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Forensic Linguistics

Applying the Scientific Principles of Language Analysis to Issues of the Law

Robert Andrew Leonard

Abstract: Forensic linguistics responds to legal questions that involve language. Who wrote a ransom note or a bomb threat letter? What is the meaning of a word in a contract? Just what constitutes “consenting” to a search? If an interrogator indirectly makes a promise, does that invalidate a confession? Is “Mc” part of the McDonalds trade name or just part of English (and can I name my restaurant McHamburgers)? Could a fourth-grade dropout actually have written a confession with the phrase, “he approached the vehicle and I raised my weapon?” This paper examines cases from the Forensic Linguistics Project at Hofstra University dealing with housing, “Spanish surnames,” and consent to search. Also discussed are a case from linguist Roger Shuy – the “devil strip” ransom note, whose solution involved expertise in linguistic geography and pragmatics; and a case from linguists Benji Wald and the present author – the stalker/serial murderer letters, analyzed through the repetition of a rhetorical discourse device, and skewings in the distribution of grammatical features measured against a base rate calculated from a large reference data set.

Keywords: Forensic, Legal, Language, Linguistic, Expert, Analysis, Consent, Words, Phrases, Pragmatics, Discourse, Authorship Identification, Murder, Word Meaning, Trademark, Crime, Lawyer, Court, Police, Base Rate

FORENSIC LINGUISTICS RESPONDS to legal questions that involve language, for example: Who wrote a ransom note? Who called in a bomb threat? What is the meaning of a phrase in a contract? If a person is searched by the police without a warrant, just what constitutes “consenting” to that search? If an interrogator indirectly makes a promise, does that invalidate a confession? Is “Mc” part of the McDonalds trade name or just part of English (and can I name my restaurant McHamburgers)? If a woman says, “I’m going to kill my rotten boyfriend,” has she threatened his life? Could a fourth-grade dropout actually have written a confession with the phrase, “he approached the vehicle and I raised my weapon?”

All these questions address aspects of language, and the analytical arsenal of linguistics—from speech act theory to variation theory to theoretical semantics—can be useful in formulating their answers. (Labov 1989; Lentine and Shuy 1989; Leonard 2003, 2004, 2005, in press; Shuy 1998.) Forensic linguistics applies the well-established science of linguistics to legal language data.

To understand law, one must understand language. In the US legal system, everything is language: statutes, subpoenas, warrants, questions, testimony, contracts, decisions, confessions, etc. Even things that aren’t actually language are transmitted through language. A ballistics expert has to testify in English.

The work of forensic linguists spans everything from plagiarism, insurance contracts, trademarks and patents to court procedure, confessions, hate crimes

and murder. Forensic linguistics augments legal analysis by applying rigorous, scientifically accepted principles of linguistic analysis to legal evidence. Although forensic linguistic courses are fairly well recognized at university level in the UK and Europe, they are a rather new concept in American higher education.

In 2001 the present author began teaching courses in “Language and Law” and “Forensic Linguistics” at Hofstra University in Hempstead, New York, and subsequently founded the Forensic Linguistics Project (whose site is at http://www.hofstra.edu/Academics/HCLAS/FLP/index_FLP.cfm). The Forensic Linguistics Project in 2004 began to work with Hofstra Law School Legal Clinics to assist on language-related cases. In these cases, Forensic Linguistic Interns, supervised by their faculty, work with third-year Law students on pro bono matters under the supervision of Clinic faculty members. Thus we have humanities and professional school students working together for the social good. To illustrate the diversity of application of linguistic expertise to legal problems, let us look at some cases.

In one case housing inspectors entered an indigent woman's apartment in a local municipality and charged her with a criminal housing violation (overcrowding). The inspectors claimed the woman had given consent for the search; she said she allowed them access to document landlord deficiencies. The Hofstra Law School Housing clinic, representing the woman, said that the landlord was trying to punish the woman for complaining about the poor con-



dition of the premises and had prompted the inspectors to find something to charge her with-in this case having too many children living with her. The Housing Clinic asked the Forensic Linguistics Project to analyze the language data, which included the complaint and statements by the inspectors and the client. We at the Project scripted questions to be asked of the inspectors that sought to explore (1) how a virtually monolingual Spanish speaker could give her oral consent to two inspectors who spoke almost no Spanish, and (2) why she would allow them in if she understood their purpose was to document her violation. We analyzed various possible linguistic scenarios to explain what had transpired which the Clinic then used to defend their client. Charges against her were eventually dropped.

The second language case in the Housing Clinic concerned "Spanish surnames." A landlord was ordered by the court to send certain beneficial notices to all tenants with Spanish surnames. The judge left open how that would be defined. The landlord's lawyers wanted the shortest possible list and suggested only a few, stereotypical names. The Housing Clinic wanted the longest, most inclusive list so that the greatest number of tenants would be benefited. The Project was enlisted to analyze and comment on the problem of the definition of Spanish surnames. Two possibilities were:

1. A semantic interpretation: What an average English speaker would consider included in a list of Spanish surnames.
2. A functional interpretation: A list of actual surnames in directories from the home country of the majority of tenants. This list included non-stereotypical names like MacCormack.

This second position on what constituted Spanish surnames was motivated and precise for the purposes of the court order, and was adopted by the Clinic. In subsequent negotiations, the landlord's lawyers compromised to a much lengthier list than before.

A forensic linguist is of course both morally and professionally bound to describe the language situation the way it actually is, rather than to slant conclusions to one side or the other. Many times clients have to be told that the language data either are not sufficient to draw any conclusions, or that the conclusions they point to are the opposite of what the client was hoping for. In the two housing cases described the evidence supported the positions advocated by the Hofstra Housing Clinic.

Our own work goes beyond the Clinics. Recently the New York Police Department Hate Crimes Task Force asked the present author and a colleague, Dr. Benji Wald, for help in establishing the identity (or identities) of a racially-motivated letter writer who, as the press reported, threatened to bomb a theater

and commit other violence in response to certain white women having married outside of their race. Since this is part of an ongoing investigation no data from the letters can be discussed, but we can look at other cases to see the types of data that are brought to bear in such instances.

Such a case came to linguist Roger Shuy, who was presented with a "pencil-scrawled ransom note, left at the doorstep of the parents of an abducted juvenile." (Shuy 2001) This is an especially interesting case in that Shuy – in a move worthy of Sherlock Holmes--almost immediately was able to observe, and infer, crucial elements of the kidnapper's identity. (It is, unfortunately, rare that a case can be concluded this quickly. Usually analysis requires long periods of time. My colleague Dr. Wald and I spent hundreds of hours on the stalker/serial killer case that I will discuss below.)

Dr. Shuy examined the ransom note and asked the authorities if they had on their suspect list a well educated man from Akron, Ohio, as the language data suggested it was such a person who wrote the ransom note. They did. Using the language clues Shuy gave them the police questioned the man, who was arrested and confessed.

The note read:

Do you ever want to see your precious little girl again? Put \$10,000 cash in a diaper bag. Put it in the green trash kan on the devil strip at corner 18th and Carlson. Don't bring anybody along. No kops!! Come alone! I'll be watching you all the time. Anyone with you, deal is off and dautter is dead!!!

What does the language in this "pencil-scrawled" letter say about the author? Quite a bit. As Dr. Shuy noticed first off, there are a number of misspellings—*kops*, *dautter*, and *kan*. Who can't spell *cops* and *can*? More to the point, who can't spell *cops* and *can* but is able to spell *precious*? If someone can spell *precious*, it's pretty likely he can spell *daughter* as well, to say nothing of *cops* or *can*. Further, when uneducated people do actually misspell these words, they don't normally come up with *dautter*, *kops* or *kan*. So why would someone pretend to misspell? Probably in an attempt to mask his or her identity and appear uneducated. But the evidence suggests the writer is fairly educated--aside from being able to spell *precious*--and *diaper* and *watching* as well--we can note that the punctuation is fairly standard, and the sentence structure demonstrates fluency and practice in writing English.

But the clincher in identifying the man, Shuy says, was the phrase *devil strip*. If the kidnapper hadn't written this, he might be a free man today. *Devil strip* means the grass strip between the sidewalk and the

road—but only in Akron, Ohio. Even in nearby Cleveland the term is not used. *Devil strip* specifically situated the writer of the ransom note as coming from Akron. And there was only one man on the police's short list of suspects who was from Akron and well-educated. And he was the one who had written the note. (Shuy 2001)

This example brings up two important points. First, linguistics helps build a profile, not identify an individual. Second, even when someone attempts to disguise his language, there is simply too much that is not under his conscious control. We have evidence, like his spelling, that this writer intended to disguise his language—but he did not disguise (or avoid) the telltale phrase *devil strip*. People are simply not aware that their speech is not the same as everyone else's—unless something occurs to highlight that fact. Maybe a vacation in Hawaii shows Akronites that other people have different accents, but not that they don't say *devil strip*. This grass strip is just the type of item nobody knows there is another term for, because it rarely comes up in conversations with outsiders (or insiders—most people I have interviewed don't have any name for this grass strip). Different dialects have different distinguishing features. For example, New Yorkers typically stand *on* line to buy tickets, while other Americans stand *in* line. Most New Yorkers are unaware of this very distinctive feature. And usually, even when they hear it, the difference does not register.

It may appear that a forensic linguist could practice his or her craft and never leave the office. But the training and experience of linguists like Dr. Shuy, Dr. Wald or myself, includes thousands of hours of legwork (to use a detective-novel term), spent in the street. Many forensic linguists are street linguists, who trained in linguistic variation and analysis by initiating and recording interviews on street-corners in language communities all over the world—from Harlem and London to Bangkok and Mombasa—and who then used this first-hand data to build data banks and construct theories of how language works in the real world. (This is in contrast to purely theoretical grammarian linguists, for whom the intuitions of native speakers about sentence acceptability serve as the primary data.)

From experience with the language that real speakers actually produce, we promulgate theoretical constructs like the *idiolect*, the unit of relevance in authorship identification cases like Shuy's *devil strip* ransom note and our stalker/serial killer letters. Idiolect refers to the language system of an individual speaker. Idiolect is established in the same way as any other linguistic construct, most notably, dialect: by a collocation of concurrent linguistic features. A linguist will conduct detailed, multilevel linguistic

analyses on the language within written documents or speech samples. He or she must infer, based on results, the likelihood that the samples do or do not stem from a common idiolect, given the specificity of the particular collocation of features. Common idiolectal features for two samples is evidence in support of the hypothesis that both samples were produced by a single individual. (See Barber 2004 for a good background discussion of *idiolect*.)

In the stalker/serial killer letters case, Wald and I were faced with two sets of letters by anonymous writers: letters written by a purported stalker, and a purported serial killer. The stalker's letters threatened a woman, claiming she had exposed their one-night stand to his fiancée. The woman was later found strangled. After the killing, a serial killer wrote letters to the newspaper and the police and claimed to have killed the woman himself (and to have killed unnamed others as well). The police wanted to know who wrote the letters.

We discovered a striking similarity between the two anonymous samples: short as the letters are, the writings of both the stalker and the serial killer contain the same uncommon, quite precise rhetorical discourse device that we called "ironic repetition." Rhetoricians might classify it within the general category of repetitive devices called *plote*. Here are the examples. (The ironic repetition sentences are in italics, repetitive words in boldface.)

Stalker:

... I had a one niter with your wife ... Rumor had it that she occasionally took several guys at once and she sucked cock really well. *I would have loved to have **found out** . A couple of days later she made sure my fiancée **found out** . She dumped me and then had an abortion ...*

Serial Killer:

I killed [woman's name], not her husband. We had an affair for the past nine months. *She wanted to **break** it off. So I **broke** her neck!* I wrote letters to ... This is the fifth woman I killed. ...

As can be seen from these examples, the device consists of repeating the same verb in two consecutive sentences in a passage but changing the context of use in such a way as to express irony. In both cases the irony is achieved by a change of the subject and a shift of the complement of the verb from the first sentence to the second. So in the case of Serial Killer it is the verb *break* that is repeated and the subject switches from *she* (the victim) to *I* (the writer); and in the case of Stalker, the phrasal verb is *find out* and the subject switches from *I* the writer to *she* the vic-

tim. The complement of *break* shifts from *affair* to *neck*, and the complement of *find out* shifts from hypothetical specific sex acts to having had an affair.

This analysis was instrumental in obtaining a search warrant for further data--samples of writing known to have been written by the prime suspect of the police. The language of the samples was in a different style than the letters--say, "expository" rather than "narrative"--so we were not surprised when there were no *ploce* examples to link these new, Known writings to the earlier, Anonymous (Stalker and Serial Killer) letters. But there were other features: particularly striking was a rather unique pattern of contractions that showed a degree of similarity across the Anonymous and Known samples that is consistent with a single author for both.

In brief, in both the Known and the Anonymous, negatives were sometimes contracted (e.g., *cannot* or *can not* sometimes became *can't*) but non-negatives were never contracted (e.g., *I am* never contrac-

ted to *I'm*). Such a skewing suggests a personal idiosyncrasy: an element of the idiolect. But to gauge this pattern's uniqueness, we needed to compare it to a base rate from a reference data set. When we derived large reference databases through the Google search engine we found that the contraction/non-contraction pattern shared by the Known and Anonymous writings was not one that matched up to any reference databases we could access or construct.

A rhetorical device and a grammatical quirk are not common bits of evidence for a homicide detective. But in this case, linguistic evidence worked along with the other evidence the detectives brought forth--the deceased's mismatched clothing, the images on a surveillance camera, and an instrument of strangulation --to point to the same suspect having committed the woman's murder.

[After this paper was presented at the Cambridge conference and submitted for publication, the suspect confessed. He is currently serving a sentence of 20 to 40 years in prison.]

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About the Author

Dr Robert Andrew Leonard

Leonard's linguistic specialty of Forensic Linguistics augments legal analysis by applying rigorous, scientifically accepted principles of analysis to legal evidence like contracts, confessions, and recorded speech. In the U.S. legal system, language is key. Through language we promulgate laws, issue subpoenas and warrants, question suspects, give testimony, write contracts, confess, claim and deny. Attorneys use language to write briefs, make opening and closing arguments, question and cross-examine witnesses; judges issue orders, write decisions, and charge juries. As biology and physics play crucial roles in the interpretation of forensic medical and ballistic data, linguistics enables a deeper understanding of forensic language phenomena. At Hofstra, the study of legal linguistics is centered at the Forensic Linguistics Project, which Dr Leonard directs. Dr Leonard has taught at Columbia and was Vice President of Friends World College and for several years Director of their East African Center, teaching undergraduates and doing fieldwork among the Akamba and Swahili peoples. At Hofstra he continues his connection with African studies as Professor of Swahili, the language he studied for his doctoral dissertation, and as Deputy Director of the Africa Network. Leonard has served as consultant on language and intercultural matters to clients that include The New Yorker Magazine, law firms, advertising agencies, television networks, police and government agencies. In the arts, Dr Leonard co-founded and led the rock group Sha Na Na and as bass and lead singer performed at the Woodstock Festival, the Fillmores East and West, on television's Tonight Show, and in the Academy Award-winning Woodstock movie. Professor Leonard's research focuses not only on forensic linguistics but on language and other conceptual systems such as identity, food behavior,

and architectural and public space. He has published on linguistic theoretical semantics and forensic linguistics. He co-edited *The Asian-Pacific American Heritage* (Routledge) and contributed to it articles on dialect, slang and standard languages; Southeast Asian food; and food and ethnic identity. The volume was chosen by the American Library Association as "One of the Outstanding Academic Books of the Year." His research in the anthropology of food was presented at the Oxford Food Symposium, St. Anthony's College, Oxford University and published by Prospect Books of London.

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