

NOTES ON

**HEARER PRESUPPOSITIONS AND
THE ART OF LANGUAGE BASED PROFILING**

Section 1

Language Based Profiling

1. LANGUAGE BASED PROFILING

1.1. Language Based Profiling (LBP). In our usage, *language based profiling* is the activity of making inferences about an individual based on his¹ use of language². Language based profiling in this sense is something everyone does regarding the behavior of individuals in whom one is interested, albeit largely intuitively.

1.2. Utterances, Speakers, and Hearers. An *utterance* is a unit of speech, spoken or written. An individual who makes (generates, produces, etc.) an *utterance* is referred to as a *speaker*, and an individual who receives (hears, reads or is otherwise privy to the utterance) is referred to as a *hearer*.

1.3. Hearer Based LBP. The profiling perspective taken in this paper is that of the hearer¹. The profiler takes the role of hearer in making inferences about the speaker based on the utterance(s) the speaker produces.

1.4. Two Types of Inference for LBP. This paper is addressed to two types of inference made by the hearer: one is that of making hypotheses regarding the speaker's *underlying beliefs and/or intentions* which appear (to the hearer) to have inclined the speaker to use language in the way that he did; the other type of inference is that of drawing implications from the speaker's inferred beliefs and/or intentions which appear relevant to profiling him. We refer to the speaker's underlying beliefs and intentions hypothesized by the hearer as *hearer presuppositions*, for which we use the acronym HPs, and we refer to their *profiling implications* with the acronym IMPs.

1.5. Limited Scope of Our Use of LBP. While the techniques discussed in this paper could also be used to make inferences of a demographic nature, such as age, gender, educational and professional level etc., we limit the scope of this paper to inferences regarding the underlying beliefs and/or intentions of that individual and their profiling implications.

1.6. LBP as an Art. Inferences from an individual's use of language to his underlying beliefs and/or intentions can be made in any number of ways, depending on the profiler's intuitions about how a person's beliefs and intentions are reflected in that person's use of language. In this paper we propose a particular way to structure such inferences². Our proposals regarding how to structure these inferences need to be regarded as procedural guidelines rather than as recipes and, in this sense, their application is referred to as an "art."

2. INTRODUCTORY CONCEPTS

2.1. Pervasiveness of LBP. People routinely make intuitive inferences about a speaker's beliefs and intentions from the way he uses language. The ability to do this is part of what it means to "understand" a language and is commonly practiced, albeit mostly at an intuitive level in evaluating the beliefs and intentions of individuals one encounters in ordinary life, such as spouses, lovers, salespersons, co-workers, employers, neighbors, and so on. This ability enables people to make routine judgements regarding whether a given speaker is actually

knowledgeable about what he purports to be knowledgeable about, whether he is confused, deceptive, honest, confident, whether he actually believes what he is asserting, and so on. This ability varies markedly among individuals and may be the distinguishing feature of certain kinds of mental illness involving skewed mental functioning, such as occurs in certain forms of schizophrenia or autism.

2.2. Intuitive LBP. While people routinely make such judgments regarding individuals on the basis of their speech, they typically make them without being aware of the basis and procedures they use in making them. Certain individuals are more skilled in making them than others. Among the more highly skilled we would expect to find those individuals whose professional practice requires that they make such judgements reasonably accurately. This would include negotiators, psychologists, psychiatrists, lawyers, salespersons, politicians, interviewers, law enforcement investigators, "con men," and so on. But even for individuals practicing in such professions, their judgments would tend to largely intuitive, relying more on experience and "gut feel" than on a "system" of any kind, and would tend to vary from person to person.

2.3. The Value of Structuring LBP. The value of approaching the making of LBP assessments in a structured way lies in its affording the profiler a guide for identifying and refining elements that enter into his³ assessments.

2.4. The Program. We describe and illustrate the use of hearer presuppositions in profiling applications. In Sections 2, 3, 4, 5, and 6, we discuss hearer presuppositions in applications to a variety of hypothetical cases; then in Sections 7 - 12, we illustrate their role in an extended application to an actual case: the Anthrax Letter sent to Tom Brokaw in September, 2001, shortly after the World Trade Center incident. While this particular case has been widely investigated and reported on in the media for over a decade, it is still of profiling interest inasmuch as questions still remain regarding the identity, motivations, and intentions of its author. I am not aware of any extensive analysis of the language of this letter that addresses those questions. For simplicity and for space considerations, we limit our "real-world" application to this one example, which has the virtue of being very brief, consisting of six hand-printed lines⁴.

Footnote 1. Hearer presuppositions, in the sense indicated, differ from notions of presuppositions referred to as “speaker presuppositions” where they are treated as *assumptions the speaker consciously or unconsciously makes (or appears to make)* regarding the “common ground,” relevance, or appropriateness of the utterances he makes, rather than as “hearer presuppositions,” treated here as *hypotheses the hearer makes* regarding the speaker’s underlying beliefs and/or intentions which may have inclined the speaker to make those utterances. The two notions connect, of course, at their interface inasmuch as what the hearer hypothesizes from the speaker’s utterances might be the speaker’s underlying beliefs and/or intentions which had inclined the speaker to make those utterances, also includes the hearer’s appraisal of the assumptions which the speaker makes (or appears to make) in generating those utterances. Treating presuppositions as “hearer presuppositions” rather than as “speaker presuppositions” in the above sense enables us to *position the profiler as hearer*.

Footnote 2. This way of structuring profiling inferences was developed in application to thousands of documents for a variety of profiling goals including that treated here, such as the determination of gender, age, native language, educational and professional level of the writer or speaker, the determination whether two documents or sections of a given document were written by the same person, whether a document was written in multiple sittings, whether it was “composed” of parts written separately by the writer and/or other individuals, and so on. Some of these other application will be described in later notes; for the present, the described approach will be primarily addressed to the identification of *the underlying beliefs and intentions* of the author or authors of given documents. The materials on which these applications were carried out included personal and business letters, extortion threats, political speeches, psychological test protocols, self-styled “manifestos” and “white papers” of domestic and foreign political groups, court documents, interview transcripts, etc.

Footnote 3. We use masculine pronouns in this paper in a gender-neutral sense, to avoid more cumbersome expressions such “his or hers,” “he or she,” etc.

Footnote 4. Implications of HPs will not be illustrated till we get to profiling the author of the Brokaw Anthrax letter in Sections 8 - 11.