Interviewing and Deception* (Dartmouth, MA: Ashgate, 1999); and David Lester, *Why People Kill Themselves: A 1990s Summary of Research Findings on Suicidal Behavior* (Springfield, IL: Charles C. Thomas Publisher, 1992).

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