ON ROOT MODALITY AND THEMATIC RELATIONS IN TAGALOG AND ENGLISH

Maayan Abenina-Adar and Nikos Angelopoulos (UCLA)

OVERVIEW

An open question in the study of modality is how context and grammar interact to produce different flavors of possibility and necessity. Here, we examine two thematic necessity modals, English **need** *and Tagalog* **kailangan**; *we show that when they establish a thematic dependency with a subject, they express necessities in light of this subject's priorities, and in the absence of an overt subject, they express necessities in light of priorities that the speaker endorses. To account for this syntax-flavor mapping, we propose that these verbs always have a needer argument, which can be either the overt subject in thematic constructions, or a speaker-bound implicit pronoun in impersonal constructions.*

EMPIRICAL GENERALIZATIONS: *KAILANGAN*

-*Kailangan* enters two structures, distinguished by case marking

(1) **Structure 1: Impersonal**
[kailanga[-ng   ma-tulog   **si-Juan**]]
MOD-COMP AV-sleep SUBJ-Juan
Approx. 'It is required that Juan sleep'

(2) **Structure 2: Thematic**
[kailangan   **ni-Jua**[-ng   ma-tulog]]
MOD   GEN-Juan-COMP AV-sleep
Approx. 'Juan feels a need to sleep'

-Animacy restrictions indicate different thematic relations in the two structures

(3) **Impersonal, No Animacy Restriction**
kailanga[-ng   um-andar   ang-sasakyan]
MOD-COMP   AV-work   SUBJ-car
'The car needs to work'

(4) **Thematic, Animacy Restriction**
*[kailanga   ng-sasakya[-ng   um-andar]]
 MOD   GEN-car-COMP   AV-work
 'The car feels a need to work'

-Impersonal/thematic minimal pairs were presented to native speakers in contexts that make salient a conflict between subject and speaker priorities

Purely Speaker-Oriented Necessity: Impersonal Construction
Context: Juan is hungry. His mother gave him a plate of food, and although she knows he intends to eat it all, she told him to set some food aside for his brother. She tells her friend…

(5) **Impersonal:**   [kailanga[-ng   mag-tira   si-Juan   ng-pagkain]]
MOD-COMP   AV-set.aside   SUBJ-Juan   OBJ-food
'It is required that Juan set aside food'

(6) **Thematic:**   #[kailangan   ni-Jua-[ng   mag-tira   ng-pagkain]]
MOD   GEN-Juan-COMP AV-set.aside   OBJ-food
'Juan feels a need to set aside food'

Purely Subject-Oriented Necessity: Thematic Construction
Context: Juan has always smoked, but now he's sick. The doctor ordered him to quit, but Juan cannot resist, and he told his doctor that he will not quit. The doctor says to Juan's wife…

(7) **Impersonal:**   #[kailanga-[ng   ma-nigarilyo   si-Juan]]
MOD-COMP   AV-smoke   SUBJ-Juan
'It is required that Juan smoke'

(8) **Thematic:**   [kailangan   ni-Jua-[ng   ma-nigarilyo]]
MOD   GEN-Juan-COMP AV-smoke
'Juan feels a need to smoke'

EMPIRICAL GENERALIZATIONS: *NEED*

-*Need* also enters an impersonal and a thematic construction, and the thematic one displays an animacy restriction (9-12); the impersonal/thematic structural distinction is obscured in (13-14)

(9) **Structure 1: Impersonal**
There needs [$_{TP}$ to be a fence here]

(10) **Structure 2: Thematic**
We need [$_{CP}$ there to be a fence here]

(11) **Impersonal, No Animacy Restriction**
The stew needs to be tasted by the chef

(12) **Thematic, Animacy Restriction**
*The stew needs the chef to taste it

(13) John needs [$_{TP}$ ~~John~~ to wear a tie]

(14) John$_i$ needs [$_{CP}$ PRO$_i$ to wear a tie]

-The impersonal construction only expresses speaker-oriented necessities, while the thematic construction only expresses subject-oriented ones (cf. Rubinstein 2012: §4 on *need*-CP structures)

Purely Speaker-Oriented Necessity: Impersonal Construction
Context: John is hungry. His mother gave him a plate of food, and although she knows he intends to eat it all, she told him to set some food aside for his brother. She tells her friend…

(15) **Impersonal:**   John needs to leave some food for his brother
(16) **Thematic**:   #John needs there to be food left for his brother

Purely Subject-Oriented Necessity: Thematic Construction
Context: John and Mary share an apartment. Mary has an exam tomorrow and is going to bed early, while John has a paper due and wants to work late. John calls a friend annoyed and says…

(17) **Impersonal:** #The light needs to be off, even though I'm trying to work
(18) **Thematic:**   Mary needs the light to be off, even though I'm trying to work

SYNTAX-FLAVOR MAPPING

Impersonal constructions express *speaker-oriented* necessities but not purely *subject-oriented* necessities; thematic constructions express *subject-oriented* necessities but not purely *speaker-oriented* necessities.

THE PROPOSAL

(i)   *Kailangan/need*'s modal flavor is lexically-specified, and it selects an experiencer ("needer") argument in all constructions it enters

(ii) In the thematic construction, the (overt) experiencer DP is the needer, while in the impersonal construction, an implicit speaker-bound variable is

-Context provides Kratzerian modal base and ordering source functions $f_{<s,i,<st,t>>}$ and $g_{<s,i,<st,t>>}$

-We treat *kailangan/need* as having two presuppositions: (i) the extension of the ordering source function is a set containing a desire of *need*'s thematic argument and (ii) the prejacent proposition must not to be settled in the modal base (like with *want*, e.g. Heim 1992)

(19) $[\![$kailangan/need$]\!]^C$ $(p_{<s,t>})(x)(w)$ is defined only if $\exists q_{<s,t>} \in \mathrm{DES}(x, w)$ and $g(w) = \{q\}$ and $\bigcap f(w) \cap p \neq \varnothing$ and $\bigcap f(w) \cap \neg p \neq \varnothing$
if defined, $[\![$kailangan/need$]\!]^C$ $(p)(x)(w) = 1$ iff $\forall w' [w' \in \mathrm{MAX}_{g(w)}(\bigcap f(w)) \rightarrow p(w')]$

For any set of worlds W, set of propositions A, possible worlds w, w', and individual x:
$\mathrm{MAX}_A(W) = \{w \in W : \neg \exists w' \in W. w' \rhd_A w\}$
$w' \rhd_A w$ iff $\{p : p \in A \text{ and } w \in p\} \subset \{p : p \in A \text{ and } w' \in p\}$
$\mathrm{DES}(x, w) = \{p_{<s,t>} : p \text{ is desirable to } x \text{ in } w\}$ (von Fintel 1999)

DERIVING THE MAPPING: THEMATIC LFs

-**Thematic constructions** have LFs where the experiencer is base-generated in its surface position in the matrix clause and optionally controls an embedded PRO

(20) **LF:**   [$_{vP}$ experiencer   [kailangan-w_0 [$_{CP}$ PRO …]]]

Context: Juan is hungry. His mother gave him a plate of food, and although she knows he intends to eat it all, she told him to set some food aside for his brother. She tells her friend…

(21) **Thematic:**   #[kailangan   ni-Jua-[ng   mag-tira   ng-pagkain]]
MOD   GEN-Juan-COMP AV-set.aside OBJ-food
'Juan feels a need to set aside food'

$[\![(21)]\!]^C$ is defined only if the ideals in the context include a desire of Juan's, and within the set of relevant possibilities, it's unsettled whether Juan will set aside food
$[\![(21)]\!]^C = 1$ iff the desire of Juan's necessitates that he set aside food (false in context)

DERIVING THE MAPPING: IMPERSONAL LFs

-**Impersonal constructions** have LFs where *need*'s experiencer is an implicit variable, "wrapped" in a group-formation function; in matrix clauses, the variable is bound by an Assert operator (cf. Pearson 2013 on implicit experiencer arguments of predicates of taste like *tasty* and *taste good*)

(22) **LF:**   [Assert   [7   [3   [Gp(t$_7$)   [kailangan-w_3 [$_{CP}$ …]]]]]]

$[\![$Assert$]\!]^C = \lambda P_{<e, <s,t>>} : \forall <y,w'>[<y,w'> \in \mathrm{DOX}(speaker(C), world(C)) \rightarrow P(y)(w')]$. P
$[\![$Gp$]\!]^C = \lambda x. \iota Y : \forall z \leq_{AT} Y \rightarrow identifies\text{-}with(x, z)$ and z is relevant in C
where $z \leq_{AT} Y$ iff z is an atomic individual and z is part of Y

Context: Juan has always smoked, but now he's sick. The doctor ordered him to quit, but Juan cannot resist, and he told his doctor that he will not quit. The doctor says to Juan's wife…

(23) **Impersonal:**   #[kailanga-[ng   ma-nigarilyo   si-Juan]]
MOD-COMP   AV-smoke   SUBJ-Juan
'It is required that Juan smoke'

$[\![(23)]\!]^C$ is defined only if the speaker believes that the ideals in the context include a desire of hers and the people she identifies, and within the set of relevant possibilities, it's unsettled whether Juan will smoke
$[\![(23)]\!]^C = 1$ iff the desire of the speaker and the people she identifies with necessitates that Juan smoke (false in context)

-We predict that impersonal *need* statements cannot express necessities in light of priorities that the speaker does not endorse

Context: A social justice advocate is giving a lecture about savage practices in antiquity that he opposes…

(24) #A human sacrifice needed to be performed every spring
(25) It was mandatory that a human sacrifice be performed every spring

CONCLUSION

-The structures that lexical modals enter systematically correlate with different modal flavors; similar findings have also been reported for functional modals (Cinque 1999, Hacquard 2010)

-Our analysis leads to a grammatical split among root modal flavors expressed by lexical modals, dividing them according to whether they are speaker- or subject-oriented

References: Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective.* Oxford: Oxford University Press. • **von Fintel, Kai. 1999.** NPI licensing, Strawson entailment, and context dependency. *Journal of Semantics,* 16(2), 97-148. • **Hacquard, Valentine. 2010.** On the event relativity of modal auxiliaries. *Natural Language Semantics,* 18(1), 79-114. • **Heim, Irene. 1992.** Presupposition projection and the semantics of attitude verbs. *Journal of Semantics,* 9(3), 183-221. • **Pearson, Hazel. 2013.** *The Sense of Self: Topics in the Semantics of De Se Expressions:* Harvard University dissertation. • **Rubinstein, Aynat. 2012.** *Roots of modality:* University of Massachusetts Amherst dissertation.