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

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

\[
\text{Su-(chi)-ye lep-ma-song.} \\
\text{who-(one)-EVEN arrive-NEG-PRFV}
\]

‘No one arrived.’

Dharamsala Tibetan is SOV, *wh*-in-situ, with scrambling. Some transitive subjects bear an ergative marker (see DeLancey, 2011).
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.’
(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.’
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*.
(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*. 
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.*
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.
(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.
(14) Licensing negation must be in the same clause:

   \texttt{Tashi-ERG [Tenzen beer one-\textit{EVEN} drink-NEG-PRFV]} say-PRFV
   ‘Tashi said [Tenzen didn’t drink any beer].’

   \texttt{Tashi-ERG [Tenzen beer one-\textit{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
Two parts to the meaning of even: (Karttunen and Peters, 1979, a.o.)

(15) Even JOHN came to the party.

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

Scalar: \( \sim \) 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.’
Two meanings for $\alpha$: (Rooth, 1985)

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

Alternatives vary in the position of focus:

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

(19) $[\text{JOHN came to the party}]^f = \begin{cases} 
\text{that John came to the party,} \\
\text{that Mary came to the party,} \\
\text{that Bill came to the party,} \\
\ldots
\end{cases}$

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

(20) **The additive part:**
\[
\text{ADD}(\alpha) \sim \exists \phi \in \lbrack \alpha \rbrack^f \setminus \lbrack \alpha \rbrack^o \ (\phi \ true)
\]

(21) **The scalar part:**
\[
\text{SCAL}(\alpha) \sim \forall \phi \in \lbrack \alpha \rbrack^f \setminus \lbrack \alpha \rbrack^o \ ([\alpha]^o <_{\text{likely}} \phi)
\]

Both of these meanings are presuppositional. *Even* does not affect truth conditions (the ordinary semantic value).
The connection between *even* and NPIs has been well established, both empirically and theoretically.

**Core idea:** NPI $= \text{EVEN} + \text{indefinite}$

(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.
(22) \( \text{EVEN}(\text{I saw SOMEONE}). \)

\[
\llbracket \text{I saw SOMEONE} \rrbracket^f = \begin{cases} 
\text{that I saw someone,} \\
\text{that I saw many,} \\
\text{that I saw everyone}
\end{cases}
\]

\( \text{SCAL} \sim (\text{that I saw someone}) \prec_{\text{likely}} (\text{that I saw many}) \) and

\( (\text{that I saw someone}) \prec_{\text{likely}} (\text{that I saw everyone}) \)

(23) \( \text{EVEN}(\neg(\text{I see SOMEONE})). = \text{“I didn’t see anyone.”} \)

\[
\llbracket \neg(\text{I saw SOMEONE}) \rrbracket^f = \begin{cases} 
\neg(\text{that I saw someone}), \\
\neg(\text{that I saw many}), \\
\neg(\text{that I saw everyone})
\end{cases}
\]

\( \text{SCAL} \sim \neg(\text{that I saw someone}) \prec_{\text{likely}} \neg(\text{that I saw many}) \) and

\( \neg(\text{that I saw someone}) \prec_{\text{likely}} \neg(\text{that I saw everyone}) \)

\( \iff (\text{that I saw someone}) \succ_{\text{likely}} (\text{that I saw many}) \) and

\( (\text{that I saw someone}) \succ_{\text{likely}} (\text{that I saw everyone}) \)
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:

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

(27) \[[\text{who came}]^f = \begin{cases} \text{that John came,} \\ \text{that Mary came,} \\ \text{that Bill came,} \end{cases}\]

*Wh*-words do not have an ordinary semantic value:

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

(29) \[[\text{who came}]^o \text{ undefined}\]
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.’
Let the two parts of \texttt{EVEN} (\texttt{ADD} and \texttt{SCAL}) take scope independently:

\begin{center}
\begin{tikzpicture}
  \node{LF:}
  \child{\node{who \quad \text{ADD}}
    \child{\node{come \quad \text{NEG}}
      \child{\node{\texttt{EVEN}}}}}
  \child{\node{\texttt{SCAL}}}
\end{tikzpicture}
\end{center}

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

\begin{itemize}
  \item The movement of \texttt{EVEN} at LF is clause-bound, explaining the clause-mate condition.
\end{itemize}
(31)  \[[\text{who come}]^o\] undefined

(32)  \[[\text{who come}]^f = \begin{cases} 
\text{that Tenzen comes}, \\
\text{that Tashi comes}, \\
\text{that Migmar comes}, \ldots
\end{cases} 

Now compute \texttt{ADD}:

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

(\text{ but } [[\text{who come}]^o \text{ is undefined, so subtract nothing from } [[\text{who come}]^f \} 
\iff \exists \phi \in [[\text{who come}]^f (\phi \text{ true})
\iff (\text{that Tenzen comes}) \text{ or (that Tashi comes)} \text{ or (that Migmar comes)} \ldots
\iff \text{that someone comes}

\text{This is our indefinite, but it’s currently a presupposition. Since } [[\texttt{ADD(who come)}]^o \text{ is currently undefined, adopt the presupposition as the truth condition} \text{ via Local Acommodation (Heim, 1983).} \text{ \color{#BDBDBD}{} \text{}}
Next we add negation. Just apply this point-wise:

\[(34) \quad \neg (\text{ADD(who come)})^0 = \neg \text{(that someone comes)} = \text{that no one comes}\]

\[(35) \quad \neg (\text{ADD(who come)})^f = \{\text{that Tenzen doesn’t come, that Tashi doesn’t come, that Migmar doesn’t come, ...}\}\]

Finally, compute SCAL:

\[(36) \quad \text{SCAL}(\neg (\text{ADD(who come)})) \sim \]

\[
\begin{align*}
(\text{that no one comes}) & \prec_{\text{likely}} (\text{that Tenzen doesn’t come}) \text{ and } \\
(\text{that no one comes}) & \prec_{\text{likely}} (\text{that Tashi doesn’t come}) \text{ and } \\
(\text{that no one comes}) & \prec_{\text{likely}} (\text{that Migmar doesn’t come})...
\end{align*}
\]
We run into trouble if we hadn’t included negation—or more generally, a downward-entailing operator:

\[
(37) \quad \llbracket \text{ADD(who come)} \rrbracket^o = \text{that someone comes}
\]

\[
(38) \quad \llbracket \text{ADD(who come)} \rrbracket^f = \{ \text{that Tenzen comes,} \quad \text{that Tashi comes,} \quad \text{that Migmar comes,} \ldots \}
\]

Compute \textit{SCAL}: 

\[
(39) \quad \text{SCAL(ADD(who come))} \sim \text{(that someone comes) } <_{\text{likely}} \text{ (that Tenzen comes) and (that someone comes) } <_{\text{likely}} \text{ (that Tashi comes) and (that someone comes) } <_{\text{likely}} \text{ (that Migmar comes),} \ldots
\]
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.**  (41) **Nwukwu oasse.**
   who-EVEN NEG came who came
   ‘No one came.’ ‘Someone came.’

   (Choi, 2007, 24)
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?

Our deepest thanks go to Tashi Wangyal for sharing his language with us. We also thank Jessica Coon for discussion. Errors are ours.


Lee, Young-Suk, and Laurence Horn. 1994. *Any* as indefinite plus *even*.


(42) **One-EVEN NPIs**

student one-EVEN arrive-NEG-PRFV
‘No student arrived.’

b. Nye tep *chi-ye lok-me.*
1sg.ERG book one-EVEN read-NEG
‘I didn’t read any book.’
(43) **ONE-EVEN NPIs without an overt domain:**

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

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