

1 Negative Polarity Items and the Issue of Scope

Unlike English, sentential negation can license subject NPI's in Hindi (cf. Mahajan (1990), Lahiri (1998)).

- (1) *kisii-ne-bhii jOn-ko nahī: dekh-aa*
someone-Erg-'even' John-Acc Neg see-Pfv
'Nobody saw John.' (Lit. *Anybody didn't see John.)

Negation can also take scope over subject quantifiers in Hindi.

- (2) *[koiī aadmīī] nahī: aa-yaa*
some man Neg come-Pfv.MSG
 $\neg > \exists$: No man came. (**easy to get**)
 $\exists > \neg$: There was a man who did not come. (**hard to get**)

This is in contrast to English.

- (3) A man didn't come.
a. $\exists x$ [man(x)] [\neg came(x)]
b. (*) $\neg \exists x$ [man(x)] [came(x)]
- (4) I didn't see a man.
a. $\exists x$ [man(x)] [\neg see(I,x)]
b. $\neg \exists x$ [man(x)] [came(x)]

Negation in restructuring infinitival complement clauses is able to take scope over the matrix predicate.

- (5) **Ram** [Dilli **nahī:** jaa-naa] chaah-taa (hai)
Ram.M Delhi Neg go-Inf want-Hab.MSG be.Prs.Sg
'Ram doesn't want to go to Delhi.'
(Possibly: Ram wants to not go to Delhi)
- (6) Matrix NPI-licensing and Auxiliary deletion:
a. Tense Auxiliary is obligatory with non-negated habituals:
Ram [Dilli jaa-naa] chaah-taa *(hai)
Ram.M Delhi go-Inf want-Hab.MSG be.Prs.Sg
'Ram wants to go to Delhi.'
- b. NPI-licensing:
ek-bhīī larḱaa [Dilli **nahī:** jaa-naa] chaah-taa
one-'even' boy.MSG Delhi Neg go-Inf want-Hab.MSG
'Not even one boy wants to go to Delhi.'

1.1 Mahajan (1990)'s Proposal

Negation in Hindi moves at LF and can take scope over the matrix IP, conditions on covert movement permitting.

• A negation in a non-restructuring infinitival complement, subject infinitival, or finite clausal complement is unable to license an NPI in an embedding clause.

- (7) *kah* 'tall': a non-restructuring predicate
a. *Ram Sita-se* [Dilli **nahī:** jaa-ne]-ko *kah-taa* *(hai)
Ram Sita-Instr Delhi Neg go-Inf.Obl-Dat say-Hab.MSG be.Prs.Sg
'Ram tells Sita to not go to Delhi.'
- b. *Ram Sita-se* [Dilli jaa-ne]-ko *nahī: kah-taa* (hai)
Ram Sita-Instr Delhi go-Inf.Obl-Dat Neg say-Hab.MSG be.Prs.Sg
'Ram does not tell Sita to go to Delhi.'
- (8) a. ***ek-bhīī larḱaa** Sita-se [Dilli **nahī:** jaa-ne]-ko *kah-taa* *(hai)
one-even boy Sita-Instr Delhi Neg go-Inf.Obl-Dat say-Hab.MSG be.Prs.Sg
'*Even a single boy told Sita to not go to Delhi.'
- b. **ek-bhīī larḱaa** Sita-se [Dilli jaa-ne]-ko *nahī: kah-taa* (hai)
one-even boy Sita-Instr Delhi go-Inf.Obl-Dat Neg say-Hab.MSG be.Prs.Sg
'Not even a single boy told Sita to not go to Delhi.'

- Rightward scrambling, which blocks wide scope for in-situ *wh*-XP's also block wide scope for negation.

- (9) *ek-bhii larḱaa chaah-taa [Dilli **nahi**: jaa-naa]
 one-'even' boy.MSg Delhi Neg go-Inf want-Hab.MSg
 '*Even one boy wants to not go to Delhi.'

2 The Form and Meaning of Hindi NPIs

NPI's in Hindi are licensed in the usual downward entailing environments and also in generic environments where they receive a Free Choice reading (see also Vasishth (1998)).

Lahiri (1998) argues that the distributional properties of most Hindi NPI's can be derived from their structure.

- (10) Structure of some Hindi NPIs (from Lahiri (1998):58)
- ek bhii* = 'any, even one' = *ek* 'one' + *bhii* 'also, even'
 - koi bhii* = 'anyone, any (count)' = *koi* 'some (count)' + *bhii* 'also, even'
 - kuch bhii* = 'anything, any (mass)' = *koi* 'some (count)' + *bhii* 'also, even'
 - zaraa bhii* = 'even a little' = *zaraa* 'little' + *bhii* 'also, even'
 - kabhii bhii* = 'anytime, ever' = *kabhii* 'sometime' + *bhii* 'also, even'
 - kahi: bhii* = 'anywhere' = *kabhii* 'somewhere' + *bhii* 'also, even'

2.1 Lahiri (1998)'s Basic Proposal

- *bhii* by itself has a meaning like 'also'.

- (11) Yunus bhii aa-yaa thaa
 Yunus 'also' come-Pfv.MSg be.Pst.MSg
 'Yunus also came.'
 Implicature: Someone else came.

- If the associate of *bhii* is focused, we get an *even* reading.

- (12) [_F Yunus] bhii aa-yaa thaa
 Yunus 'also' come-Pfv.MSg be.Pst.MSg
 'Even Yunus came.'
 Implicature: The likelihood of Yunus's coming was less than the likelihood of everyone else who came.

2.2 The scopal theory of *even*

even is focus-sensitive:

- (13) a. John even introduced MARY to Bill.
 b. John even introduced Mary to BILL.

The contribution of *even* in (13a):

- (14) a. Assertion: John introduced Mary to Bill.
 b. Implicatures:
 i. There is someone other than Mary that John introduced to Bill.
 ii. For all contextual alternatives *x* to Mary, the likelihood of John introducing *x* to Bill is greater than the likelihood of John introducing Mary to Bill.

Certain sentences with *even* are ambiguous:

- (15) It is hard for me to believe that Bill understands [even Aspects].
 a. Reading 1: I think that *Aspects* is really tough, and Bill is really smart.
 b. Reading 2: I think that *Aspects* is really easy, and Bill is slow.

This ambiguity has been analyzed in scopal terms: at LF, *even* moves to the edge of a clause. If more than one option is available, this leads to ambiguity.

- (16) a. It is hard for me to believe that Bill understands [even Syntactic Structures].
 LF: It is hard for me to believe that [[even Syntactic Structures], [Bill understands *t_i*]]
 b. It is hard for me to believe that Bill understands [even Mother Goose].
 LF: [[even Mother Goose], [It is hard for me to believe that [Bill understands *t_i*]]]

2.3 Deriving the properties of Hindi NPIs

- NPI's are inherently focused.

- The property to which *bhii* attaches in an NPI is a 'weak' predicate **one** - it is entailed by all its contextual alternatives.

$$(17) \forall x(P(x) \rightarrow \mathbf{one}(x))$$

- If there is no downward entailing operator/genericity, the implicatures of the weak predicate + *bhii* are systematically violated.

- The presence of a downward entailing operator/genericity rectifies this problem.

2.3.1 The Basic Cases

No DE operator:

- (18) a. Surface Order: [[one even] man] came
 b. LF: [one even]_i [[t_i man] came]
- (19) a. Assertion: $\exists x [\mathbf{one}(x) \wedge \text{person}(x)][\text{came}(x)]$
 b. Alternative Propositions: $\exists x [P(x) \wedge \text{person}(x)][\text{came}(x)]$
 (P is a pragmatically salient predicate.)
 c. Implicature of *even*:
 $\text{likelihood}(\exists x [\mathbf{one}(x) \wedge \text{person}(x)][\text{came}(x)]) < \text{likelihood}(\exists x [P(x) \wedge \text{person}(x)][\text{came}(x)])$
 d. Semantic property of **one**:
 $\text{likelihood}(\exists x [P(x) \wedge \text{person}(x)][\text{came}(x)]) \leq \text{likelihood}(\exists x [\mathbf{one}(x) \wedge \text{person}(x)][\text{came}(x)])$
 Clash between the implicature of the contribution of **one** renders the structure unusable.

Blocking the *also* reading of *bhii*.

Presence of Negation:

- (20) a. Surface Order: [[one even] man] Neg came
 b. LF: [one even]_i [Neg [[t_i man] came]]
- (21) a. Assertion: $\neg \exists x [\mathbf{one}(x) \wedge x \text{ came}]$
 b. Alternative Propositions: $\neg \exists x [P(x) \wedge x \text{ came}]$ (P is a pragmatically salient predicate.)
 c. Implicature of *even*:
 $\text{likelihood}(\neg \exists x [\mathbf{one}(x) \wedge x \text{ came}]) < \text{likelihood}(\neg \exists x [P(x) \wedge x \text{ came}])$
 d. Semantic property of **one**:
 $\neg \exists x [\mathbf{one}(x) \wedge x \text{ came}] \rightarrow \neg \exists x [P(x) \wedge x \text{ came}]$
 $\text{likelihood}(\neg \exists x [\mathbf{one}(x) \wedge x \text{ came}]) \leq \text{likelihood}(\neg \exists x [P(x) \wedge x \text{ came}])$
 Hence no contradiction.

Free Choice Any:

- (22) ek bhii aadmii is mez-ko uṭhaa sak-taa hai
 one even man this table-Acc lift can-Hab.MSG be.Prs.3Sg
 'Even one man can lift this table.'

The problem of 'generic' entailments.

2.3.2 Differences in Contextual Alternatives

- (23) a. *ek bhii*:
 ek bhii aadmii is mez-ko uṭhaa sak-taa hai
 one even man this table-Acc lift can-Hab.MSG be.Prs.3Sg
 'Even one man can lift this table.'
 b. *koi bhii*:
 koi bhii aadmii is mez-ko uṭhaa sak-taa hai
 some even man this table-Acc lift can-Hab.MSG be.Prs.3Sg
 'Any man can lift this table.'
- (24) Contextual alternatives for:
 a. **ek**/'one': **two, three, four...**
 b. *koi*/'some': other contextually salient properties possessed by members of the set denoted by the NP.

2.3.3 The Locality of NPI-licensing derived

NPI Licensing requires:

- (25) a. Negation takes scope over trace of NPI.
 b. The 'even' part of the NPI takes scope over Negation.

→ Locality effects on NPI-licensing - negation must take scope over NPI, but NPI must not be too deeply embedded.

• Since NPI licensing is allowed across some finite clauses in the (Neg..._{CP}...NPI) configuration, we have to countenance covert movement of *even* out of finite clauses (as in English).

2.4 Some Additional Issues

Not all NPI's require a *bhii*.

- (26) *tas-se mas* 'budge an inch'
 a. vo ṭas-se mas **nahī**: hu-aa
 he budge-an-inch Neg be-Pfv.MSG
 'He did not budge an inch.'
 b. vo ṭas-se mas tak/bhii **nahī**: hu-aa
 he budge-an-inch till/even Neg be-Pfv.MSG
 'He did not so much as/even budge an inch.'

Most phrasal NPI's can optionally take *bhii* 'even' or *tak* 'till'.

Non NPI usage of *tak*:

- (27) Mona Dilli-**tak** train-se jaa-egii
Mona Delhi-till train-Inst go-Fut.3FSg
'Mona will go up until Delhi by train.'

tak does not combine with determiners, but combines with NP's.

- (28) a. *[ek tak freshman] nahī: aa-yaa
one till freshman Neg come-Pfv.MSg
- b. [ek freshman] tak nahī: aa-yaa
one freshman till Neg come-Pfv.MSg
'Not even a freshman came.'
(the focus is on the predicate 'freshman', not on the number.)

A puzzle: Vasishth (1998) notes that there are some NPI's like *sir pair* lit. 'head legs', 'head or tail', which display the following pattern:

- (29) a. Downward Entailing, but not pure negation:
sir pair, **sir pair* + *bhii*, **sir pair* + *tak*
- b. Antimorphic (i.e. basically negation):
???*sir pair*, *sir pair* + *bhii*, *sir pair* + *tak*

He suggests that strongly negative environments prefer NPI's with overt *bhii/tak*.

Would a scopal approach extend to the inabilitative passive?

- (30) Inabilitative Passive
- a. ???Saira-se per ukhaar-e jaa-te hĒ
Saira-Instr tree.m uproot.Pfv.MPI Neg Pass-Hab.MPI be.Prs.Pl
'?Trees are uprooted with Saira.'
- b. Saira-se per ukhaar-e nahī: jaa-te
Saira-Instr tree.m uproot.Pfv.MPI Neg Pass-Hab.MPI
'Saira is unable (to bring herself) to uproot trees.'

Where would the covert 'even' be here?

Maybe it doesn't need to. The NPI nature of the inabilitative could be like the NPI nature of modals in many languages, a fact that needs to be stipulated.

References

- Lahiri, U. (1998) "Focus and Negative Polarity in Hindi," *Natural Language Semantics* 6:1, 57–123.
- Mahajan, A. K. (1990) "LF Conditions on Negative Polarity Licensing," *Lingua* 80:4, 333–348.
- Vasishth, S. (1998) "Negative Contexts and Negative Polarity in Hindi," in R. Singh, ed., *The Yearbook of South Asian Languages 1998*, Sage Publications, Thousand Oaks/London/New Delhi, 135–158.