Wh-quantification in Dharamsala Tibetan

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Today

Today we discuss a series of **negative polarity items (NPIs)** in **Dharamsala Tibetan**:

(1) ***Wh*-EVEN NPIs:**

Su-(chi)-ye lep-**ma**-song.
who-(one)-EVEN arrive-NEG-PRFV

'No one arrived.'

Dharamsala Tibetan is SOV, *wh*-in-situ, with scrambling. Some transitive subjects bear an ergative marker (see DeLancey, 2011).

Today

The combination of *wh*-words and EVEN for NPIs is well attested:

(2) **Japanese *wh*-EVEN NPI:**

Dare-mo ko-**nak**-atta.
who-EVEN come-NEG-PAST

'No one came.'

(3) **Bengali *wh*-EVEN NPI:**

Ram *kotha-o* jay **na**.
Ram where-EVEN go NEG

'Ram doesn't go anywhere.'
(Ramchand, 1996, 22)

The contribution of EVEN in NPIs has been well studied (Heim, 1984; Lee and Horn, 1994; Lahiri, 1998; Chierchia, 2013, a.o.). How they compose with *wh*-words is less understood (but see Ramchand 1996).

☞ **How does a *wh*-word combine with EVEN to produce an NPI?**

Shape and distribution

Wh-EVEN NPIs

(1) ***Who*-EVEN NPI = anyone:**

Su-(chi)-ye lep-**ma**-song.
who-(one)-EVEN arrive-NEG-PRFV

'No one arrived.'

☞ NPIs can be constructed very productively with different *wh*-words and EVEN *-ye/yang*, with an optional *chik* 'one.'

Wh-EVEN NPIs

(4) ***What*-EVEN NPI = anything:**

a. Nye *khare-yang* se-**me**.
1sg.ERG what-EVEN eat-NEG
'I didn't eat anything.'

b. Nye *khee* se-**me**.
1sg.ERG anything eat-NEG
'I didn't eat anything.'

Hypothesis: *khare-ye* > *khee*

Wh-EVEN NPIs

(5) ***When*-EVEN NPI = at any time:**

Nga *khatu-ye* nye-khi-**me**.
1sg when-EVEN sleep-PROG-NEG

'I never sleep.' = 'I don't sleep at any time.'

(6) **Where-EVEN NPI = anywhere:**

Nga *kawa-chi-ye* ching-**me**.
1sg where-one-EVEN go-NEG

'I didn't go anywhere.'

(7) **Which-EVEN NPI = any of...:**

Kuu tep-*kangki-ye* lok-**min**-duk.
3sg book-which-EVEN read-NEG-EVID

'He didn't read any of the books.'

Chik and *-ye/yang*

Wh-ye/yang and *wh-chiye* are productively NPIs.

Q: Could *-chiye* be one morpheme?

Case markers show that *chik* and *-ye/yang* are two separate morphemes:

(8) ***Chik* and *-ye/yang* separated by ERG:**

Kyarang *su-chi-ki-ye* thong-song-**pe**?
2sg who-one-ERG-EVEN see-PRFV-Q

'Did anyone see you?'

In fast speech, *su-chi-ki-ye* > *su-chi-k-e*.

Chik and *-ye/yang*

(9) ***Chik* is 'one':**

Lopchuk *chik* lep-**ma**-song.
student one arrive-NEG-PRFV

'One student didn't arrive.' (≠ 'No student arrived.')

(10) ***-ye/yang* means 'also/even':**

Tenzen-ki tep-di-*ye* lok-song.
Tenzen-ERG book-this-EVEN read-PRFV

'Tenzen also read THIS BOOK.'

More later on the meaning of *-ye/yang*.

One-EVEN NPIs

Dharamsala Tibetan has an additional type of NPI:

(11) **One-EVEN NPIs:**

Lopchuk *chi-ye* lep-**ma**-song.
student one-EVEN arrive-NEG-PRFV

'No student arrived.'

Here, *chik* 'one' is obligatory. As noted above, *-ye/yang* by itself means 'also/even.' We will focus today on *wh*-EVEN NPIs.

NPI licensing

NPIs are licensed in the scope of negation, but often also in other *downward-entailing* environments (Ladusaw, 1979).

☞ NPIs in Dharamsala Tibetan are licensed by **negation and questions** but not other downward-entailing environments.

NPI licensing

(12) **NPIs require a licensing negation or question:**

a. * Nye *khee* see-yin.
1sg.ERG anything eat-EVID

b. Nye *khee* see-**me**.
1sg.ERG anything eat-NEG
'I didn't eat anything.'

c. Kyarang-ki *khee* see-**pe**?
2sg-ERG anything eat-Q
'Did you eat anything?'
$\neq$ 'What did you eat?'

(See Guerzoni (2004) on why questions behave like negation for NPI licensing.)

Conditional clauses

(13) **NPIs not licensed in conditional clause:**

a. [Tenzen chang tung-nga], ra-si-khi-duk.
Tenzen beer drink-if drunk-become-PROG-EVID
'If Tenzen drinks beer, she gets drunk.'

b. * [Tenzen chang *chi-ye* tung-nga], rasi-khi-duk.
Tenzen beer one-EVEN drink-if drunk-become-PROG-EVID
Intended: 'If Tenzen drinks any beer, she gets drunk.'

Compare to English *any*, in translations.

Clause-mate condition

(14) **Licensing negation must be in the same clause:**

a. Tashi-ki [Tenzen chang *chi-ye* tung-**ma**-song] lap-song.
Tashi-ERG [Tenzen beer one-EVEN drink-NEG-PRFV] say-PRFV
'Tashi said [Tenzen didn't drink any beer].'

b. * Tashi-ki [Tenzen chang *chi-ye* tung-song] lap-**ma**-song.
Tashi-ERG [Tenzen beer one-EVEN drink-PRFV] say-NEG-PRFV
Intended: 'Tashi didn't say [Tenzen drank any beer].'

Similar clause-mate conditions are well-known for Japanese and Korean NPIs (McGloin, 1972; Oyakawa, 1975; Choe, 1988; Kuno, 1998, a.o.).

Summary

***Wh*-EVEN NPIs:** *wh*-(one)-EVEN

Both syntactic and semantic requirements on NPI licensing:

Semantics: NPI-licensing environments include negation, questions

Syntax: clause-mate condition

Analysis

The semantics of *even*

Two parts to the meaning of *even*: (Karttunen and Peters, 1979, a.o.)

(15) *Even* JOHN came to the party.

Additive: $\rightsquigarrow$ Someone else came to the party. (*also*, *too*, etc.)

Scalar: $\rightsquigarrow$ John is less likely than others to come to the party.

Both will be important.

The semantics of *even*

(16) **Additive *-ye/yang*:**

Gegen lep-song. Lopchuk-*ye* lep-song.
teacher arrive-PRFV student-EVEN arrive-PRFV

'Teachers arrived. STUDENTS also arrived.'

(17) **Scalar *-ye/yang*:**
Context: Tenzen has done many things to advance her career.

(Tenzen-ki) sinzi-nyamto-ye/yang changsa gyap-pare.
Tenzen-ERG president-with-EVEN marriage LV-EVID

'Tenzen even married the PRESIDENT.'

Formalization

Two meanings for α: (Rooth, 1985)

- $[\![\alpha]\!]^o$ = ordinary semantic value
- $[\![\alpha]\!]^f$ = focus semantic value, a set of alternatives

Alternatives vary in the position of focus:

(18) $[\![\text{JOHN came to the party}]\!]^o$ = that John came to the party

(19) $[\![\text{JOHN came to the party}]\!]^f = \left\{ \begin{array}{l} \text{that John came to the party,} \\ \text{that Mary came to the party,} \\ \text{that Bill came to the party,...} \end{array} \right\}$

We call $[\![\alpha]\!]^o$ the *prejacent*.

Formalization

(20) **The additive part:**

$\text{ADD}(\alpha) \rightsquigarrow \exists\phi \in [\![\alpha]\!]^f \setminus [\![\alpha]\!]^o\ (\phi\ \text{true})$

(21) **The scalar part:**

$\text{SCAL}(\alpha) \rightsquigarrow \forall\phi \in [\![\alpha]\!]^f \setminus [\![\alpha]\!]^o\ ([\![\alpha]\!]^o <_{\text{likely}} \phi)$

Both of these meanings are presuppositional. *Even* does not affect truth conditions (the ordinary semantic value).

NPIs and *even*

The connection between *even* and NPIs has been well established, both empirically and theoretically.

Core idea: NPI = EVEN + indefinite

(see e.g. Heim, 1984; Lee and Horn, 1994; Lahiri, 1998)

The **scalar** part of *even* associated with an indefinite will be strange, unless it's in a downward-entailing environment.

NPIs and *even*

(22) EVEN(I saw SOMEONE).

$$[\![\text{I saw SOMEONE}]\!]^f = \left\{ \begin{array}{l} \text{that I saw someone,} \\ \text{that I saw many,} \\ \text{that I saw everyone} \end{array} \right\}$$

SCAL $\rightsquigarrow$ (that I saw someone) $<_{\text{likely}}$ (that I saw many) and
(that I saw someone) $<_{\text{likely}}$ (that I saw everyone)

(23) EVEN(NEG(I see SOMEONE)). = **"I didn't see *anyone*."**

$$[\![\text{NEG(I saw SOMEONE)}]\!]^f = \left\{ \begin{array}{l} \text{NEG(that I saw someone),} \\ \text{NEG(that I saw many),} \\ \text{NEG(that I saw everyone)} \end{array} \right\}$$

SCAL $\rightsquigarrow$ NEG(that I saw someone) $<_{\text{likely}}$ NEG(that I saw many) and
NEG(that I saw someone) $<_{\text{likely}}$ NEG(that I saw everyone)
$\iff$ (that I saw someone) $>_{\text{likely}}$ (that I saw many) and
(that I saw someone) $>_{\text{likely}}$ (that I saw everyone)

Where's the indefinite?

To use this approach, we have to find an indefinite:

(24) *Su* lep-song(-pe)
who come-PRFV-Q
'Who came?'
* 'Someone came.'

This is true even with the numeral 'one' *chik*.

(25) * *Su-chik* lep-song.
who-one come-PRFV
Intended: 'Someone came.'

The semantics of *wh*-words

Wh-words denote alternatives corresponding to possible (short) answers to the question: (Hamblin, 1973)

(26) $[\![\text{who}]\!]^f = \{x \mid x \text{ animate}\} = \{\text{John, Mary, Bill...}\}$

(27) $[\![\text{who came}]\!]^f = \left\{ \begin{array}{l} \text{that John came,} \\ \text{that Mary came,} \\ \text{that Bill came,...} \end{array} \right\}$

Wh-words do not have an ordinary semantic value:
(Ramchand, 1996; Beck, 2006, see also Kratzer and Shimoyama 2002)

(28) $[\![\text{who}]\!]^o$ undefined

(29) $[\![\text{who came}]\!]^o$ undefined

Proposal

Idea: Use the **additive part** of EVEN to create the indefinite first.

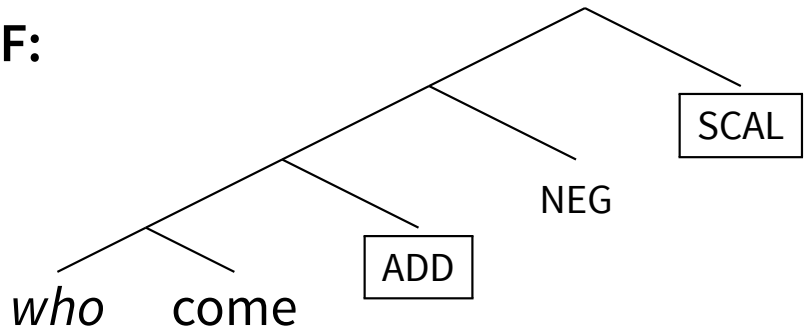
We'll illustrate with the following example:

(30) *Su-yang* lep-**ma**-song.
who-EVEN come-NEG-PRFV
'No one came.'

Proposal

Let the two parts of EVEN (ADD and SCAL) take scope independently:

LF:



EVEN being interpreted higher, not where it is pronounced, is independently necessary (see Karttunen and Peters 1979, also Lahiri 1998).

☞ The movement of EVEN at LF is clause-bound, explaining the clause-mate condition.

Proposal

(31) $[\![\text{who come}]\!]^o$ undefined

(32) $[\![\text{who come}]\!]^f = \left\{ \begin{array}{l} \text{that Tenzen comes,} \\ \text{that Tashi comes,} \\ \text{that Migmar comes,...} \end{array} \right\}$

Now compute ADD:

(33) $\text{ADD}(\text{who come}) \rightsquigarrow \exists\phi \in [\![\text{who come}]\!]^f \setminus [\![\text{who come}]\!]^o(\phi \text{ true})$

(but $[\![\text{who come}]\!]^o$ is undefined, so subtract nothing from $[\![\text{who come}]\!]^f$)

$\Longleftrightarrow \exists\phi \in [\![\text{who come}]\!]^f(\phi \text{ true})$

$\Longleftrightarrow$ (that Tenzen comes) or (that Tashi comes) or (that Migmar comes)...

$\Longleftrightarrow$ **that someone comes**

☞ This is our indefinite, but it's currently a presupposition. Since $[\![\text{ADD}(\text{who come})]\!]^o$ is currently undefined, **adopt the presupposition as the truth condition** via Local Acommodation (Heim, 1983).

Proposal

Next we add negation. Just apply this point-wise:

(34) $[\![\text{NEG}(\text{ADD}(\text{who come}))]\!]^o = \text{NEG}(\text{that someone comes})$
$= \text{that no one comes}$

(35) $[\![\text{NEG}(\text{ADD}(\text{who come}))]\!]^f = \left\{ \begin{array}{l} \text{that Tenzen doesn't come,} \\ \text{that Tashi doesn't come,} \\ \text{that Migmar doesn't come,...} \end{array} \right\}$

Finally, compute SCAL:

(36) $\text{SCAL}(\text{NEG}(\text{ADD}(\text{who come}))) \rightsquigarrow$
(that no one comes) $<_{\text{likely}}$ (that Tenzen doesn't come) and
(that no one comes) $<_{\text{likely}}$ (that Tashi doesn't come) and
(that no one comes) $<_{\text{likely}}$ (that Migmar doesn't come)... ☺

Proposal

We run into trouble if we hadn't included negation—or more generally, a downward-entailing operator:

(37) $[\![\textsc{add}(\text{who come})]\!]^o$ = that someone comes

(38) $[\![\textsc{add}(\text{who come})]\!]^f = \left\{ \begin{array}{l} \text{that Tenzen comes,} \\ \text{that Tashi comes,} \\ \text{that Migmar comes,...} \end{array} \right\}$

Compute SCAL:

(39) $\textsc{scal}(\textsc{add}(\text{who come})) \rightsquigarrow$
(that someone comes) $<_{\text{likely}}$ (that Tenzen comes) and
(that someone comes) $<_{\text{likely}}$ (that Tashi comes) and
(that someone comes) $<_{\text{likely}}$ (that Migmar comes)...

Previous approaches

Previous approaches to the compositional semantics of *wh*-EVEN NPIs:

1. **Ramchand (1996) on Bengali a.o.:**
   Similar in spirit, but the existential is not derived compositionally:
   "...a result of the notion of alternativity itself and is not contributed by any additional linguistic particle." (p. 25)

2. **Choi (2007) on Korean:**
   Korean bare *wh*-words can be indefinites, unlike in Tibetan.

(40) *Nwukwu-to* **an** oasse.
who-EVEN NEG came
'No one came.'

(41) *Nwukwu* oasse.
who came
'Someone came.'

(Choi, 2007, 24)

Conclusion

Conclusion

- **Today** we investigated a productive series of NPIs in Dharamsala Tibetan made of a ***wh*-word and EVEN**.
  - Requires both semantic and syntactic licensing.
  - The *wh*-words are not indefinites by themselves.
- **A novel compositional analysis for *wh*-EVEN NPIs:**
  - Use the additive part of EVEN to create the indefinite.
  - Scope-taking of the parts of EVEN explains clause-mate condition.
- This analysis may be applicable to other *wh*-EVEN NPI languages.

Thank you! Questions?

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Slides at `http://mitcho.com` and `http://hkotek.com`.

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One-even NPIs

(42) **One-EVEN NPIs**

a. Lopchuk *chi-ye* lep-**ma**-song.
student one-EVEN arrive-NEG-PRFV
'No student arrived.' (=11)

b. Nye tep *chi-ye* lok-**me**.
1sg.ERG book one-EVEN read-NEG
'I didn't read any book.'

One-even NPIs

(43) **ONE-EVEN NPIs without an overt domain:**

A: Konga duk-pe?
egg EVID-Q
'Are there eggs?'

B: *Chi-ye* **mĭn**-duk.
one-EVEN NEG-EVID
'There are none.' (= no eggs)

One-even NPIs

Q: Is *chiye* one morpheme?

(44) **'One' and EVEN can be separated by ERG:**

Lopchuk *chi-ki-ye* tep-di lok-**min**-duk.
student one-ERG-EVEN book-this read-NEG-EVID

'No student read this book.'

A: *Chi-ye* is the numeral 'one' *chik* and the EVEN particle *-ye/yang* (as indicated by our glosses).