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hii at the Semantics-Pragmatics Interface

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1. Introduction

This paper explores the semantic contribution of the Hindi emphatic particle *hii*. Hindi speakers often employ *hii* in conjunction with focus. As an example, take a simple sentence like in (1), where *Aatish* is focused. It is common to place *hii* after the focused constituent, as in (2).

- (1) Aatish_F ne Upasana ko kiss kiya.
Aatish ERG Upasana ACC kiss do-PAST
'Aatish kissed Upasana.'
- (2) Aatish_F ne hii Upasana ko kiss kiya
Aatish ERG hii Upasana ACC kiss do-PAST
'Aatish kissed Upasana.'

Interestingly, the use of *hii* in (2) results in different readings, which become salient in different contexts. One common salient reading is 'Only Aatish (and nobody else) kissed Upasana.' However, a context can allow for a scalar reading like 'Just Aatish (and nobody better) kissed Upasana.' Many speakers also get an intensifying reflexive interpretation like 'Aatish himself kissed Upasana' or a cleft reading like 'It was *Aatish* that kissed Upasana.'

The goal of this paper is to determine what *hii* contributes to a sentence like (2), where a proper name is associated with *hii*. I will present evidence that *hii*'s meaning contribution is pragmatic rather than truth-conditional. Specifically, *hii* will be shown to carry two particular presuppositions – an 'only' presupposition, and an 'even'-like presupposition.

Section 2 will discuss the motivating empirical data, and Section 3 will then present a classical analysis for English *only* and *even*. Section 4 will detail my own analysis for *hii*. Then the following two sections will describe how my analysis explains two particular puzzles about *hii*; Section 5 will explain *sirf* (Hindi *only*) and *hii* associating with the same focused constituent, while Section 6 will discuss *hii* with sentential negation. Section 7 will then conclude and summarize the paper.

2. Motivating Data

A very common observation is that *hii* is like *only*. Bhatt (1994) observed that in a basic sentence like (2), *hii* readily translates to English quantificational *only*. This can be seen by evaluating the sentence in two common situations, like in (3). Suppose men named Aatish, Deepak, and Vijay are all possible people to have kissed a woman named Upasana.

- (3) a. Situation 1: Aatish kissed Upasana, Deepak didn't kiss Upasana, and Vijay didn't kiss Upasana.
b. Situation 2: Aatish kissed Upasana, Deepak kissed Upasana, but Vijay didn't kiss Upasana.

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In Situation 1, (2) evaluates as true, but in Situation 2, where somebody other Aatish has kissed Upasana, (2) evaluates to false. This is the same patterning of truth conditions for English *only* in the sentence 'Only *Aatish* kissed Upasana.'

It is unsurprising then that the descriptive and theoretical literature has generally stated that *hii* is restrictive or exclusive in nature. Nevertheless, *hii*'s nuanced meanings are hinted at as well. Sharma (1999) says there is a complex functional range for *hii*. McGregor (1972) and Imai (1981) refer to an emphatic type of role of *hii*. Also Bhatt (1994) has described *hii* as a marker of discourse-grounded status. Beyond this, there has not been an attempt to define a semantic/pragmatic role of *hii*.

sirf, the Hindi word for *only*, can grammatically mark the same constituent that *hii* does. Bhatt remarks that (4) gives the same truth conditions as using *hii* alone, or *sirf* alone, for the situations in (3).

- (4) Sirf Aatish_F ne hii Upasana ko kiss kiya
 only Aatish ERG hii Upasana ACC kiss do-PAST
 'Only *Aatish* kissed Upasana.'

If *hii* is semantically equivalent to *sirf*, then it needs to be explained how there can be a single 'only' reading when both are combined. To explain this, Verma (1971) suggested that sentences like (2) actually always have a covert *sirf* (or *bas* or *keval*, also words for 'only' in Hindi). Under this analysis, the covert *sirf* is what actually contributes the truth condition of *only*, while *hii* serves only to overtly delimit the right edge of the focused constituent.

Thus, according to Verma, *hii* is merely a spellout of the focus marking. Unfortunately, this does not explain some other behavior of *hii*, illustrated by the paradigm in (5). The data shows that two constituents marked with *hii* within a single clause leads to ungrammaticality.

- (5) a. *Aatish_F ne hii Upasana_F ko hii kiss kiya.
 Aatish ERG hii Upasana ACC hii kiss do-PAST
 b. Aatish_F ne Upasana_F ko kiss kiya.
 Aatish ERG Upasana ACC kiss do-PAST
 'Aatish kissed Upasana.'
 c. Sirf Aatish_F ne sirf Upasana_F ko kiss kiya.
 only Aatish ERG only Upasana ACC kiss do-PAST
 'Only *Aatish* kissed only *Upasana*.'

It is rather curious that two instances of *sirf* are grammatical in (5c), and similarly the case with multiple occurrences of contrastive focus alone, without the use of a particle, as in (5b). Thus, it cannot be that *hii* is just a spellout of focus, nor that *hii* is just *only*. There must be something about *hii* that sets it apart from *only* and *sirf*, and from the use of contrastive focus alone.

Furthermore, if *hii* is in a negated environment, like in (6), some speakers are able to obtain an *even*-like reading for it from the use of *hii*. This is brought out in (6b). The most salient reading is the *only-not* reading in (6a), but in (6b), the *even* reading of the same sentence is brought out by adjusting the followup context.

- (6) a. Aatish_F ne hii Upasana ko kiss nahiiN kiya. Baaki sab log ne kiya.
 Aatish ERG hii Upasana ACC kiss NEG do-PAST Rest all people ERG do-PAST
 'Only *Aatish* didn't kiss Upasana. Everyone else did.'
 b. Aatish_F ne hii Upasana ko kiss nahiiN kiya. To aur kaun kiss karega?
 Aatish ERG hii Upasana ACC kiss NEG do-PAST So more who kiss do-FUT
 'Even *Aatish* didn't kiss Upasana. So else will?'

This set of data brings out an 'even' meaning component of *hii* that needs to be accounted for. Simply giving *hii* equivalence with *sirf* and *only* therefore cannot satisfy this.

To summarize, then, the issue to be addressed in this paper is how is it that a single particle *hii* can contribute an exclusive sense of *only* and a scalar sense akin to *even*. The goal is to define *hii* in a flexible enough way that can accommodate both of these different senses.

3. Regarding *only* and *even*

Because of the similarity of *hii* with *only* and *even*, it is helpful to start with an analysis of these two words in English. Rooth (1992) and Rooth (1996) analyze *only* as in (7) and *even* as in (8).

- (7) *only* (p)
Presupposes: p
Asserts: $\forall p' [(p' \in C \ \& \ \vee p') \rightarrow p' = p]$
- (8) *even* (p)
Presupposes:
 a. $\exists p' [p' \in C \ \& \ \neg(p = p') \ \& \ \vee p']$
 b. $\forall p' [(p' \in C \ \& \ \neg(p = p')) \rightarrow p' \succ_{\text{likely}} p]$
Asserts: p

According to this analysis, a statement with *only* is true if the asserted proposition is the only true one amongst the contextually-given set of alternatives in *C*. Rooth, like Horn (1969), assumes that the prejacent is presupposed to be true. *even* is truth-conditionally vacuous, but has one presupposition of existence, and another scalar presupposition, stating that the prejacent should be the least likely of the alternatives.

4. An Analysis for *hii*

I propose the analysis given in (9), whereby *hii* encodes two presuppositions. (9) posits that *hii* is truth-conditionally vacuous, but has an exclusive and a scalar presupposition.

- (9) *hii* (p)
Presupposes:
 a. $\forall p' [(p' \in C \ \& \ \vee p') \rightarrow p' = p]$
 b. $\forall p' [(p' \in C \ \& \ \neg(p = p')) \rightarrow p \succ_{\text{likely}} p']$
Asserts: p

The exclusive presupposition in (9a) lends the *only* sense, while the scalar presupposition in (9b) provides a meaning similar to *even*, but selecting for the most likely rather than least likely proposition.

The evidence for the exclusivity of *hii* derives from the fact that we cannot follow up *Aatish ne hii Upasana ko kiss kiya* with adding that somebody else had kissed Upasana as well, as shown in (10). The same holds for *sirf* and *only*. In both cases, the exclusive requirement cannot be canceled.

- (10) a. *Aatish_F ne hii Upasana ko kiss kiya, #aur Vijay ne bhii kiya.*
 Aatish ERG hii Upasana ACC kiss do-PAST and Vijay ERG also do-PAST
 'Aatish kissed Upasana, #and Vijay did too.'
- b. *Sirf Aatish_F ne Upasana ko kiss kiya, #aur Vijay ne bhii kiya.*
 'Only Aatish ERG Upasana ACC kiss do-PAST and Vijay ERG also do-PAST
 'Only Aatish kissed Upasana, #and Vijay did too.'

A scalar requirement needs to be specified on *hii* for the asserted proposition to be the most likely proposition amongst the alternatives, as evidenced by an overt *wh*-question. If asking *Who kissed Upasana?* in (11), there is a difference between answering with *sirf*, and answering with *hii*.

- (11) *Kis ne Upasana ko kiss kiya?*
 who ERG Upasana ACC kiss do-PAST
 'Who kissed Upasana?'
- a. *Sirf Aatish/Vijay/Deepak ne Upasana ko kiss kiya.*
 only Aatish/Vijay/Deepak ERG Upasana ACC kiss do-PAST
 'Only Aatish/Vijay/Deepak kissed Upasana.'

- b. Aatish/#Vijay/#Deepak ne hii Upasana ko kiss kiya.
 Aatish/Vijay/Deepak ERG hii Upasana ACC kiss do-PAST
 'Only Aatish/#Vijay/#Deepak kissed Upasana.'

(11) can be answered with *Sirf Aatish ne Upasana ko kiss kiya*, *Sirf Vijay ne Upasana ko kiss kiya*, or *Sirf Deepak ne Upasana ko kiss kiya* with no further restrictions on the context. However, with *Aatish ne hii Upasana ko kiss kiya*, there is a contextual requirement that must hold. Assume we have a background assumption that Aatish and Upasana are a couple. Now take the situation where Deepak kissed Upasana, Aatish did not kiss Upasana, and Vijay did not kiss Upasana. Here it is perfectly acceptable to answer 'Who kissed Upasana?' with *Sirf Deepak ne Upasana ko kiss kiya*. However, it is not felicitous to describe this situation with *Deepak ne hii Upasana ko kiss kiya*. It is only acceptable to assert *X ne hii Upasana ko kiss kiya* when X is the sole kisser of Upasana, and furthermore when X is assumed to be the most likely individual to have kissed Upasana. Only Aatish fulfills this requirement in this context. Thus, there is a felicity condition dealing with likelihood when using *hii*.

This is going beyond Bhatt's observation that *hii* must associate with an NP that is discourse-grounded in some way. I propose here with (9) that it is not only the case that the name associated with *hii* should be already in the discourse, but it must to be related to the other propositional alternatives in such a way that it is the most likely or the most expected in the context to have the property in question.

5. *sirf* with *hii*

Recall that a constituent can be acceptably double-marked with *sirf* and *hii*, and moreover still yield a single exclusive meaning, as in (4). This puzzle now has an explanation, with the analysis for *hii* defined in the previous section. First we need to determine whether *hii* takes narrow scope or wide scope with respect to *sirf*, and also determine which scopal relationship gets the proper felicity conditions for the reading.

We can determine which scopal relationship satisfies the felicity conditions by calculating the denotation of both LF's. (12) shows the calculation for *sirf* taking narrow scope with respect to *hii*; (13) shows the calculation for *sirf* taking wide scope with respect to *hii*.

- (12) a. $\llbracket \text{Aatish}_F \text{ ne Upasana ko kiss kiya} \rrbracket^o = \text{kissed}(\mathbf{a}, \mathbf{u})$
 b. $\llbracket \text{sirf}(\text{Aatish}_F \text{ ne Upasana ko kiss kiya}) \rrbracket^o = \forall p' [(p' \in C \ \& \ \vee p') \rightarrow p' = \text{kissed}(\mathbf{a}, \mathbf{u})]$
 c. $\llbracket \text{hii}(\text{sirf}(\text{Aatish}_F \text{ ne Upasana ko kiss kiya})) \rrbracket^o = \forall p' [(p' \in C \ \& \ \vee p') \rightarrow p' = \text{kissed}(\mathbf{a}, \mathbf{u})]$
- (13) a. $\llbracket \text{Aatish}_F \text{ ne Upasana ko kiss kiya} \rrbracket^o = \text{kissed}(\mathbf{a}, \mathbf{u})$
 b. $\llbracket \text{hii}(\text{Aatish}_F \text{ ne Upasana ko kiss kiya}) \rrbracket^o = \text{kissed}(\mathbf{a}, \mathbf{u})$
 c. $\llbracket \text{sirf}(\text{hii}(\text{Aatish}_F \text{ ne Upasana ko kiss kiya})) \rrbracket^o = \forall p' [(p' \in C \ \& \ \vee p') \rightarrow p' = \text{kissed}(\mathbf{a}, \mathbf{u})]$

Truth-conditionally, (12) and (13) are equivalent. However, due to the differing placement of *hii*, the scalar presupposition trigger, the likelihood requirements differ between the two. If *hii* takes wide scope with respect to *sirf*, as in (12c), *sirf* combines with the proposition first, and the alternatives fed into *hii* are of the form *Only X kissed Upasana*. By the scalar presupposition, this requires that *Only Aatish kissed Upasana* is more likely than *Only Vijay kissed Upasana* and *Only Deepak kissed Upasana*. If instead *hii* takes narrow scope with respect to *sirf*, as in (13c), the alternatives for the likelihood ranking are simply of the form *X kissed Upasana*. This is exactly what the sentence requires of the context – that *Aatish kissed Upasana* be more likely than *Deepak kissed Upasana* and *Vijay kissed Upasana*. Thus (9) accounts for both the right truth conditions and the proper presuppositional requirements for *Sirf Aatish ne hii Upasana ko kiss kiya* with the LF in (13c).

6. *hii* with sentential negation

Lastly, I will present the puzzle posed by a sentence in which sentential negation used along with *hii* gives rise to two potential readings. Bhatt noticed that one reading is an *only-not* reading, and another is a *not-even* reading, as described in the Introduction and brought out in (6).

Not all speakers are able to get both of these readings, but ideally an account for *hii* should be able to account for the two situations in (14).

- (14) a. Background Context: Aatish and Upasana are known to be a couple.
Situation: Aatish didn't kiss Upasana, Deepak didn't kiss Upasana, Vijay didn't kiss Upasana.
- b. Background Context: N/A
Situation: Aatish didn't kiss Upasana, Deepak kissed Upasana, Vijay kissed Upasana.

As with the case of *sirf* and *hii*, there are two possible scopal relationships in the negated environment. If we look at the LF with *hii* taking narrow scope with respect to negation, we get the requirements we need to elicit the (14a) reading, which is a *not-even* reading. Aatish kissing Upasana should be the most likely, which it is if the context has it that they are a couple. The exclusive presupposition requires that if anybody kissed Upasana, it should have been Aatish; nobody did, so this is vacuously satisfied.

If *hii* takes wide scope over negation, then we get the right exclusive requirement for (14b), in that Aatish should be the only one to have not kissed Upasana. However, the scalar presupposition needs to be taken into consideration as well, and unfortunately this is where the problem is. It seems that it does not matter who was the most likely to kiss Upasana; the only requirement is that Aatish is the only one who did not in the situation. Somehow, the scalar presupposition needs to be eliminated in this case, though according to the analysis, it needs to hold whenever *hii* is employed.

I leave for further research the question of whether the scalar inference can be canceled to accommodate this reading, and if so, how this can be done in a principled way.

7. Conclusion

In this paper, I have shown that *hii* has an exclusive meaning component like *only*, as is often thought, but it also has a meaning component that forces an ordering amongst the propositions it is being compared against. This scalar presupposition is where *hii* bears some similarity with the classical analysis of English *even*. Putting aside the fact that *even* has an extra presupposition that requires existence, *hii* is the "opposite" of *even*, in picking out the most likely proposition, rather than the least likely.

Defining exclusive and scalar felicity conditions on the use of *hii* provides us with an explanation for why a focused constituent can be double-marked with both *sirf* (Hindi *only*) and *hii*, and also sheds light on how we might ultimately explain why *hii* in negated sentences yields both an *only-not* and *not-even* reading.

References

- Bhatt, Rajesh (1994). The semantics of *hi*. Ms., University of Massachusetts .
- Horn, Larry (1969). A presuppositional approach to *only* and *even*. *Papers from the Fifth Regional Meeting of the Chicago Linguistic Society*, 98–107.
- Imai, Takashi (1981). On enclitic *hi*: in Hindi. *Indian Linguistics* 42:1-4, 48–57.
- McGregor, Ronald S. (1972). *Outline of Hindi Grammar*. Oxford University Press, London.
- Rooth, Mats (1992). A theory of focus interpretation. *Natural Language Semantics* 1:1, 75–116.
- Rooth, Mats (1996). Focus. Lappin, Shalom (ed.), *The Handbook of Contemporary Semantic Theory*, Blackwell, Oxford.
- Sharma, Devyani (1999). Nominal clitics and constructive morphology in Hindi. *Online Proceedings of the LFG99 Conference*, CSLI Publications.
- Verma, Manindra K. (1971). *The structure of the noun phrase in English and Hindi*. Motilal Banarsidass, Delhi.