

Wide Scope Universal NPIs in Japanese?

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1. Indeterminate-*mo* NPIs

- (1) a. Yoko-wa dare-mo shootaishi-nakat-ta.
 Yoko-Top who-MO invite-not-Past
 'Yoko didn't invite anyone.'
- b. dare-mo Yoko-o shootaishi-nakat-ta.
 who-MO Yoko-Acc invite-not-Past
 'Nobody invited Yoko.' (Lit. *Anybody didn't invite Yoko.) [Like Hindi]

(2) A partial list of indeterminate pronouns: [x: low tone]

<i>dare</i> (person)	<i>nani</i> (thing)	<i>doko</i> (place)
a. <u>dare</u> ...Q 'who'	<u>nani</u> ...Q 'what'	<u>doko</u> ...Q 'where'
b. <u>dare-ka</u> 'someone'	<u>nani-ka</u> 'something'	<u>doko-ka</u> 'somewhere'
c. <u>dare-mo</u> 'everyone'	* <u>nani-mo</u> 'everything'	<u>doko-mo</u> 'everywhere'
d. <u>dare-mo</u> 'anyone _{NPI} '	<u>nani-mo</u> 'anything _{NPI} '	<u>doko-mo</u> 'anywhere _{NPI} '
e. <u>dare-de-mo</u> 'anyone _{FC} '	<u>nan-de-mo</u> 'anything _{FC} '	<u>doko-de-mo</u> 'anywhere _{FC} '

• *Mo* as 'also/even' [Like Hindi *bhii*]

- (3) Yoko-wa Saburo-mo shootaishi-ta.
 Yoko-Top Saburo-MO invite-Past
 'Yoko also/even invited Saburo.'

- Can we extend Lahiri's (1998) analysis of Hindi NPIs to indeterminate-*mo* NPIs?
 ☞ Indeterminate-*mo* NPIs have more limited distribution.¹

¹ Minimal value NPIs (e.g., *hito-ri-mo* = one-Cl_{person}-MO, 'even a single person') and exceptive NPIs (e.g., *Taro-sika* 'anyone_{NPI} but Taro') require sentential negation, too. There are other, less studied types of items (NPIs?) that seem to have wider distribution: e.g., *sonnani* 'so much/that much' (Y.-S. Lee 1993, Nam 1996, Yoshida 1997).

- (4) Descriptive generalizations for indeterminate-*mo* NPI licensing
- Sentential negation requirement
 - Clausemate requirement (But see Yamashita 2003.)
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 - Immediate scope requirement —not absolute (Linebarger 1987)
 - Scope rigidity —general property of LF in Jpn.

• Scope of *fewer than five students*

- (5) *[go-nin ika-no gakusei]-ga nani-mo yon-da.
 five-Cl_{person} fewer.than-Gen student-Nom what-MO read-Past.
 'Fewer than five students read anything.'

• Restriction of *every*

- (6) *[[nani-mo yon-da] dono gakusei-mo] gookakushi-ta.
 what-MO read-Past every student pass-Past
 'Every student who read anything passed.'

- (7) Three types of NPIs [See Bernhard's handout on 8/27/03]
- Weak *any, ever, ...* mere monotone decreasing context
 - Strong *lift a finger, ...* anti-additive context
 - Superstrong *one bit, ...* sentential negation

- (8) a. Taro didn't say [that Yoko invited anyone].
 b. *Taro-wa [Yoko-ga dare-mo shootaishita to] iwa-nakat-ta.
 Taro-Top Yoko-Nom who-mo invited that say-not-Past
 'Taro didn't say that Yoko invited anyone.'

2. Existential vs. universal analyses of NPIs

- (9) a. Yoko didn't invite anyone.
 b. Yoko-wa dare-mo shootaishi-nakat-ta.
 Yoko-Top who-MO invite-not-Past
 'Yoko didn't invite anyone.'

- (10) a. Narrow scope existential: $\neg \exists x[x \text{ is a person} \ \& \ \text{Yoko invited } x]$
 b. Wide scope universal: $\forall x[x \text{ is a person} \ \rightarrow \ \neg \text{Yoko invited } x]$

- (11) a. $[[\text{anyone/dare-mo}]] = \lambda P \exists x [\text{person}(x) \ \& \ P(x)]$
 b. $[[\text{anyone/dare-mo}]] = \lambda P \forall x [\text{person}(x) \rightarrow P(x)]$

- *Any* NPIs: Narrow scope existential (Ladusaw 1979, Carlson 1980)
- *ind-mo* NPIs: Assumed to be like English *any*. (e.g., Nam 1994)

Recent proposal

What we see in (9b) is a negative concord phenomenon (Kawamori & Ikeya 199x, Watanabe 2002a,b).

Negative concord phenomenon

- (12) a. Nadie ha venido. (Spanish, from Alonso-Ovalle & Guerzoni 2003)
 n-body has come
 'Nobody came.'
 b. *(No) ha venido nadie.
 not has come n-body
 'Nobody came.'

(13) *Nadie* 'n-body' is:

- (a) always a negative quantifier (NOBODY).
- (b) always an NPI (ANYBODY). (i) narrow scope existential NPI²
 (ii) wide scope universal NPI³
- (c) ambiguous between (a) and (b).

(14) *Dare-mo* is always a negative quantifier.
 Sentential negation has no semantic content.

$$[[\text{dare-mo}]] = \lambda P \neg \exists x [\text{person}(x) \ \& \ P(x)]$$

$$= \lambda P \forall x [\text{person}(x) \rightarrow \neg P(x)] \quad (\text{Watanabe 2002a,b})$$

Outline

- i. I present evidence for (11b), the wide scope univ. analysis of *ind-mo* NPIs.
- ii. It turns out that the evidence also shows that (14) is not tenable.

² See, for example, Ladusaw (1992), Kratzer (2003) and Alonso-Ovalle and Guerzoni (2003).

³ Giannakidou (2000) analyzes Greek emphatic n-words as wide scope universals.

3. Constructing cases where the two analyses make different predictions

(15) Downward monotone functions [See Bernhard's handout on 8/27/03]
 $f(A \vee B) \rightarrow f(A) \wedge f(B)$ (Zwarts 1998)

(16) Anti-additive functions
 $f(A \vee B) = f(A) \wedge f(B)$

(17) Anti-morphic functions (Sentential negation)

a. $f(A \vee B) = f(A) \wedge f(B)$

b. $f(A) \vee f(B) = f(A \wedge B)$

(18) a. $\neg \exists = \forall \neg$

b. $\exists \neg = \neg \forall$

(19) a. (Alex danced) or (Christina danced) or (Tammy danced).

b. Someone danced.

(20) a. (Alex danced) and (Christina danced) and (Tammy danced).

b. Everyone danced.

What we should look for is:

(21) Non-anti-additive functions

$f(A \vee B) \neq f(A) \wedge f(B)$

(22) Non-anti-additive function $Q\neg$

a. $Q\neg \exists$

b. $\neq \forall Q\neg$

(many not, more than n not, mostly not, ...)

(23) Non-anti-additive function $\neg Q$

a. $\neg Q \exists$

b. $\neq \forall \neg Q$

(not many, not more than n, not mostly, not always, ...)

(24) The IRS $Q\neg$ rarely audits anyone.
usually.not

NPI

(Ladusaw 1979)

(25)

	predicted reading	actual reading
i) \exists -analysis	$Q\neg \exists$	$Q \neg \exists$
ii) \forall -analysis	$\forall Q\neg$	

i) $Q\neg \exists$ It is usually not the case that there is someone whom the IRS audits.

(= The IRS almost always audits no one.)

ii) $\forall Q\neg$ *Everyone is such that it is usually the case that the IRS doesn't audit him.

- What's the picture now?

i) Universal quantificational phrases that are not polarity sensitive and undergo normal QR:

dare-mo 'everyone', *doko-mo* 'everywhere', ...

ii) Universal quantificational phrases that are specified to be polarity sensitive and undergo QR to Spec of NegP⁴:

dare-mo 'everyone_{NPI}', *doko-mo* 'everywhere_{NPI}', ...

iii) *Mo* in indeterminate-*mo* always contributes universal quantification.

5. Could they be negative quantifiers?

• (28) also shows that the meaning of *dare-mo* cannot contain negation as in (14).

(14) [[*dare-mo*]] = $\lambda P \neg \exists x [\text{person}(x) \ \& \ P(x)]$
= $\lambda P \forall x [\text{person}(x) \rightarrow \neg P(x)]$ (Watanabe 2002a,b)

Puzzle for both negative and non-negative quantifier analyses:

—What's going on with negative fragment answers?

—What kind of ellipsis is involved?

(30) Q: *Ti idhes?*
what saw.2sg
'What did you see?'

A: *TIPOTA.*
n-thing
'Nothing' (Giannakidou 2000)

(32) Q: *Nani-o mi-ta no?*
what-Acc see-Past Q
'What did you see?'

A: *Nani-mo.*
what-MO
'Nothing' (Watanabe 2002a,b)

(31) a. *TIPOTA [dhen idha]*
n-thing not saw.1sg
'I didn't see anything.'

b. **TIPOTA [idha]*
n-thing saw.1sg
'I saw anything.'

(33) a. *Nani-mo [mi nakat ta]*
what-MO see-not-Past
'I didn't see anything.'

b. **Nani-mo [mi ta]*
what-MO see-Past
'I saw anything.'

⁴ Giannakidou (2000: 466) reports that there are recorded instances in southern Igbo where 'anyone/anything' and 'everyone/everything' are distinguished only by tone.

Appendix: Why teasing the two analyses apart is so difficult in Japanese

The properties (4c) and (4d) conspire to make it very difficult to construct cases that decide between the narrow scope existential and wide scope universal analyses. What follows is a chronicle of unsuccessful attempts to tease the two analyses apart, despite the potentially deciding configurations that contain non-anti-additive expressions.

A. [. . . Q . . . NPI . . . Neg . . .]

- (1) $\begin{matrix} \text{Q} & & \text{NPI} & & \text{Neg} \\ \text{ooku-no seijika-ga} & & \text{dare-mo} & & \text{yoba-nakat-ta.} \\ \text{many-Gen politician-Nom} & & \text{who-MO} & & \text{invite-not-Past} \end{matrix}$ (Sohn 1995)
 'Many politicians didn't invite anyone.'

(2)

	possible reading	actual reading
i) \exists -analysis	$Q \neg \exists$	$Q \neg \exists$
ii) \forall -analysis	$\forall Q \neg$	$= Q \forall \neg$

- i) $Q \neg \exists$ many politicians_x \neg [someone_y [x invited y] \checkmark
 ii) $\forall Q \neg$ everyone_y [many politicians_x \neg [x invited y] *
<4d: SR (& 4c: ISR)>
 ii') $Q \forall \neg$ many politicians_x [everyone_y \neg [x invited y] \checkmark

(3)

	possible reading	actual reading
i) \exists -analysis	$\neg Q \exists$	$Q \neg \exists$
ii) \forall -analysis	$\forall \neg Q$	$= Q \forall \neg$

- i) $\neg Q \exists$ \neg many politicians_x [someone_y [x invited y] *<4c: ISR>
 ii) $\forall \neg Q$ everyone_y \neg [many politicians_x [x invited y] *<4d: SR>

B. [. . . NPI . . . Q . . . Neg . . .]

- (4) $\begin{matrix} \text{NPI} & & \text{Q} & & \text{Neg} \\ \text{dare-mo} & & \text{ooku-no seijika-o} & & \text{yoba-nakat-ta.} \\ \text{who-MO} & & \text{many-Gen politician-Acc} & & \text{invite-not-Past} \end{matrix}$
 'No one invited many politicians.'

(5)

	possible reading	actual reading
i) \exists -analysis	$Q \neg \exists$	$\neg \exists Q$
ii) \forall -analysis	$\forall Q \neg$	$= \forall \neg Q$

- i) $Q \neg \exists$ many politicians_y \neg [someone_x [x invited y] *<4d: SR>
ii) $\forall Q \neg$ everyone_x [many politicians_y \neg [x invited y] *<4c: ISR>
- i') $\neg \exists Q$ \neg someone_x [many politicians_y [x invited y] \checkmark
ii') $\forall \neg Q$ everyone_x \neg [many politicians_y [x invited y] \checkmark

(6)

	possible reading	actual reading
i) \exists -analysis	$\neg Q \exists$	$\neg \exists Q$
ii) \forall -analysis	$\forall \neg Q$	$= \forall \neg Q$

- i) $\neg Q \exists$ \neg [many politicians_y [someone_x [x invited y] *
<4d: SR (& 4c: ISR)>
ii) $\forall \neg Q$ everyone_x \neg [many politicians_y [x invited y] \checkmark

Partial References [See the refs on the syllabus for what's not listed here.]

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