Japanese modals and other evaluations

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> **Desired insights**
>
> Starting point: Semantic analysis of Japanese prioritizing modality constructions (Kaufmann 2017b; Kaufmann and Tamura 2017); relates to:
>
> - Non-logical conditionals (emotive factives, preference predicates)
>
> - Referential *if*-clauses
>
> - Japanese conditonal markers

1 Prioritizing modality à la Japanese

Standard take in natural language semantics:[1]

- Interpretation w.r.t. indices *I* (possible worlds, world-time pairs, situations,...)

- Modals quantify over accessible indices (Kratzer 1977,..., Kratzer 2012; simplified)

(1)   a.   '*must* ϕ' is true at a context *c* and index *i*
          iff ϕ is true at all indices *j* s.t. $iR^c j$.
   b.   '*may* ϕ' is true at a context *c* and index *i*
          iff ϕ is true at some index *j* s.t. $iR^c j$.

- English (German, Romance,...) modals are context-sensitive in flavor.

- Necessity/possibility according to what is known, commanded, desired, aimed at,... depending on *c* (specifically, R^c).

The Japanese system of modality does not seem to fit into the picture (similarly, Nauze 2008 for Korean):

- Items tend to be specified for particular modal flavors, barely any overlap between epistemic vs. prioritizing (Portner's (2007, 2009) term for deontic, bouletic, teleological)

  For discussions in English, see Narrog 2008; Larm 2006; Kaufmann and Tamura 2017.

- Many Japanese 'modals' are at least historically complex. The prioritizing ones look like conditional evaluations–**conditional evaluative constructions (CECs)** (*Q Kelly*):

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(2) a. Tabe-nakere-ba nara-na-i.
eat-NEG-COND become-NEG-NPST
lit.: 'If you don't eat it doesn't work/become.' ($\approx$ 'You have to eat.')

b. Tabe-te mo i-i.
eat-GER also good-NPST
lit.: 'If you eat it's also good.' ($\approx$ 'You may eat.')

(3) a. Tabe-nakere-ba onaka ga suk-u.
eat-NEG-COND stomach NOM be.empty-NPST
'If you donâĂŹt eat youâĂŹll be hungry.'

b. Tabe-te mo onaka ga suk-u.
eat-GER also stomach NOM be.empty-NPST
'Even/also if you eat you'll be hungry.'

(4) [A-if B]
a. A: 'antecedent'
b. B: 'consequent'

Prominent exception: weak necessity modal *beki* $\approx$ 'should'.

- Schematically:

(5) a. *must A* $\mapsto$ 'If not *A* then BAD'
b. *can A* $\mapsto$ 'if *A* then (also) OK/GOOD'

- Functional profile is similar to *must* and *may/can*; sometimes glossed as verbal inflectional morphology *-nakerebanarana-(i)* 'must', *-temoi-(i)* 'may' or 'can' (e.g. Johnson 1994; Moriya and Horie 2009; Larm 2006)

> **Relating CECs and modals**
>
> 1. **Morphosyntactic Atomicity Hypothesis** α's apparent structure ('-Cond.Marker] GOOD/BAD') is lexicalized (or grammaticalized) into one morpheme.
>
> 2. **Compositionality Hypothesis** The meaning of α corresponds to the compositional interpretation of what are, or what used to be, α's morphosyntactic parts.
>
> 3. **Identity Hypothesis** For a given pair of a Japanese CEC α and the functionally most similar modal verb μ of English (or an arbitrary representative of a class of functionally most similar modal verbs *M*), the interpretation of α as an expression of Japanese is equivalent to the interpretation of μ as an expression of English.
>
> (Resulting in pairs like [[*-nakereba naranai*]]$_J$ = [[*must*]]$_E$.)

Status of Identity Hypothesis (*Q Sarah; Maša*):

- Given functional similarity, it would be interesting to know this.

- If our analysis fails it for a given Japanese item, does it predict relevant differences? (*mo*-problem)

Morphosytactic Atomicity: Strikes me as implausible for two reasons:

- CECs instantiate a possibly open class of constructions:

(6)

'IF A, GOOD/BAD'

GOOD:	ii,	uresii,	yorosii,	daizyoobu,
	good,	happy,	fine,	all.right,
	kamawanai,...			
	no.problem			
BAD:	ik-e-nai,	dame da,	iyada,	zannen da,
	can't go,	is not good,	dislike,	it's a shame,
	komaru,	tae-rare-nai,...		
	terrible,	can't bear,...		

IF: *-tara*, *-(re)ba*, *-to*, *-te (mo/wa)*, *nara*

Note: some 'conditional markers' may be morphosyntactically complex (*Q Sarah*): *-te wa*, *-te mo*; *to* is (a.o.-?) a conjunction.

- Adverb-insertion (Hiro Saito, p.c.; pace Hanazono 1999):

(7) *Konna subarasii ningenkankei o taisetu ni suru honkoo no tokusyoku o*
such wonderful human.relations ACC important DAT make this.school GEN characteristic ACC
nagaku nokosi-tei-nakere-ba zettai nara-na-i to
long preserve-PROG-nakere-ba absolutely become-NEG-NPST COMP
omot-tei-mas-u
think-PROG-POL-NPST
'I think that this school's wonderful characteristic of valuing such human relations must be preserved by all means.'

Morphosytactic Atomicity fails ⇒ wanted: compositional interpretation.

- Comparable cases in English:

(8) *It's alright if you eat.*

- Capture functional profile (Fujii 2004: directly in construction grammar)

> **Puzzle (an issue for compositionality)**
>
> - Schema (6) cannot be instantiated as freely as a compositional semantics might lead us to expect.
>
>   Specifically, some restrictions don't follow from restrictions on conditional connective chosen (not observed in regular hypothetical conditionals).

(9) a. #*Tabe-tewa i-i.*
eat-COND good/ok-NPST
intended: 'You may/should eat.'/'If you eat, it's good.'
general restriction of '-tewa': antecedent has to have a negative status in the context,[2]
Akatsuka (1997)

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[2]*Q Maša, Sarah*: ok: *Tabete (mo) ii.* (not factive). *Tabete (kurete) yokatta.* 'It's good that you ate (it) (for me).' (Hiro Oda, p.c.)

b. #*Tabere-ba   nara-na-i/dame da.*
   eat-COND become-NEG-NPST/bad COP.NPST
   intended: 'You must not eat.'/'If you eat, it doesn't work/it's bad.'

Note: I am only interested in instantiations of (6) that seem to express an evaluation of the *if*-part, not of some contextually salient possibility.

Kuno 1973's example (discussed in my paper) involves *nara* (preferred for factual conditionals, link to settledness Hasegawa 2015, *Q Suzanna*; - but here's a version with *-tara* (*Q Sarah*):

(10)   *Byooki-nara i-i   yo. Hayaku ie   ni   kaet-te   age-nasai*
       ill-COND   good/ok-NPST SFP. early   house DAT return-GER BENEF-IMP
       [Context: 'My mother is ill, can I go home?'] 'If your mother is ill (if it's an illness), that's ok. Go back home earlier for her.'

(11)   Byooki dat-tara   i-i   yo. . . .
       ill   COP-COND good/ok$_N$PST SFP. . . .
       'If your mother is ill (if it's an illness), that's ok. . . .'

(12)   a.   A: Can I open the window?
       b.   *Samu-i nara/Samu-kat-tara/Samu-ke-reba ii*
            cold-PST   COND/cold-ADV-COND/cold-ADV-COND
            yo.   Soo jana-i kara, moo   sukosi ake-te oite
            good-NPST SFP.   Otherwise, still   a.bit   open-GER do.once-GER
            'If you're cold that's [→ *closing it*] ok. Otherwise, leave it open a bit longer, please.'

2   A first stab on a compositional semantics for CECs and how it relates to modal logic

- Interpretation of *if*-antecedents

- Interpretation of evaluative predicates

- How is the evaluation combined with the antecedent

- Solution should not rely on a (too) specific logical subfield (laws vs. preferences; circumstantial)

- Japanese specifically: what blocks certain combinations

2.1   Standard semantics for hypothetical conditionals

- Standard in natural language semantics: like modals, conditionals express quantification over indices (Lewis 1973, Kratzer 1978, von Fintel 1999; Gillies 2010,. . .)

  (13)   '*If A, B*' is true at a context c and an index i iff for all j among the i-closest$_c$ '*A*'-indices:'*B*' is true at j.

Standard Kratzer-semantics for modality (with Limit Assumption, Lewis 1973; Kaufmann and Kaufmann 2015

- Determining modal domain of quantification ('closest$_c$'):

  (14)   Set of propositions G (rules, preferences,. . .) induces preorder on I:
         $j \leq_G k$ iff $\{p \in G \mid k \in p\} \subseteq \{p \in G \mid j \in p\}$

(15) Optimal indices given facts about i (reflected in **modal base** f) according to relevant criteria in i (reflected in **ordering source** g):

$$O(f,g,i) := \{j \in \bigcap f(i) \mid \forall k \in \bigcap f(i)[k \leq_{g(i)} j \rightarrow j \leq_{g(i)} k]\}$$

(16) a. $[[must]]^{c,i}(p) = 1$ iff $O(f_c, g_c, i) \subseteq p$.
     b. $[[may]]^{c,i}(p) = 1$ iff $O(f_c, g_c, i) \cap p \neq \emptyset$.

- *if*-clauses restrict operators, e.g. modals (Kratzer 1986).

(17) $[[If\ A,\ must\ B]]^{c,i} = [[must\ B]]^{c',i}$,
    where $f_{c'} = f_c + [[A]]^{c,i}$ $(f_c + [[A]]^{c,i} := \lambda i.f_c(i) \cup \{[[A]]^{c,i}\}$,
                                   and c is like c' in all other respects. As context shift for simplicity.

- If there is no overt modal in the consequent, there is a covert epistemic modal that is restricted by the *if*-clause (Kratzer 1981, *Q Suzanna*).

2.2 Japanese modals as Kratzer-style conditionals

(18) (first stab: pointwise)
    $[[dame/naranai/ikenai\ \text{BAD}]]^{c,i} = 1$ iff $i \notin O(f_c, g_c, i)$,
    where $f_c(i)$ is the contextually relevant set of facts holding at i, and
    $g_c(i)$ represents the content at i of the contextually salient goals or rules.

                                         naranai seems to allow empty g, too: circumstantial

CECs contain no overt modal in the consequent: covert epistemic *must*:[3]

(19) $[[If\ not\ A,\ [must]\ \text{BAD}]]^{c,i} = 1$ iff
    $\forall j \in O(f + \neg[[A]]^{c,i}, g, i):\ j \notin O(f', g', j).$
                           (f with g: epistemic; f' with g': prioritizing; more sophisticated c needed)

    'All epistemically accessible A-indices are bad (according to the rules <u>there</u>).'

How good/bad is this result -?

- Dependence on rules in antecedent indices (rather than actual index): relatively innocent as long as the rules are known/known to not depend on the antecedent.

- Familiar from conditionals with prioritizing modals, which allow for two construals (Frank 1996; von Fintel and Iatridou 2005; Condoravdi and Lauer 2016; Kaufmann and Kaufmann 2015:

(20) If A, **must** B.

    a. [**must**(if A) B]   overt conditional operator, OCO
    b. [must^{epi}(if A) [**must** B]]   covert conditional operator, CCO

- Sometimes we want rules to change (needs

(21) If the new laws for opening hours of shops go through, salespeople will have to work longer.
                                                             (Frank, 1996, p. 199, (51))

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[3]In her comments on my talk at the Rutgers Semantics/Pragmatics Workshop, May 2017, Una Stonjnić questions this assumption - could *if*-A restrict GOOD and BAD directly?

- Works to some extent for 0-place evaluative predicates (of if a covert empty argument pronoun can be assumed).

- Sode (2017): degree-based version for German *gut/besser* 'good/better' (could replace our BAD-semantics).

- A problem for possibility-like construction 'if A, good' (for recommendations, permissions, or concessions)

(22) Tabe-reba i-i   yo. Demo osake o   mada noma-na-i-de   kudasai.
       eat-COND good/ok-NPST SFP but   sake   ACC not.yet drink-NEG-NPST-GER please
       'It's ok if you eat. But don't drink the sake, yet.'

Predicted interpretation: the epistemically most plausible worlds at which you eat are good/acceptable. But this can only be true if the speaker believes/it is presupposed that you won't do anything else that's illegal. This seems at odds with explicit restrictions as in (22).

2.3   Deontic reduction - What if von Wright had been Japanese?

We have just derived a model-theoretic version of **deontic reduction**, which in deontic logic is discussed as an alternative to standard quantificational modal logic!

(23) a.   *must A* $\mapsto$ 'If not *A* then BAD STATE OF AFFAIRS'
      b.   *can A* $\mapsto$ 'not (if *A* then BAD STATE OF AFFAIRS)'

Anderson (1967:345)

In a number of papers written over the past six or seven years, I have tried to defend, from two points of view, the following thesis: **If a set of rules states or implies that it is obligatory that a certain state-of-affairs p obtain, and if in fact p does not obtain, then the set of rules in question has been violated.**
Or, put less ponderously:
When a rule says you are supposed to do something, and you don't do it, that means you've broken that rule.
The thesis so put sounds innocuous enough, but such is the perversity of my professional colleagues and critics (the two collections being almost, *if not exactly, coextensive) that arguments on the matter seem to be required.*
Anderson (1967:346)

The leading idea behind the suggestion that
         it is obligatory that p
can be taken to mean
         if not-p, then V
(where V is some bad *state of affairs) lies in the fact that this sort of reasoning is involved in many common justifications of "ought" statements.*

- Anderson points out that this requires an appropriate interpretation of *if. . . then*; material implication and strict implication fail.

  Introduces for 'is a relevant and sufficient [but not necessarily logically sufficient] condition for'; axiomatic characterization (1967:352).

- Deontic reduction for free choice permissions (*you can A or B*): Asher & Bonevac (2005), Barker (2010)

  Deontic Reduction in NL semantics: Barker (2010)

- Resource-sensitive logic to avoid paradoxes of standard deontic modal logic (von Wright's free choice paradox)

- Mentions Japanese data to motivate deontic reduction analysis of *may/can*

- Model-theory remains ad hoc and hard to grasp [-*So what(?)*]

- Admits to considerable ambiguity of connectives; overly resource sensitive (Kaufmann 2016)

- Special GOOD-predicate; different ones and BAD-ones needed. Can we relate them to their stand-alone occurrences?

> Goal here: work on independently motivated semantics for **conditional evaluations** that captures similarities (and differences) with modals under the standard analysis.

- Chung (2017) suggests a non-standard analysis for *must* along the lines of the Japanese constructions, but as counterfactual ('if A were not the case, things would be deontically suboptimal')

  Motivation: *must p* as 'if p weren't the case, things would be deontically suboptimal' is supposed ot solve the Zvolenszky-Problem (Context: Britney Spears signed a contract to only drink Pepsi in public; intuition: false.):

  (24)   *If Britney Spears drinks Coke in public, she must drink Coke.*

  Problems:

    - 'deontically suboptimal' according to actual rules but with a modal base modified by antecedent proposition; worked out in continuation semantics only (WooJin Chung, p.c.).
    - bad facts *q* that are (causally) independent from *p* verify any *must p* (closest not p worlds are all deontically bad because of *q*)

3   My preference: alternative target for assimilation

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Architecture of my proposal

1. *if*-clauses as restricting operators (Lewis, Kratzer,. . .) or as referential expressions (Stalnaker, Schlenker, Schein,. . .)

   ⇒ Assume that Japanese conditional markers can differ in which type of *if*-clause they give rise to

2. Some *if*-clauses have been argued to be verbal or adjectival complements (rather than adverbial clauses/adjuncts) ('non-logical conditionals') (Pullum 1987; Pesetsky 1991; Rocchi 2010; Grosz 2011; Onea 2015)

   Superficially similar *if p, q* -sentences differ in the relationship between *q* and *(if) p*.

   ⇒ Assume that Japanese CECs belong to the complement-type ('non-logical conditionals')

3. Relating 1+2 to predict restrictions:

   Hypothesis: only referential *if*-clauses can play the role of complement clauses.

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3.1   Non-logical conditionals

Some sentences of the form *If A, B* appear to have an (additional) **non-logical reading** (Williams 1974:95; Pesetsky 1991) brought out by the **popular paraphrase** (e.g. (25-b), (26-b)) (*Q Giuseppe* for *it*):

(25)   I would be happy if Bill were here.
   a. **logical reading**: 'If Bill were here I would be happy [*for some reason or other*]'
   b. **non-logical reading**: 'If Bill were here I would be happy [*that Bill was here*]'

(26)   It would be good if Bill were here.
   a. **logical reading**: 'If Bill were here it[$\mapsto$ *the relevant situation*] would be good.'
   b. **non-logical reading**: 'If Bill were here [*that Bill is here*] would be good.'

- Paraphrases suggest: non-logical reading is stronger.

- Evidence that non-logical readings are 'real' (rely on a different interpretational mechanism):

   – Syntactic evidence (logical reading: adjunct, non-logical reading: argument).

   – Semantic-pragmatic evidence (answerhood, Onea 2015)

   – Semantic evidence (independence of the two readings, i.e., the preferred paraphrases are incorrect in at least some cases; Pullum 1987; Grosz 2011; Kaufmann 2017a)

- These considerations come up for (i) emotive factives (*it is good, be happy/glad, regret,*. . . , and (ii) preference predicates (*prefer, be better*,. . .).

   $\Rightarrow$ unclear that we can make the case for all of them.

3.1.1   Syntactic considerations

On the non-logical reading, *if*-ancedents*A* seem to behave more like an argument clause:

- For the emotive factives, they constitute the non-factive version of *that*-complement clauses:

(27)   a. *It would be good [if John came to the party.]*
        b. *It is good [that John will come to the party.]*

- For some predicates, *if A* can appear in lexical argument positions (no expletive/pronoun; Rocchi 2010:(1d),(41a), (41b)):

(28)   a. *I would prefer [if the DSB had its own library].*
        b. *I would like [if each email account showed in its own notification].*
        c. *I would hate [if my dead links where deleted without me knowing].*

- Non-logical *if*-clauses pattern with arguments rather than adjuncts for extraction (modified from Pullum 1987):

(29)   a. ?**Which comitment will Joe die [if we keep t_i]?*
        b. *Which commitment would it be useful [if we kept t_i]?*

Q Chris points out that not all putative NL *if*-clauses permit extraction ((30-b)); but we should compare with–no judgment given–(30-c):

(30)   a. *It will surprise me if John makes that commitment.*
        b. ?**Which commitment$_i$ will it surprise me [if John makes t_i]?*
        c. __ *Which commitment$_i$ will it surprise me [that John makes t_i]?*

This fits general variation in what extraposed clauses are transparent for extractions (Bošković 2015, *caveat*: speaker variation);

(31) a. *?*What is it possible that John underestimates?* (his 162)
      b. [AP [A possible [CP that John underestimates the value of his house]]

(32) a. *What is it likely (that) John bought?* (his 165)
      b. [AP [AP likely it] [CP that John bought a house]]

Note that some of these constructions are adjunction structures after all–but this doesn't mean that we have to assimilate them to logical conditionals. Crucially, for *that*-clauses, we cannot obtain an independent adverbial interpretation ⇒ have to identify with 'dummy' pronouns.

(*On-going.*)

3.1.2 Question-answer test

For German, Onea (2015) (see also references therein) shows that non-logical *wenn* 'if'-clauses behave like content clauses in question-answer pairs and contrast with logical *wenn* 'if'-clauses:

(33) a. Hans würde es bedauern wenn Maria krank wäre.
          Hans would it regret   if   Mary ill   were.
          roughly: 'Hans would be sad if Mary were ill.'
      b. Hans würde es dir sagen wenn Maria krank wäre.
          Hans would it you tell   if   Mary ill   were
          'If Mary were ill Hans would tell you.'

(34) a. Was würde Hans bedauern?   - Wenn Maria krank wäre.
          what would Hans regret/be.sad.about - If   Mary ill   were
          roughly: 'What would Hans be sad about?' - 'If Mary were ill.'
      b. Was würde Hans dir sagen? - #Wenn Maria krank wäre./Dass Maria krank ist.
          what would Hans you tell?   - If   Maria ill   were./that Maria ill   is

3.1.3 Semantic considerations

- The popular paraphrase and the non-logical reading are logically independent (at least for some cases):

  (35) a. *I'd be glad if Sue showed up.*
        b. *If Sue showed up I'd be glad that Sue showed up.*

  (36) **The ignorance scenario** John will be hosting a party while I am away, and I won't learn who is invited or who shows up. I know that, this time, it is particularly important to him that Sue shows up, so I hope she will.

        (35-a): true NLC-reading; (35-b): false

  (37) **The sick coffee scenario** Whenever Sue comes over, she slips a drug into my coffee that makes me feel horribly sick but also extremely glad that she is there. I am finding it creepy, and I don't want to ever experience this again. (Suzy Killmister & Dave Ripley, p.c.)

        (35-a): false NLC-reading; (35-b): true

- Grosz (2011): on the popular paraphrase, (38-a) and (38-b) should be equivalent:

  (38) a. *It's not the case that I want John to be here, but if he were here, it would be nice that he's here.*

        b. *#It's not the case that I want John to be here, but it would be nice if he were here.*

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NLC in (38-b) seems to entail *I want John to be here*, (38-a) doesn't.

- Pullum (1987) argues that (39-a) is synonymous with (39-b), but not with (39-c) ('incoherent', double reference to alternate worlds, with failure of an irrealis presupposition) (his 7a,b,c) (relates to *Q Frank*):

  (39)   a.   *It would be wonderful if unicorns existed.*
         b.   *For unicorns to exist would be wonderful.*
         c.   *If unicorns existed, for unicorns to exist would be wonderful.*

- *Q Maša*: observation: can we force the non-logical reading by inserting *for its own sake* (-? Just harder to resolve *it* contextually?)

  (40)   *It would be good for its own sake if Bill were here.*

Irrealis versions of emotive factives are about actual dispositions (Onea 2015, drawing on Lewis (1997))

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4   CECs as a form of non-logical conditionals

If A, B allows for the non-logical flavor if *B* (e.g. *good*) can be

- a 0-place predicate evaluating a particular states of affairs (or after supplying a covert propositional argument)

  Logical reading of the conditional:

  (41)   *If A, B_0* is true at a context c and index i iff
         $\forall j \in i\text{-closest}_c$ A-indices: B_0 is true at c and j.

- a 1-place predicate of propositions (or world pluralities)

  Non-logical reading of the conditional:

  (42)   *If A, B_1* is true at a context c and index i iff $[[B_1]]^{c,i}([[A]]^{c,i}) = 1$.

Referential *if*-clauses

if-clauses as arguments seems to fit nicely with an analysis conditional antecedents as plural definite descriptions:

Stalnaker 1968, Schein 2001, Schlenker 2002,...

(43)   a. $[[the\ F]]^{c,i}$ = the (salient) plurality/set of *F*-individuals, if there is one; else undefined.
       b. $[[If\ A_{\text{referential}}]]^{c,i}$ = the (salient) plurality/set of *A*-indices, if there is one; else undefined.

- **Logical conditionals**: B_0 is predicated of $[[if\ A]]^{c,i}$ via **distribution**: $\forall j \sqsubset [[if\ A_{\text{referential}}]]^{c,i}$

  $\sqsubset$ accessing atoms in index-plural *P*.

- **Non-logical conditionals**: **collective** predication.

- Compare definite descriptions:

  (44)   a.   *The students were tired.*   distributive
         b.   *The students gathered in the lecture hall.*   collective

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Evaluations as collective predication (*Q Chris, Neil -?*):

(45) [[*dame/naranai/ikenai* BAD]]^{c,i}(P) = 1 iff $\{j : j \sqsubset P\} \cap O(f_c, g_c, i) = \emptyset$,
where $f_c(i)$ is the contextually relevant set of facts holding at i, and
$g_c(i)$ represents the contextually salient goals or rules.

- Good: actual evaluation

- Alternatives to this particular collective semantics of GOOD/BAD (worth exploring!):

  - Heim (1992): *want* as pointwise comparison of indices
  - von Fintel (1999): *want, glad, sorry* as global comparison
  - Lassiter (t.a.): *good* in terms of expected utilities
  - Sode (2017): measure functions

- Non-committal about exact referential *if*

4.1 Mileage for Japanese CEC modals

Hypothesis:

  (i) Japanese CEC modals are NLCs.

  (ii) NLCs are collective predications over **referential** *if*-clauses.

- NLCs only with *if*-clauses that can be referential. (*Q Hanzhi*)
  Note: any sort of referential will do (even [[*if A*]]^{c,i} = [[*A*]]^{c,i}).

- *If A,*GOOD/BAD -schema allows for a variety of conditional markers (*-tara, -(re)ba, -to, -te (mo/wa),* $^?$*nara*).

- Not every instantiation is acceptable.

- Proposal:

  - General restrictions (e.g. *tewa*: negatively evaluated main clause, Akatsuka 1997)
  - Restrictions in terms of whether connectives allow referential interpretations.
  - Additional conditional marker *mosi* cannot be added to CEC modals (enforces distribution).

Example of CEC restriction with *-(re)ba*

(46) a. [. . . Verb-NEG]-*reba* BAD.   V-*nakereba naranai*
          You must . . . *Verb*.
      b. *[. . . Verb]-*reba* BAD.   V-*reba naranai*
          You must not [. . . *Verb*].

(47) Gusuu   o   hika-**nakere-ba**   **nara-na-i**.
      even.number ACC draw-NEG-COND become-NEG-NPST
      'If you don't draw an even number it doesn't work.'/'You must draw an even number.'

(48) * Kisuu   o   hike-**ba**   **nara-na-i**.
      odd.number ACC draw-COND become-NEG-NPST
      intended: 'If you draw an odd number, it doesn't work.'/'You must draw an even number.'

'Verb-IF BAD' is not generally bad:

(49)   It-te   wa   ik-e-na-i.
       go-GER TOP go-POT-NEG-NPAST
       '(One/you) must not go.'   Larm (2006):(30)

Capturing *reba*-restriction:

- *-reba* with non-negated antecedent is ok in

  (i) hypothetical conditionals,

  (ii) in CECs with GOOD

- Lexicalized family of *reba*-conditional markers:

Marker	Conditional construal	Restriction on evaluation
-reba₁	quantificational	—
-reba₂	referential	positive
-nakereba	referential	negative

4.2   An issue with *mosi* (usually: 'if')

- Japanese hypothetical conditionals can contain *mosi* ('supposedly') in addition to the conditional marker (*-reba, -tara, -te (wa/mo), nara*)   (ex. from Hasegawa 2015:229)

  (50)   (mosi) kono moosi   ga   asita   mo tuzuku nara, eakon   wa   kowareru
          if   this   heat.wave NOM tomorrow also continue if   air.conditioner TOP break
          daroo.
          COP.CNJ
          'If this heatwave continues tomorrow the airconditioning will break.'

- *mosi* is ungrammatical in CECs:

  (51)   (*Mosi) tabe-nake-reba   nara-na-i/dame   da.
          (if)   eat-NEG-REBA become-NEG-NPST/bad COP.NPST
          int. 'You must eat.'

- *mosi* either introduces distribution, or it is like Kratzer's covert epistemic modal and has to get restricted by *if A*

  (52)   a. $[[mosi\ A\text{-}\textsc{If}]]^{c,i} = \lambda p_{\langle s,t \rangle}.\forall j[j \sqsubset [[A\text{-}\textsc{If}]]^{c,i} \rightarrow j \in p]$
          b. $[[mosi\ A\text{-}\textsc{If}]]^{c,i} = \lambda p.\forall j \in O(f_c^{+A}, g_c, i) : j \in p.$

  Either way, collective predication will be blocked.

- Prediction (Ikumi Imani, p.c.): *mosi* blocks *if A* from restricting other operators (quantificational adverbial, generic operator,...)

  This is born out, *mosi* is incompatible with quantificational adverbials or law-like readings (multi-case conditionals) (Ikumi Imani, p.c.; marginally possible: readings where the Q-Adverb is interpreted as part of the consequent):

  (53)   a.   *(??Mosi) Mary-ga kur-eba, taitei John mo kuru.*
              'If Mary shows up, usually, John shows up, too.'
          b.   *(# Mosi) taiyoo-ga sizumu-to, yoru-ni naru.*
              'If the sun goes down, it becomes night.'

4.3 Consequences for Semantic Identity Hypothesis

- If *if A* refers to the set of all *A*-worlds, we predict $[[\textit{-nakereba naranai}]]_J = [[\textit{must}]]_E$.

  (*Q Neil*)

- If *If A* refers to the epistemically most plausible *A*-worlds, the equivalence only holds if *must* is interpreted w.r.t. a modal base that confines it to the epistemically most plausible worlds.

5 Account doesn't gladly extend to NLC *glad*

English NLC constructions

(54)   *John would be glad if Sue came.*

Extension to NLCs with *glad, regret,…* proves tricky:

1. Mood-marking 'out of place'

2. Factive *that*-variants

3. If $[[\textit{if}_{\text{referential}}\ p]]^{c,i}$ contains more information than p (salience, likelihood, stereotypicality,…), we won't know what to compare the antecedent index to.

4. If $[[\textit{if}_{\text{referential}}\ p]]^{c,i}$ relies on an epistemic perspective, it needs to switch from speaker to attitude holder.

<div align="right">shift to perspective of local attitude holder, Speas & Tenny (2004)</div>

3 and 4 vanish for referential analyses where $[[\textit{if}\ A]]^{c,i} = [[A]]^{c,i}$.

- Non-logical moodiness

    - NLCs convey actual preferences (see above)
    - But then: where does the irrealis mood marking come from?
      Sode (2015, 2017): syntax, matrix clause agrees with embedded clause in German *good/better that/if*-construction
    - Grosz (2012) points out parallel to von Fintel & Iatridou's findings about weak necessity modals (transparent OUGHT)
    - Hypothesis: Mood marking as/indicates a special presupposition filter.
    - But: what presuppositions are there?

- What's in *glad that*

    - Desirable: same *glad* in *glad that* and *glad if* (prediction thrown out with the rejected paraphrases).
    - Standardly: $[[\textit{glad that}\ \phi]]^{c,i}(a)$ presupposes
      (i) 'ϕ' is true   FACITIVITY
      (ii) a believes $\lambda i.[[\phi]]^{c,i}$ BELIEF
      <div align="right">(e.g. Katz 1991, von Fintel 1999, Villalta 2007)</div>
    - FACITIVITY (and BELIEF) disappear in NLCs:

      (55)   a.   I'd be glad if Smith had accepted the offer.
                    b.   [%]I'm glad if Smith has accepted the offer. But are you sure she has?

- Reshuffling gladness

  - Even indicative *is/am glad (if)* ϕ does not entail ϕ.
  - FACITIVITY can't come from *glad*.
  - FACITIVITY comes from *that*$_{\text{Fact}}$
    (Kiparsky & Kiparsky 1970, Kratzer 2006, Schueler 2013, Sode 2015, 2017...)
  - $[[\text{glad}_{\langle s,t\rangle,\langle e,t\rangle}]]^{c,i}(p)(a)$ can't entail $[[\text{glad}_{\langle e,t\rangle}]]^{c,i}(a)$.

- A new *glad* (building on Heim's 1992 *want*)

  (56)   The i-closest$_c$ p-indices:

  <div align="right">(intended: causally, Kaufmann 2013)</div>

  $\text{SIM}_c(i)(p) := \{j \in I : j \in p \ \& \ \text{there is no } k[k \in p \ \& \ k \text{ is more similar to } i \text{ than } j]\}$

- *glad* as expressing comparative preferences:

  <div align="right">Heim 1992; nothing hinges on specific implementation:</div>

  (57)   a. $[[\text{glad}]]^{c,i}(a)(p) = 1$ iff $\forall j \in DOX_a(i) :\text{SIM}_c(j)(p) <_{a,i} \text{SIM}_c(j)(\neg p)$
         b. $j <_{a,i} k$ iff a in i prefers j to k
         c. $X <_{a,i} Y$ iff for all $j \in X, k \in Y$: $j <_{a,i} k'$

  (58)   a. $[[that_{\text{Fact}}]]^{c,i} = \lambda p_{\langle s,t\rangle} : p(i).p$
         b. $[[if]]^{c,i} = \lambda p_{\langle s,t\rangle}.p$

- Gains and losses?

  - Problem 1: *that*$_{\text{Fact}}$ encodes FACITIVITY but not BELIEF.
  - Heim (1992): presuppositions of preference attitude ascriptions tend to hold of belief state of preference attitude subject. - Sufficient?
  - Correct for *want*; too weak for *glad* (*pace* Onea 2015 for similar cases with *bedauern* 'be sad about, regret'):

    (59)   a.   Patrick wants to sell his chello.
           b.   ok: Patrick has a chello and he believes that he has a chello.
           c.   ok: Patrick wrongly believes that he has a chello.

    (60)   a.   Sandy is glad that Robin ate kale.
           b.   ok: Robin ate kale and Sandy believes that Robin ate kale.
           c. ???: Sandy wrongly believes that Robin ate kale.   speaker variation

  - Problem 2: *if A* has to refer to antecedent proposition.
  - Problem 3: Una Stojnić (comments on Rutgers talk) points out that the comparative analysis is problematic

    (61)   *I would be glad if I ate the cookie, and I'd be glad if I didn't eat the cookie.*

- Give up on uniformity after all?

  - Non-uniform alternative:

    (62)   a.   (i)   *glad that p* $\mapsto$ *glad (about) the fact that p*

(ii)　*glad if p* ↦ for each doxastic alternative, most similar *p* indices are preferable to most similar ¬*p*-indices

– Resulting picture:

(63)　a.　*glad if* (apparent conditional) ⇒ (comparative) propositional attitude
　　　b.　*glad that* (apparent propositional attitude) ⇒ relation between individual and 'fact'

- Back to *would . . . if*: more than agreement?

Scenario: Mathematician Red Sox fan (somewhat nerdy, with a preference for nice things happening to people in years magically connected to them in some way):

(64)　The sum of the numbers of pitchers in the current starting rotation of the Red Sox multiplied by 17 is 2193.
　　　a.　#I'll be glad if the Red Sox win in 2193!
　　　b.　#I'm glad if the Red Sox win in 2193!
　　　c.　I'd be glad if the Red Sox won in 2193!

Presuppositions triggered by $[[glad]]^{c,i}(p)(a)$:
(i) *a* is an attitude subject at *i* (alive,. . .)
(ii) *p* is settled at *i* (Thomason 1984)

(65)　a.　*would*(α *glad* ϕ): no presupposition
　　　b.　*will*(α *glad* ϕ): presupposes that there is a point in the future at which ϕ is settled and α is an attitude subject

- Weakening *glad*-presupposition

Note: 'possibly *a* alive' seems sufficient:

(66)　a.　I'll/#I'm be glad if the Red Sox ever win again, and even if it is a hundred years from now.
　　　b.　I'd be glad if the Red Sox ever won again, and even if it is a hundred years from now.

- More non-counterfactual counterfactuality marking

(67)　Weak necessity modals/strong necessity modals (von Fintel & Iatridou 2008):
　　　a.　**lexical languages** (like English *ought*/*have to*)
　　　b.　**transparent languages** (*HAVE TO*/*HAVE TO*+COUNTERFACTUALITY)

(68)　a.　To get to the island you ought to use this boat.
　　　b.　To get to the island you would have to use this boat.

– *ought* is only about actual weak preferences/law/. . . , not preferences/laws/criteria in hypothetical situations.

– OUGHT as meta-linguistic counterfactuality: 'if we were in a context in which the secondary ordering source was promoted, then it would be a strong necessity that. . . ' (von Fintel & Iatridou 2008)

- Counterfactuality filtering:

Very rough idea, extending this suggestion in von Fintel & Iatridou (2008):

> Counterfactual filtering hypothesis:
> (i) strong necessity modals carry presupposition that modal flavor counts as binding (notions in Rubinstein 2011, Kaufmann 2012)
> (ii) counterfactual morphology can indicate presence of metalinguistic presupposition filter: IFDEFINED (or: 'STRAWSON')
>
> But: restricted to presuppositions of verbal predicate -?

Problems with blocking (von Fintel & Iatridou 2008); problems with 'free-standing *would*-s' (Schueler 2008, 2013).

> I'm troubled by Una's (61) for the preferential analysis. Lewis/Onea-style dispositions? - *Ongoing.*
> – Problematic about Onea 2015: presupposition filtering is a matter of *if/that*. Independent of matrix mood - missing piece.

6 Conclusions

- Conditional evaluative constructions in Japanese as non-logical conditionals (NLCs)

- NLCs as collective predications over index-plurals (complex indices or sets (aka propositions))

- Some Japanese *if*-connectives enforce distributivity; restrictions on Japanese paradigm captured as blocked collective predications

- Extension to further non-logical conditionals (NLCs under emotive factives in English)

- Trouble for referential analyses with $[[if\,A]]^{c,i} \neq [[A]]^{c,i}$

  - lost: motivation non-monotonicity (Schlenker 2004)
  - remaining: quantificational restriction (Schein 2001)
  - remaining: *then*-syntax (a.o., Schlenker 2004)

- Counterfactual mood marking as filtering (certain) presuppositions

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Appendix: Referential *if*-clauses (from Göttingen Spirit Summer School)

Independent arguments (and references) in favor of a referential analysis:

6.1 *if*-clauses and topics

- Referential expressions can appear as topics in left-dislocated position, quantificational expressions or simple restrictors cannot (Schlenker 2004; but see Endriss 2009):

(69) a. *Every man, he is happy.
      b. *Man, every he is happy.

If-clauses can appear in left-dislocated position.

6.2 *then* as a proform

- Conditionals are similar to correlative constructions: free relative clause adjoined to the matrix clause and coindexed with a pronoun inside the matrix clause (Bhatt and Pancheva 2006).

- On this view, *if*-clauses are definite descriptions of possible worlds and *then* is a world pronoun (see also Cresswell 1990; Iatridou 1994; Izvorski 1996).

- Iatridou (1994), Izvorski (1996), and Schlenker (2004) (his (40a,b,41a,b,a',b')) use this to derive restrictions on the distribution of *then*:

(70) a. If Peter runs for President, (then) the Republicans will lose.
      b. If John is dead or seriously ill, (then) Mary will collect the money.
      c. If John is dead or alive, (#then) Mary will collect the money.

Iatridou argues that *then* triggers a presupposition/implicature about alternatives:

(71) a. Assertion: *if*$[p]q$
      b. Presupposition/Implicature: $\neg$*if*$[\neg p]q$

She argues that this parallels left-dislocation with doubling in German:

(72) Hans$_i$, der$_i$ hat es verstanden.
      Hans   he   has it understood
      Assertion: 'Hans understood.'
      Presupposition: 'There is some other person who did not understand.'

Trouble?

(73) Alle haben die Vorlesung verstanden. Hans hat sie verstanden. Marie hat sie verstanden. Und unser Freund Peter, der hat sie auch verstanden.

'Everybody understood the lecture. John understood it. Mary understood it. And our friend Peter understood it too.' (Iatridou credits Irene Heim, p.c.)

- Following ideas by Izvorski (1996), Schlenker (2004) argues that *then* is a strong pronoun and evokes alternatives (over possibilities). These are either used for exhaustification (negation of stronger alternatives; leading to the requirement of alternatives, fails in (70-c)), or for association with the focus sensitive particle *auch* 'too'.

- Examples like (73) can be replicated with condtionals:

(74) Wenn es regnet gehen wir zum   Kurs, und wenn es nicht regnet, dann gehen wir auch.
if   it rains go   we to.the class, and if   it not   rains   then go   we also
(roughly) 'If it rains, we will go to the class, and if it doesn't rain, then we'll also go to the class.'

- *then* displays Condition C effects (Schlenker 2004:(54a,b,c;56a,b,c)):

(75) a. John likes [people who admire him$_i$].
b. *He$_i$ likes [people who admire John$_i$].
c. [His$_i$ mother] likes [people who admire John$_i$].

(76) a. [if it were sunny right now]$_i$ I would see [people who would then$_i$ be getting sunburned]
b. *If I would then$_i$ be seeing [people who would be getting sunburned [if it were sunny right now]$_i$]
c. Because I would then$_i$ hear lots of people playing on the beach, I would be unhappy [if it were sunny right now]$_i$

6.3 Distal/proximal marking on referential expressions

- Pronouns for individuals are marked for relative distance from the center/speaker: *this/that*

- Schlenker (2004): indicative vs. subjunctive indicates location of the (plural) world referent to the common ground

6.4 Schein-sentences

- The restriction of a generalized quantifier can be introduced through a plural description referring to the domain of the quantifier:

(77) a. Each student is happy.
b. [∀x: student(x)](happy(x))
c. Each of the students is happy.
d. [∀x: x atom-of [ιX: STUDENT(X)]](happy(x))

Stacked definite descriptions (Schlenker 2004:(30)):

(78) a. Les Français, ceux que je connais sont pour la   plupart sympathiques.
The French, those that I know   are for   the most   part   nice
'As for the French, those I know are mostly nice.âĂŹ
b. [ιX': French(X')][ιX : $X \subseteq X$' & I-know(X)][MOST x:Xx](nice(x))

c.　[Most x : French(x) & I-know(x)](nice(x))
　　　　　'Most Frenchmen I know are nice.'

Barker's puzzle (Barker): iterated *if*-clauses (Schein 2001; Schein 2003; Schlenker 2004:(31)):

(79)　　a.　If John comes, if Mary comes as well, the party will probably be a disaster.
　　　b.　[ιW' : John-Comes(W')][ιW: W ⊆ W' & Mary-comes(W)] [Most w:Ww](disaster(w))
　　　c.　[Most w: John-comes(w) & Mary-comes(w)](disaster(w))

The c-clauses show that both (78-a) and (79-a) can be treated as standard generalized quantification over individuals/worlds, but it is unclear how logical forms along these lines could be derived from the object language expressions.

Stacked *if*-clauses restricting non-universal quantificational operators (Barker's puzzle) provide evidence in favor of a (monotonic or non-monotonic) referential analysis of *if*-clauses.