

NOTES ON

HEARER PRESUPPOSITIONS AND THE ART OF LANGUAGE BASED PROFILING

Section 4

HP Selection and Integration

1. INTRODUCTORY REMARKS

1.1. On the Association of Hearer Presuppositions (HPs) With Utterance Features (UFs). How might the hearer (profiler) identify and organize HPs, and draw their implications (IMPs) for a speaker's profile? As indicated in the preceding Section 3, a given utterance U can have many UFs, and multiple HPs can be associated with each UF. Accordingly, we need some way of organizing HPs to develop a coherent profile of the speaker.

1.2. Overview of Steps Involved. The *first step* the hearer (profiler) takes is to transition from the utterance U and context C to his understanding U* of the utterance U and his understanding C* of the context C, where his understanding U* of U includes the perceived properties UF. The *second step* is to associate, with every UF the hearer perceives to hold of U*, those HPs which appear most relevant for profiling the speaker. The *third step* is to organize the relevant HPs into levels which appear to the hearer to reflect the order in which certain of them have inclined others, in the sense that the beliefs and/or intentions embodied in a higher level HP appears to have induced the beliefs and/or intentions embodied in a lower level HP. The *fourth step* is to

draw the implications (IMPs) of the thus organized HPs as they pertain to profiling the speaker. The *fifth and final step* is to draw these various HPs and IMPs together into a summary of the speaker's profile. These steps will be illustrated in Section 11 in application to the Brokaw Anthrax letter.

1.3. The Role of Intuition in Profiling. In Section 2, we suggested various HPs as associated with given UFs in several examples there, without justifying to what extent these suggested HPs were reasonable as hypotheses the hearer could make regarding the speaker's underlying beliefs and/or intentions in making the utterances in given contexts as presented in those examples. There is no precise way to justify a choice of particular HPs in any given case; that is, the choice of HPs associated with a given UF in a given utterance is based on one's intuition about how that utterance and the context in which it occurs might be understood.

1.4. A Technical Base for the Above Notions. In the remainder of this Section we inter-relate some of the preceding notions in terms of a technical base the use of which makes it possible to more clearly outline their connections. For this purpose we introduce some notions of a more formal character.

2. Settings and Scenarios

2.1. Setting of an Utterance. A *setting of an utterance U* involves a speaker S, an utterance U made (intentionally or not) by S, the context C in which S makes the utterance U, and a hearer H (intended or not) of the utterance U. We can designate a setting as a quadruple:
<S, H, C, U>

2.2. Scenario of an Utterance. A *scenario of an utterance U* is an *interpreted setting*, that is, a setting as understood by the hearer H to include also: (i) the hearer's understanding C* of the context C (which may or may not be the way others understand the context C), and (ii) the hearer's understanding U* of U relative to his understanding C* of C (which may or

may not be the way others understand the utterance U relative to their understanding C^* of the context C). We can designate a scenario as a sextuple: $\langle S, H, C, U, C^*, U^* \rangle$, and speak of the utterance U and of the context C as *relative to that scenario*.

2.3. When the scenario $\langle S, H, C, U, C^*, U^* \rangle$ of an utterance U is obvious or otherwise understood, we will refer to the utterance U and the context C without reference to the scenario to which they are relative.

3. HP SELECTION

3.1. Selecting Profiling Relevant Scenarios. More generally, for any given setting, there are multiple possible scenarios $\langle S, H, U, C, C^*, U^* \rangle$, that is, multiple ways in which a hearer H can understand the context C as C^* and the utterance U as U^* relative to C^* .

3.2. Selecting Profiling Relevant Utterance Features (UFs). A given understanding U^* of a given utterance U can have a number of UF's that reflect aspects of it, and each UF that reflects an aspect of U^* can have a multiple HP's associated with it. Since the text as a whole would ordinarily contain a large number of UF instances reflecting aspects of understandings U^* of utterances occurring in it, the profiler needs to select those UF's which bear most directly on the profiling purposes at hand. Besides restricting the UF's to relevant ones, it is important to order the HP's associated with any one UF among themselves, and to order these HP's in a manner that makes intuitive sense. In the next few sections we describe one way of ordering them which not only seems intuitive, but also provides a thumbnail procedure for generating and ordering given HP's from others.

4. HP ORGANIZATION INTO LEVELS AND CHAINS

4.1. Level 1 HP. A *level 1 HP of an utterance U relative to a given scenario $\langle S, H, C, U, C^*, U^* \rangle$* is an hypothesis¹ made by H regarding the beliefs or

intentions held by S which H believes may have inclined S to make the utterance U in the context C relative to that scenario.

4.2. Level 2 HP. *A level 2 HP of an utterance U relative to a given scenario $\langle S, H, C, U, C^*, U^* \rangle$ is a refinement of a Level 1 HP of that utterance U relative to that scenario which conjoins to the hypothesis of that Level 1 HP a further belief or intention held by S which H believes may have inclined S to make the utterance U in the context C relative to that scenario.*

4.3. Level n + 1 HP. *A level n + 1 HP of an utterance U relative to a given scenario $\langle S, H, C, U, C^*, U^* \rangle$ is a refinement of a Level n HP of that utterance U relative to that scenario which conjoins to the hypothesis of that Level n HP a further belief or intention held by S (as a Level n + 1 HP) which H believes may have inclined S to make the utterance U in the context C relative to that scenario.*

4.4. HP Chains. *An HP chain based on a given scenario is a sequence of HPs of successively increasing levels relative to that scenario, in the sense that the n + 1st HP of the chain is a refinement of the nth HP of the chain. The level of an HP chain is the level of its terminal HP.*

5. Examples of HP Levels and Chains

5.1. Examples of level 1 HP Chains. There are various alternative level 1 HP chains, each arising as an hypothesis made by a hearer H in a given setting in which H is S's date, and in which H and S are sitting next to each other in a movie theatre (C), and in which S utters "I love you" (U). Consider then the scenario¹ X which includes that setting and in which H understands U as a proclamation (U*) of S's feelings for H and understands C as a context C* in which it is convenient for S to make such a proclamation to H, and perceives the proclamation U* as having the property (UF) of being "mumbled." One possible level 1 HP chain relative to X is the one term sequence: *<S believes that H would reject S if H heard S's proclamation clearly>*. Another possible level 1 HP chain relative to X is the one-term sequence: *<S does not intend anyone but H to hear S make this proclamation>*. A third possible level 1 HP chain relative to X is the one-term sequence: *<S was thinking of someone other than H and was not aware that he was speaking aloud>*. Each of these

HPs is an hypothesis the hearer might make regarding those of S's beliefs and/or intentions which H believes might underlie S's utterance relative to X.

5.2. Examples of level 2 HP Chains. There are several alternative level 2 HP chains which can be based on any of the three level 1 HP chains relative to X mentioned in 4.2 above: one Level 2 HP chain relative to X based on the level 1 HP chain relative to X: *<S believes that H would reject S if H heard S clearly>* is the two-term sequence: *<S believes that H would reject S if H heard S clearly, S loves H>*. A level 2 HP chain relative to X based on the level 1 HP chain *<S is so conflicted in his feelings toward H as to have impeded his speaking clearly>* might be the two term sequence *<S is so conflicted in his feelings toward H as to have impeded his speaking clearly, S is not certain that he loves H>*.

5.3. Example of a Level 3 HP Chain: One possible Level 3 HP chain relative to X based on the level 2 HP chain relative to X, *<S is so conflicted in his feelings toward H as to have impeded his speaking clearly, S is not certain that he loves H>* is: *<S is so conflicted in his feelings toward H as to have impeded his speaking clearly, S is not certain that he loves H, S does not want to say something clearly which he is not certain is true>*.

5.4. Rationale for Organizing HPs into Chains and Levels. Certain HPs are reasonable to associate with a given utterance in a given context on the basis of one or more intervening prior HPs, *but are less reasonable to associate with that utterance without identifying those intervening HPs*. For example, we note that the above mentioned level 2 HP chain whose second term is the HP *S loves H*, could have omitted the first term of the chain, namely the HP: *S believes that H would reject him if H heard him clearly*, but it would be less reasonable to regard this HP (*S loves H*) as an hypothesis regarding the speaker's beliefs or intentions in mumbling the utterance "I love you" under his breath, that is, without an intervening HP, such as: *S believes that H would reject him if she heard him clearly*. In other words, ordering these component HPs in the manner suggested appears to afford a more realistic account of how H might understand S's utterance made in the manner S did.

6. Organization of HPs into Branches

6.1. Branches of HP Chains. There are often multiple possible HP chains which can be associated with a hearer's understanding of a given utterance and of the context in which it is made. It is useful to organize HP chains which the hearer develops into a network in which their common HPs are connected. Organizing HP chains in this manner affords the hearer/profiler a more complete picture of the hypotheses he makes regarding the speaker's underlying beliefs and intentions which may have induced the speaker to make that utterance in that context.

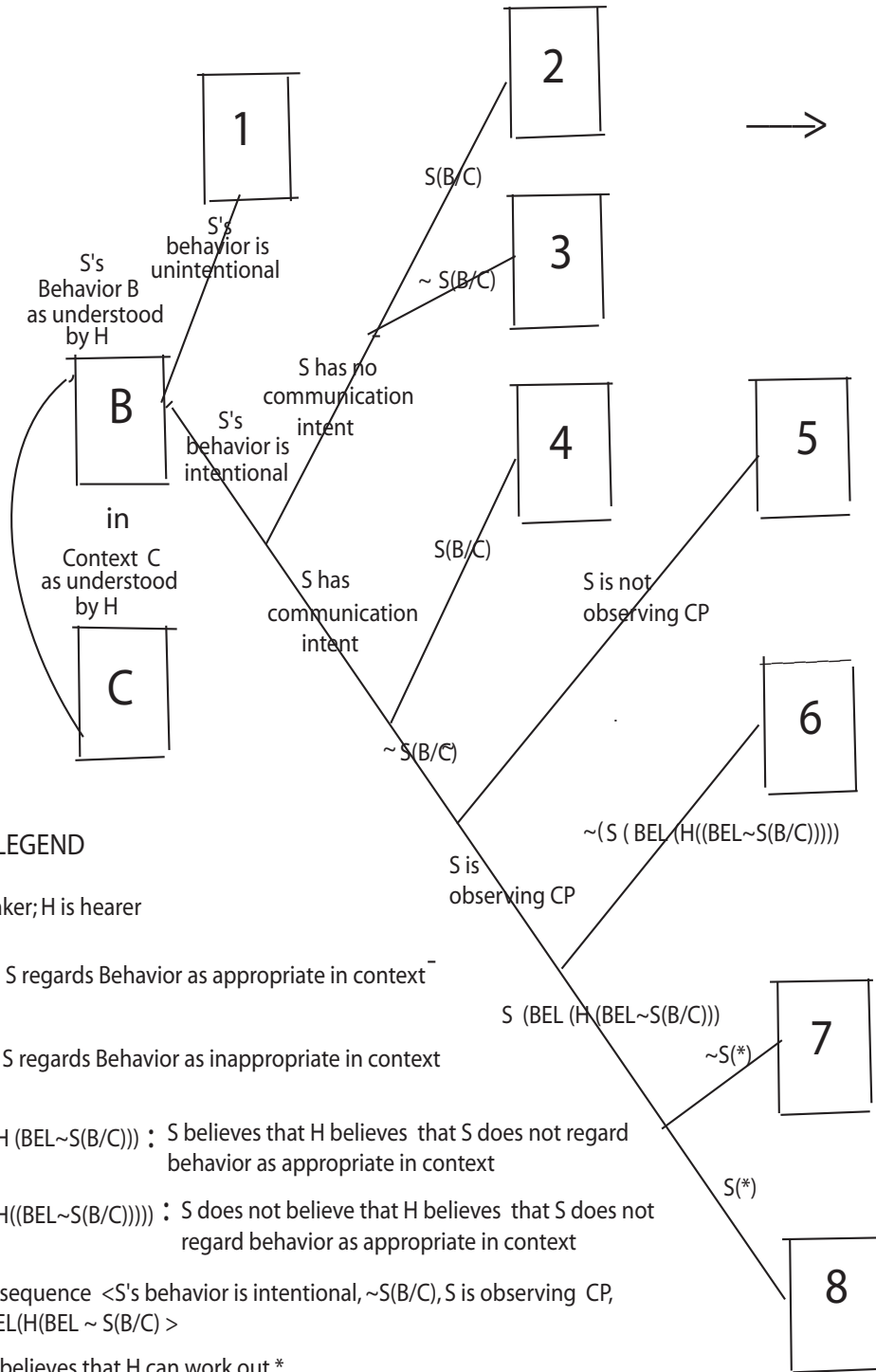
6.2. Branchings of HP Chains at a common m th term. (i) Let HP_j be level j HP chain, let HP_k be a level k HP chain, and let $m \leq j, k$. Then HP_j and HP_k *branch at their m th term* if HP_j and HP_k are identical in their first m terms and differ at their $m + 1$ st term.

6.3. Alternating Branchings of HP Chains. A particularly interesting and useful type of branching of HP Chains is one whose constituent HPs come in pairs in which each component HP of a pair is the negation of the other. We refer to a branch with this structure as an *Alternating HP Branch*. We exhibit the template of a particular type of alternating HP branch below, which we designate as an "*Alternating HP branch of type A*," in graphical form below, noting that it is by no means the only alternating HP branch possible. In Section 6, following, we apply this graphical form to several different scenarios, and give, for each, a verbal and/or diagrammatic description of the HP chains of which it is composed.

6.4. Utility of Using An Alternating Branch of Type A in Profiling. There are often multiple possible HPs which one can assign to a particular case. Organizing them into HP chains affords one way to track their connections and interdependencies. The use of alternating HP branches assists further in this regard inasmuch as it also affords the profiler a way to compare alternative HP chains.

Footnote 1. The nature of such a hypothesis would depend on the scenario and, in particular, on the way that U and C were understood as U^* and C^* (by the hearer H) in that scenario. Such hypotheses could vary widely among hearers, and are not intended to be hypotheses based on a "typical" or "most usual" scenario.

6.5. Template for Alternating HP Branch of Type A



LEGEND

S is speaker; H is hearer

$S(B/C)$: S regards Behavior as appropriate in context

$\sim S(B/C)$: S regards Behavior as inappropriate in context

$S (BEL (H (BEL \sim S(B/C))))$: S believes that H believes that S does not regard behavior as appropriate in context

$\sim S (BEL (H ((BEL \sim S(B/C)))))$: S does not believe that H believes that S does not regard behavior as appropriate in context

* : The sequence <S's behavior is intentional, $\sim S(B/C)$, S is observing CP, $S (BEL (H (BEL \sim S(B/C))))$ >

$S(*)$: S believes that H can work out *

$\sim S(*)$: S does not believe that H can work out *

TEMPLATE FOR ALTERNATING HP BRANCH OF TYPE A