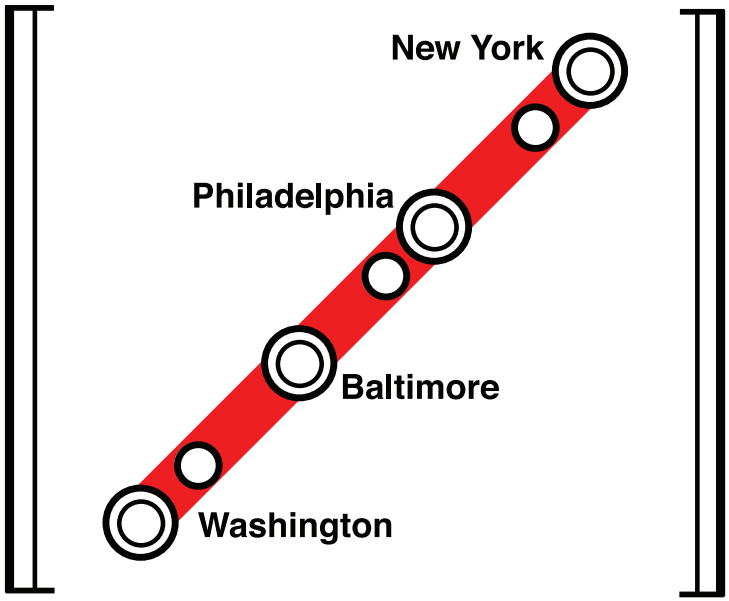
MACSIM XI

Johns Hopkins University, Oct 11, 2025



MACSIM

Program

9–10	Breakfast, registration, poster set-up (Levering lounge)
10–11	Talk session 1 (Levering great hall)
	Fedor Golosov (UMD): A dynamic account of bare singulars in articleless languages: a case study from Russian
	Mingyang Bian (UPenn): Interpreting Negation under *Yiqian* 'Before' in Mandarin Chinese
11–12	Invited talk
	Paloma Jeretič (UPenn): Relations between modality and possession
12:00–1:30	Lunch (on your own, see website for suggestions)
1:15	poster setup
1:30–3	Poster session 1 (Levering lounge/great hall)
3–4:30	Talk session 2
	Auromita (Disha) Mitra (NYU): Openness requirements and conditional 'iffiness': evidence from Bangla *jodi*-conditionals
	Jiayuan Chen (Rutgers): Uniqueness presuppositions and where to find them: evidence from focus
	Mingyeong Choi (Georgetown): Finding mood where it wasn't expected: a comparison-based account of *-ki* in Korean
4:30	poster setup
4:45–6:15	Poster session 2
6–	Dinner

Acknowledgements

- Support provided by the JHU Cognitive Science Department and the JHU Semantics Lab.
- Thanks very much to CogSci staff, especially Chamera Sampson, for assistance with this workshop.
- Thanks to the Data Science and AI institute for help with the poster displays.

Poster session 1 (1:30-3)

Setup at 1:15, or throughout the morning.

- Ruidi Hang (UPenn): Meaning in Context: Children's Understanding of English Plurals
- Xiang Li (Georgetown): On the Structure and Indicative Interpretation of *-liK* in Uyghur
- Katherine Howett (UMD)
- Matthew Ganquan Shi (UMD): Restricting ignorance
- William Zumchak (UMD): Equivalency Oddness without Blind Exhaustificatio
- Alexander Hamo (UPenn): When properties lend themselves to events: Deriving responsibility in English middles
- Hajime Mori (NYU): Extending Free Choice Inference to Hedged Assertions: A Multilateralarized Update Semantics Account
- Matthew Loder (NYU)

Please take down your posters at 3 in prep for the next poster session.

Poster session 2 (4:45–6:15)

Setup at 4:30 after the talk session.

- Emily Pecsok (UPenn): Negating Antonyms: Asymmetric vs Symmetric Interpretations
- Quartz Colvin (Rutgers)
- Daniar Kasenov (NYU): Social meaning through mismatching ϕ-features in honorifics and imposter expressions
- Mikaela Belle Martin (UPenn): The effect of persona racialization on perceptions of pragmatic (im)precision
- Malhaar Shah (UMD)
- Daiki Asami (UD): Specificity and Scrambling in Sentence Comprehension
- Gonzalo Resa Heras (UD): Analyzing the Interaction Between Differential Object Marking and Filler-Gap Effects in Spanish
- Jane Li (JHU): Can internal representations of neural language models tell us something about whether they have multiple readings?
- Alex Shilen (JHU):

Invited talk: **Relations between modality and possession**
Paloma Jeretič, University of Pennsylvania.

Modality and possession are two separate semantic phenomena. Yet many unrelated languages utilize light verbs like be, have or get to express some form of predicative possession and/or modality. An example is English have, as in I have a book and I have to go. It turns out that if we look at standard accounts for the semantics of modality and possession, we notice they have a common core: contextually-supplied relations. Relations between individuals, or relations between worlds. In this programmatic talk, I propose a way of unifying the syntax-semantics of modality and possession, which is to be tested and adjusted to specific languages and constructions. I discuss special cases of change-of-state possession which give insight into how flavors of light verb modals are restricted in a principled way.

Specificity and scrambling in sentence comprehension

Daiki Asami[1*], Edson T. Miyamoto[2], and Satoshi Tomioka[1]

University of Delaware[1] Future University Hakodate[2]

*daiasami@udel.edu

Many languages allow flexible word order through *scrambling*. In Japanese, for example, transitive sentences can have either SOV (basic) or OSV (scrambled) word order. Previous psycholinguistic studies have shown that scrambled sentences take longer to process than their basic counterparts (e.g., Miyamoto and Takahashi 2002; Tamaoka et al. 2005; Koizumi and Imamura 2017). In this study, we examine whether this processing asymmetry is impacted by a discourse-pragmatic factor, with special attention to *specificity*. We target specificity because theoretical work suggests that phrases conveying specific information are often scrambled (e.g., Diesing 1997; Karimi 2003). Our hypothesis is that the difficulty of scrambled sentences decreases when the scrambled phrase is marked as specific. Results from our experiment, which measured the total time to process a whole sentence, revealed that the processing cost of non-canonical word order was reduced but not eliminated when the scrambled phrase represented specific information. We conclude that the asymmetry between basic and scrambled sentences cannot be explained exclusively by discourse-pragmatic factors (see Asami and Tomioka 2025 for a similar conclusion). Since the current experiment measured only processing times for whole sentences, a self-paced reading experiment is being prepared to investigate phrase-by-phrase processing patterns.

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Interpreting Negation under *Yiqian* 'Before' in Mandarin Chinese

Mingyang Bian

University of Pennsylvania

1 Introduction We describe and analyze expletive negation embedded under *yiqian* 'before' in Mandarin Chinese, as in constructions of the form '*Q yiqian*, *P*', meaning '*P* before *Q*'. Surprisingly, the sentence variants in (1) with and without the negation yield the same meaning:

(1) yisheng **(mei)** lai yiqian, bingren jiu yijing si le.
doctor NEG come before patient then already die PFV.
$t_{\text{PATIENT DIE}} < t_{\text{DOCTOR ARRIVE}}$ (Adapted from Lin 2016)

The intuitive understanding of the clause under *yiqian* in (1) seems to correspond to a (tenseless) Perfect (Iatridou et al. 2003) interpretation, with the affirmative variant picking out the set of time points following the event time: $[\![yisheng\ lai]\!] = \lambda t.[\exists e[\tau(e) < t \wedge arrive(e, doctor)]]$.

Cross-linguistically, expletive negation under 'before' is not uncommon (Jin & Koenig 2020). However, in prior work on Catalan (Espinal 2000), Italian (Prete 2008) and German (Krifka 2012), it has been shown to obey various licensing conditions , which would rule out (1) or only allow an anti-veridical reading. In Mandarin, however, expletive negation under *yiqian* is not subject to similar constraints and appears unrestricted. Thus prior analyses (e.g, the negation-absorption approach (Espinal 2000: Catalan) and the semantic-pragmatic approach (Krifka 2012: German)) do not naturally extend to Mandarin.

We adapt the proposal of Beaver & Condoravdi 2003 for English 'before' by building on Lin's 2016 informal characterization of Mandarin *yiqian* as being sensitive to a transition of state of affairs. Our formal analysis of the puzzle of expletive negation under *yiqian* is based on a formulation of the denotation of the *transition* operator $\mathscr{T}$. Under this analysis, negation under *yiqian* is in fact interpreted. We then show that this makes the correct predictions with respect to the allowed temporal boundary configurations for propositions under *yiqian*.

2 Background On the main prior analysis of English 'before' by Beaver & Condoravdi 2003, its complement proposition combines with a type-coercion operator *earliest* that selects the earliest time point in the set of times points (a continuous time interval) at which that proposition holds, and 'before' establishes the temporal sequence of this earliest time point and the set of time points at which the matrix proposition holds:

(2) $[\![earliest]\!] = \lambda Q_{<i,t>}.\iota t[t \in Q \wedge \forall t'[t' \in Q \rightarrow t \leq t']]$.

(3) *P* before *Q* iff $\exists t[t \in P \wedge t < earliest(Q)]$

Applying $[\![earliest]\!]$ to the **positive variant** of (1) correctly picks out the unique time point which coincides with the moment of the doctor's arrival. However, the **negative variant** of (1) denotes $\lambda t.[\neg\exists e[\tau(e) < t \wedge arrive(e, doctor)]]$, a right-bounded set of time points (holding of all time points prior to the doctor's arrival) : $(-\infty, \tau(e)]$. It follows that the *earliest* operator picks out $-\infty$ when applied to this negative variant, which yields implausible truth conditions requiring the patient to have died before $-\infty$. In fact, Beaver & Condoravdi 2003 assume that *earliest* is only defined for left-bounded sets of time points, which correctly rules out English 'before'-clauses with an embedded negation (cf. *#Before John hasn't entered college,...*).

3 *Transition* Operator Lin 2016 observes that propositions that are true/false at all times cannot be embedded under *yiqian* and proposes that *yiqian* is sensitive to a transition of state of affairs, selecting a *transition* operator. In informal terms, the operator picks out the earliest time of a resultant state (typically affirmative propositions) and the latest time of a prior state (typically negative propositions). For a given affirmative proposition and its negative variant, these are effectively indistinguishable, rendering the negation seemingly uninterpreted.

Considering our discussion of (1), the transition operator will need to pick out the earliest time point of a left-bounded set of time points and the latest time point of a right bounded set of time points. We propose a formal explication of the *transition* operator as referring to the unique non-infinite time point in a time interval I:

(4) $[\![\mathscr{T}]\!] = \lambda Q_{<i,t>}.\iota t[t \in Q \wedge t \neq \pm\infty \wedge [\forall t'[t' \in Q \rightarrow t \leq t'] \vee \forall t''[t'' \in Q \rightarrow t \geq t'']]$.

For a left-bounded interval ($I_A = [t_1, +\infty)$), $\mathscr{T}$ picks out its earliest time point t_1; for a right-bounded interval ($I_B = (-\infty, t_2]$), $\mathscr{T}$ picks out its latest time point t_2. This provides a formal explanation of the expletive nature of negation under Mandarin *yiqian*: for an affirmative proposition embedded under *yiqian* like in (1) that denotes an interval $Q_A = [t_1, +\infty)$, its starting point t_1 is effectively indistinguishable from the end point t_2 of its negative counterpart, which denotes an interval $Q_B = (-\infty, t_2]$. That is, t_1 and t_2 coincide with the transition point. Since t_1 and t_2 are effectively indistinguishable, the positive and negative variants of a *yiqian*-clause yield the same truth conditions, and therefore negation under *yiqian* appears semantically vacuous.

4 Further temporal configurations Lin's 2016 proposal is motivated by the observation that propositions without an inherent transition point cannot be embedded under *yiqian*, e.g., (5):

(5) #Sanjiaoxing dou you san tiao bian yiqian, ...
triangle all have three CL side before
Before all triangles have three sides, ... (Adapted from Lin 2016)

In the current study, we claim that the infelicity of (5) is because the embedded proposition receives an imperfective interpretation. The formal explication proposed in (4) accounts for examples like (5), as the *transition* operator is undefined when taking open intervals, which have no specified starting or end point. Using a standard treatment for imperfectives (in e.g., Kratzer 1998), the embedded clause denotes $\lambda I_{<i,t>}.\exists e[\tau(e) \supseteq I \wedge have.three.sides(e, triangles)]$. Since 'all triangles have three sides' is true throughout time, this includes all intervals that are subintervals of $(-\infty, +\infty)$. Following the (simplifying) assumption in Beaver & Condoravdi 2003 that the set of time points corresponding to a sentential clause A is just the set of all time points contained in the intervals corresponding to A, the embedded clause (5) corresponds to $(-\infty, +\infty)$, which in turn renders (4) undefined. Additionally, cases that require the overt imperfective marker *zhe* in Mandarin, e.g., in (6), cannot be embedded under *yiqian*, providing further empirical support for the proposed *transition* operator:

(6) #Zhangsan xie zhe zuoye yiqian, ...
Z write IMPF homework before
'Before Z is/was doing his homework, ...'

(7) ??Yidian dao liangdian yiqian, ...
1.o'clock to 2.o'clock before
'Before (the period of time between) 1 to 2, ...'

Similarly, the *transition* operator proposed in (4) is undefined when taking closed intervals, which have both specified starting and end points. This accounts for the observation that embedding duration terms under *yiqian*, as in (7), is infelicitous. The embedded duration term $[\![Yidian\ dao\ liangdian]\!] = \lambda t.1\ o'clock \leq t \leq 2\ o'clock$. Applying (4), there are two non-infinite time points such that they are the starting point or the end point, and the uniqueness requirement of ι is not satisfied, rendering the *transition* operator undefined. We acknowledge inter-speaker variations with respect to the felicity of examples like (7): while most speakers consider them infelicitous, some speakers accept the 'earliest' interpretation. A possible account for the variations is that in the grammar of some speakers, the *earliest* operator is available when the result of applying the *transition* operator is undefined.

5 Conclusion and extension In summary, we offer an analysis for a novel empirical observation in Mandarin involving negation and temporal modification with *yiqian* 'before' based on a formal explication of $\mathscr{T}$, the *transition* operator. Extensions of this work include exploring anti-veridical *yiqian*-clauses, building on the intensional part of Beaver & Condoravdi 2003 and the proposal of Ogihara & Steinert-Threlkeld 2024 for English 'before'-clauses.

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Uniqueness presuppositions and where to find them: evidence from focus

Jiayuan Chen, Rutgers University

Overview. There is a debate in the literature on what is at-issue when *the* is stressed. Abbott (1999) (among many others) argues that uniqueness is at-issue, such that (1a) is equivalent to (1b). Ludlow & Segal (2004) (among many others) counter that uniqueness cannot be at-issue, since uniqueness is clearly not satisfied in examples like (2). I argue that uniqueness is indeed at-issue when *the* is stressed, and (2) can be accounted for if we assume (i) *the* encodes uniqueness via a covert *only*, and (ii) *only* and the superlative morpheme *-est* are different phonetic realizations of the same morpheme (Sharvit 2015).

(1) a. Mary didn't see THE talk. (There are two.)
b. Mary didn't see the ONLY talk. (There are two.)

(2) (There are many German airlines, but) Lufthansa is THE German airline.

Existing analyses of THE. Abbott (1999) argues that definites presuppose uniqueness, which becomes at-issue when *the* is stressed. To account for (2), Abbott argues that (2) is simply hyperbolic and deliberately overstating the facts to achieve a certain pragmatic effect. By comparison, Ludlow & Segal (2004) argue that definites presuppose familiarity, which becomes at-issue when *the* is stressed. They point to examples like (2), where uniqueness is violated, and (3), where familiarity, rather than uniqueness, is at-issue.

(3) Are you THE William Faulkner? (Ludlow & Segal 2004)
= Are you the famous/familiar William Faulkner?
≠ Are you the only/unique William Faulkner?

Proposal. I argue that (2) and (3) can be accounted for without appealing to hyperboles or familiarity. First, I propose that *the* denotes (4). (4) takes two arguments, one a covert *only*, whose denotation is given in (5), and the other an NP, and returns a type $\langle e,t\rangle$ predicate true of the only individual satisfying the NP description. Following Coppock & Beaver (2015), I assume that definites in predicative positions denote type $\langle e,t\rangle$ predicates, and definites in argument positions denote the same predicates type-shifted by either ι or EX. A sample derivation for a definite in argument position is given in (6) and (7). The present analysis echoes Coppock & Beaver (2015)'s treatment of *the*: (6a) is the same denotation that Coppock & Beaver propose for *the*, and (6c) is the same denotation Coppock & Beaver would assign to a definite in argument position. The main innovation of the present analysis is that *the* can be decomposed into *the* and a covert *only*.

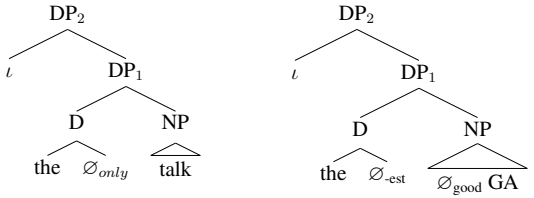
(4) $[\![\text{the}]\!] = \lambda Q_{\langle et,et\rangle}\lambda P_{\langle e,t\rangle}\lambda x_e\!:\!Q(P)(x).P(x)$

(5) $[\![\varnothing_{\text{only}}]\!] = \lambda P_{\langle e,t\rangle}\lambda x\!:\!P(x).\forall y[y \neq x \rightarrow \neg P(y)]$ (Coppock & Beaver 2015)

(6) a. $[\![\text{D}]\!] = \lambda P\lambda x\!:\!\forall y[y \neq x \rightarrow \neg P(y)].P(x)$
b. $[\![\text{DP}_1]\!] = \lambda x\!:\!\forall y[y \neq x \rightarrow \neg\text{talk}(y)].\text{talk}(x)$
c. $[\![\text{DP}_2]\!] = \iota x\!:\!\forall y[y \neq x \rightarrow \neg\text{talk}(y)].\text{talk}(x) \quad = \iota x.\text{talk}(x)$

THE & the ONLY. Next, I propose that when *the* is stressed, focus is not placed on *the*

(7)



itself, but on the covert *only* that *the* takes as an argument. Here I assume that when focus is placed on a covert element, stress may be shifted to some adjacent linguistic material that is overtly pronounced (see Laka 1990, Ahn 2015, Saha et al. 2023, a.o. for similar proposals on the stress assignment of silent focus-marked elements). When focus is placed on the covert *only*, this adjacent linguistic material is *the*. The present analysis thus accounts for (1), where stressing *the* is semantically equivalent to stressing *only*.

THE & non-uniqueness. The present analysis also accounts for (2) and (3), given certain assumptions. Following the delineation approach to gradable adjectives (e.g. Klein 1980), I assume that an adjective like *tall* denotes roughly (8), which partitions a contextually supplied set of individuals C known as the comparison class into those who are definitely tall (the positive extension of *tall*), those who are definitely not tall (the negative extension of *tall*), and those who are neither tall nor not tall (the extension gap of *tall*), and asserts that x belongs to the first partition. On this basis and following Hohaus (2024), I propose that the superlative morpheme *-est* denotes (9), which asserts that x is the only member of C in the positive extension of P. Following Sharvit (2015), I propose that *only* and *-est* are different phonetic realizations of the same underlying morpheme denoting (9), which is realized as *-est* when it composes with an adjective, and as *only* when it composes with a noun. I assume that when (9) is realized as *only*, C consists of individuals satisfying the NP description whose cardinality is 1 (the positive extension of the NP), greater than 1 (the negative extension), and 0 (the extension gap).

(8) $[\![\text{tall}]\!] = \lambda x_e\!:\![x \in C \wedge x \text{ is either tall or not tall in } C].x \text{ is tall in } C$

(9) $[\![\text{-est}]\!] = \lambda P_{\langle e,t\rangle}\lambda x\!:\![P(x) \wedge x \in C].\forall y[y \in C \wedge y \neq x \rightarrow \neg P(y)]$

To account for (2), I propose that there is a contextually supplied covert adjective akin to *good* or *important* that modifies the NP *German airline* in (2). The denotation of *the German airline* in (2) can then be derived as in (7) and (10). (For space reasons, I omit the presuppositions that $x, y \in C$ and x is not in the extension gap of the NP.)

(10) a. $[\![\text{NP}]\!] = \lambda x.x \text{ is good in } C \wedge \text{GA}(x)$
b. $[\![\text{D}]\!] = \lambda P\lambda x\!:\!\forall y[y \neq x \rightarrow \neg P(y)].P(x)$
c. $[\![\text{DP}_1]\!] = \lambda x\!:\!\forall y[y \neq x \rightarrow \neg(x \text{ is good in } C \wedge \text{GA}(x))].x \text{ is good in } C \wedge \text{GA}(x)$
d. $[\![\text{DP}_2]\!] = \iota x\!:\!\forall y[y \neq x \rightarrow \neg(x \text{ is good in } C \wedge \text{GA}(x))].x \text{ is good in } C \wedge \text{GA}(x)$
$= \iota x.x \text{ is good in } C \wedge \text{GA}(x) \quad$ = the unique x s.t. x is the best GA

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When properties lend themselves to events: Deriving responsibility in English Middles

Alexander Hamo
University of Pennsylvania
ahamo@upenn.edu

English middle constructions (*This bread cuts easily*, *Politicians bribe readily*) exhibit a puzzling requirement: surface subject properties must be explanatorily responsible for the event's feasibility. Building on Williams (2015), this work argues that this responsibility relationship is semantically encoded, not pragmatically inferred. Adapting diagnostics developed in Biggs and Embick 2022 for passives, I show that responsibility in middles patterns distinctly from passives: it is non-cancelable (*This bread cuts easily, #but nothing about the bread's properties made it so*), invariably attributed to surface subject properties, and context-independent.

Notably, middles characteristically prefer 'facilitators'—additional material like manner adverbs (*easily*), definite subjects, contrastive focus, and negation—distributed across structural positions (subject DP, (extended) verbal domain). This preference arises because facilitators specify the connection between surface subject properties and events: subject-oriented facilitators make relevant properties salient, while event-oriented facilitators restrict the set of events to those that the subject properties lend themselves to. Additionally, middles entail implicit initiators, either agents or causers (distinguishing them from unaccusatives) yet systematically exclude volitional adverbs (further distinguishing them from passives).

I propose that middles are licensed by a middle head (m) that introduces a primitive semantic relation Lend relating properties, individuals, and events:

$$[\![m]\!] = \lambda f_{\langle s,t\rangle}\lambda x.\lambda e.\exists P[\mathsf{Lend}(P, x, e)] \;\&\; f(e)$$

Intuitively, this asserts that some property P of individual x lends itself to event e. This semantic encoding explains the non-cancelability of responsibility, the heterogeneous distribution yet functional unity of facilitators, and restrictions on reason clause control and modifier distribution. The analysis suggests that natural language may encode property-to-event relations as a semantic primitive, distinct from standard thematic relations and causation, with potential cross-linguistic significance.

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Social meaning through mismatching φ-features in honorifics and imposter expressions

Daniar Kasenov (NYU)

Competition in phi-feature interpretation: Most work on interpretation of phi-features assumes that their distribution is partially governed by semantico-pragmatic competition principles (*Maximize Presupposition!* in Heim 2008; *Lexical Complementarity* in Harbour 2016; *Exhaustification* in Bobaljik, Sauerland 2024; a.o.). Take, for example, the privative decomposition for person features (3 = []; 2 = [PART]; 1 = [PART, AUTH]). Under a Heim (2008)-style approach, [PART] presupposes that the referent of the pronoun includes the speaker, the listener, or both. However, by competition with [AUTH] that presupposes that the referent of the pronoun includes the speaker, [PART] receives the anti-presupposition that the referent of the pronoun does not include the speaker. Implicit is the assumption that mismatch between the referent and features of the pronoun results in a presupposition failure.

Exceptions from competition: Recent work (Wang 2023; 2025; Varaschin et al. 2025) has highlighted the fact that mismatching features on pronouns are capable of generating social meanings. For example, German 3PL pronoun *sie* may refer to the listener in an honorific social scenario. Wang's typological study highlights that the attested mismatches are unidirectional: only a presuppositionally weaker pronoun may be used for an honorific. Wang argues that the Taboo of Directness pragmatic principle (1) may override MP! (in the spirit of OT pragmatics), giving rise to the cross-linguistic pattern.

(1) In respect contexts, use the form with the weakest presupposition.

Varaschin et al. (2025) note that Wang's approach overgenerates. For example, Russian 3PL pronoun *oni* may not refer to the listener in an honorific social scenario. In their account, Varaschin et al. (2025) employ a direct use-conditional convention that regulates "special", socially charged reference vehicles (and also reject MP!). In this work, I aim to settle for a middle ground between Wang's and Varaschin et al.'s view — in deriving a social meaning, an MP! violation opens the door for the listener to rely on the use-conditional conventions.

A novel view of honorifics: What happens when the listener encounters a pronoun which isn't 2SG and is intended to refer to her? She realizes that the MP! is inactive in this particular speech situation: the presuppositionally stronger alternative is unavailable. Here's the twist: unavailability of 2SG *underdetermines* which pronoun should be used instead. This is where use-conditional conventions kick in, allowing German to use 3PL and allowing Russian to use 2PL. Crucially, no "overriding" of principles by each other is involved — the speaker indicates unavailability of 2SG by themselves, it is the speaker who regulates which principles apply (in a sense, it is *flouting* of MP!). And unlike Varashin et al.'s approach, the use-conditional conventions cannot directly influence the interpretation of the features (making it impossible to violate Wang's generalization).

Extensions: In the poster, I discuss how the similar mechanism of "flagging" of alternatives as unavailable accounts for three other cases of meaningful feature mismatches: nurse *We* (Collins, Postal 2012; Varaschin et al. 2025), imposter DPs (Collins, Postal 2012; Podobryaev 2014), and singular *they* (Collins, Postal 2012; Arregi, Hewett 2025).

Sel. references: – Heim, I. (2008). Phi-features as presupposition triggers. – Varaschin, G., Machicao y Priemer, A., McCready, E. (2025) When I am you: Deriving honorifics through weak indices.. – Wang, R. (2023). Honorifics without [HON]. – Wang, R. (2025) Presuppositionless proxies of politeness: An (eventually) Optimality-Theoretic account

On the Structure and Indicative Interpretation of *-liK* in Uyghur

Xiang Li, *Georgetown University*

1. Introduction. In Uyghur, the suffix *-liK* (with variants *-lik*, *-liq*) occurs in non-finite complement clauses selected by certain predicates. With verbal embedded predicates, the neutral perfective marker *-GAn* is required, with *-liK* optionally following it (1). With non-verbal predicates, *-liK* attaches directly and is obligatory (2).

(1) Ali [Aygül-ning ket-ken-(lik)-i-ni] di-di.
Ali [Aygül-GEN leave-GAN-(LIK)-POSS.3SG-ACC] say-PAST.3SG
'Ali said that Aygül left.'

(2) Ali [Aygül-ning yaxshi adem-lik-i-ni] bil-idu.
Ali [Aygül-GEN good person-LIK-POSS.3SG-ACC] know-PRES.3SG
'Ali knows that Aygül is a good person.'

Traditional grammars describe *-liK* as a nominalizer (Engesæth et al. 2009), while Asarina (2011) analyzes it as a complementizer. Building on novel evidence, I argue that *-liK* contributes to the indicative interpretation, especially under epistemic modal predicates. Besides, it functions primarily as a complementizer while also serving as a nominalizer in certain contexts.

2. The (Declining) Indicative Interpretation of *-liK*. The distribution of *-GAn-liK* clauses is not completely random, but closely parallels cross-linguistic patterns of the indicative. Attitude predicates that select *-GAn-liK* clauses overlap substantially with those that govern the indicative mood in other languages (Farkas 1993, Portner 1999, Quer 2001). These include declaratives (*say, claim, brag*), predicates of certainty (*know*), fiction verbs (*dream*), and commissives (*promise*). By contrast, desideratives (*want, hope*), directives (*order, persuade*), and emotives (*refuse*) do not select *-GAn-liK* clauses. This restriction extends to epistemic modal predicates: clauses with *-GAn-liK* are compatible with predicates expressing certainty, but ruled out with predicates expressing uncertainty, as shown by the contrast in (3).

(3) a. Ali-ning kitab-ni oqu-iwat-qan-liq-i mukarrar.
Ali-GEN book-ACC read-PROG-GAN-LIK-POSS.3SG certain
'Ali must be reading the book.'

b. *Ali-(ning) kitab-ni oqu-iwat-qan-liq-i mumkin.
Ali-(GEN) book-ACC read-PROG-GAN-LIK-POSS.3SG possible
Intended meaning: 'Ali might be reading the book.'

Further evidence comes from adjunct clause types. *-GAn-liK* clauses can appear in reason clauses, which are uniformly indicative (4), but not in purpose clauses, which are uniformly subjunctive (5). This distribution reinforces the conclusion that *-GAn-liK* clauses encode indicative semantics.

(4) Men aghrip qal-ghan-liq-im üchün, u yighin-i kiqiktur-di.
1SG.NOM ache become-GAN-LIK-POSS.1SG because, 3SG.NOM meeting-ACC postpone-PAST.3SG
'He/She postponed the meeting, because I was ill.' (Tomur 2003)

(5) Ular doklar angla-sh-qa ket-ti.
3PL.NOM lecture hear-ISH-DAT leave-PAST.3PL
'They went in order to hear the lecture.' (Tomur 2003)

The question then arises: which suffix primarily contributes to the indicative mood? I argue that both *-liK* and *-GAn* can yield indicative interpretation, but their contributions differ by predicate type. With modal predicates, *-liK* itself plays the key role. Specifically, clauses marked with *liK* cannot be selected by predicates expressing uncertainty (6a). However, once *-liK* is replaced with *-(I)sh*, which in previous work I have argued contributes to the subjunctive interpretation, the clause becomes acceptable (6b).

(6) a. *Ali-(ning) kitab-ni oqu-iwat-qan-liq-i mumkin.
Ali-(GEN) book-ACC read-PROG-GAN-LIK-POSS.3SG possible
Intended meaning: 'Ali might be reading the book.'

b. Ali-(ning) kitab-ni oqu-iwat-qan bul-ush-i mumkin.
Ali-(GEN) book-ACC read-PROG-GAN be-ISH-POSS.3SG possible
'Ali might be reading the book.'

The contrast is even clearer with non-verbal predicates, where *-GAn* is absent and compatibility must be determined by *-liK* alone. In this environment, clauses marked only with *-liK* can be selected by predicates expressing certainty (7a), but not by those expressing uncertainty (7b). Once *-liK* is removed, the clause becomes compatible again with predicates expressing uncertainty (7c).

(7) a. Yol-ning bunchilik uzun-lik-i mukarrar.
road-GEN this.much long-LIK-POSS.3SG certain
'The road must be so long.'

b. *Yol-(ning) bunchilik uzun-lik-i mumkin.
road-(GEN) this.much long-LIK-POSS.3SG possible
Intended meaning: 'The road might be so long.'

c. Yol-(ning) bunchilik uzun bul-ush-i mumkin.
road-(GEN) this.much long be-ISH-POSS.3SG possible
'The road might be so long.'

However, with non-modal predicates, omitting *-liK* after *-GAn* does not alter the sentence meaning, as in (8). This indicates that *-GAn* alone is sufficient to convey the indicative interpretation in these cases.

(8) Ali [Aygül-ning ket-ken-(lik)-i-ni] bil-idu.
Ali [Aygül-GEN leave-GAN-(LIK)-POSS.3SG-ACC] know-PRES.3SG
'Ali knows that Aygül left.'

Taken together, these patterns point to a division of labor. *-liK* can contribute to the indicative interpretation with modal predicates, while *-GAn* alone yields an indicative interpretation in non-modal contexts.

3. The Dual Nature of *-liK*: A Nominalizing Complementizer. Asarina (2011) provides three arguments for analyzing *-liK* as a complementizer. First, CP-level adverbs like *heqiqatan* 'truly' can be licensed (9), suggesting the presence of a CP layer. Second, when an overt noun head is present, the *-liK* clause cannot bear possessive agreement and case marking (10). This also challenges a purely nominalizer-based account. Third, *-liK* can be optional in certain contexts, which is a crosslinguistic characteristic of complementizers.

(9) Ali [Aygül-ning heqiqatan ket-ken-(lik)-i-ni] di-di.
Ali [Aygül-GEN truly leave-GAN-(LIK)-POSS.3SG-ACC] say-PAST.3SG
'Ali said that Aygül truly left.' (Asarina 2011)

(10) Ali [Aygül-ning ket-ken-(lik)-(*i-ni)] xewer-i-ni di-di.
Ali [Aygül-GEN leave-GAN-(LIK)-(*POSS.3SG-ACC)] news-POSS.3SG-ACC say-PAST.3SG
'Ali said the news that Aygül left.'

However, these tests are not decisive. In contexts without an overt head noun, as in (9), *-liK* might still function as a nominalizer. Supporting this view, *-liK* occurs only in typical nominal positions and is excluded from relative clauses (11), which are not nominal environments. This distribution suggests that an alternative interpretation could be that *-liK* still behaves as a nominalizer in certain contexts.

(11) *Relative Clause:*
[Ötkür-ning oqu-ghan-(*liq)] kitab-i uzun.
[Ötkür-GEN read-GAN-(LIK)] book-POSS.3SG long
'The book that Ötkür read is long.' (Asarina 2011)

4. Conclusion. In this paper, I argue that *-liK* contributes to the indicative interpretation with modal predicates, while *-GAn* alone yields an indicative interpretation when selected by non-modal predicates. Besides, I show that *-liK* functions primarily as a complementizer while also serving as a nominalizer in certain contexts. Importantly, preliminary research suggests that Kazakh exhibits a similar dual role of *-LIK*, indicating that this phenomenon is not limited to Uyghur but may reflect a broader typological pattern within Turkic languages.

Selected References: [1] Asarina, A. (2011). *Case in Uyghur and beyond* (Doctoral dissertation, Massachusetts Institute of Technology). [2] Engesæth, T., Yakup, M., & Dwyer, A. (2009). *Greetings from the Teklimakan: a handbook of Modern Uyghur Volume*. [3] Portner, P. (1999). The semantics of mood. *Glot international*, 4(1), 3-9. [4] Tomur, H. (2003). *Modern Uyghur Grammar*. Yildiz Dil ve Edebiyat 3.

Negating Antonyms: Asymmetric vs Symmetric Interpretations

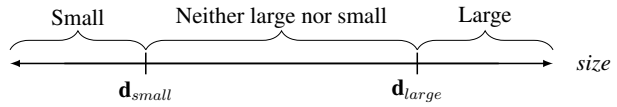
Emily Pecsok
University of Pennsylvania

Gradable adjectives project their arguments onto abstract measurement representations, or degrees that are ordered to create a scale (Kennedy & McNally, 2005; Kennedy, 2007). For the use of a gradable adjective to be acceptable, the degrees of the adjective's argument must exceed some underspecified standard, **d** (Barker, 2002; Kennedy, 2007). Some gradable adjectives, such as *open, closed, bent* or *straight,* are called absolute because they have either a minimum or maximum degree that their arguments must possess for the adjective to become applicable. Other adjectives that don't have these standards, like *tall, short, expensive* or *cheap*, are called relative gradable adjectives (Kennedy & McNally, 2005). This difference means that for certain pairs of absolute gradable adjective antonyms, negated absolute gradable adjectives, entail their antonym, such as in (1a), while negated relative gradable adjectives do not, such as in (1b).

(1) a. The door is not open. ⇒ The door is closed.
b. The apartment is not large ⇏ The apartment is small.

This difference is only borne out when an absolute gradable adjective is minimum standard and its antonym is maximum standard. The minimum degree at which the positive adjective becomes applicable is also the maximum degree at which the negative adjective is no longer applicable. So, the negation of the positive adjective has the same meaning as the negative adjective. This is not the case for relative gradable adjectives because the standard for which the positive adjective becomes applicable is not the same standard for which the negative adjective becomes applicable (see (2)). Rather, in between the two antonyms, there is this "Zone of indifference" or extension gap where neither adjective is deemed appropriate (Horn, 1989; Kennedy & McNally, 2005; Kennedy, 2007).

(2)



However, despite the lack of entailment relation, negated positive relative gradable adjectives can imply their antonym, such as in (3a), through a process called negative strengthening (Horn, 1989) or inference toward the antonym (Ruytenbeek et al., 2017). However, this strengthening occurs only when the positive adjective is negated, not when the negative adjective is negated (3b). Rather, in this case, the middle ground between the two adjectives is implied (3c).

(3) a. My apartment is not large. ⇝ My apartment is small.
b. My apartment is not small. ⇏ My apartment is large.
c. My apartment is not small. ⇝ My apartment is neither large nor small.[1]

This asymmetry is widely attested, both theoretically and experimentally. However, it seems to no longer hold in contexts where the negated adjective is already introduced in the discourse. In cases such as these, the asymmetry disappears and the only reading for the two negated adjectives is simply the complement of the adjective, as seen in (4a) and (4b) and modeled in (5).

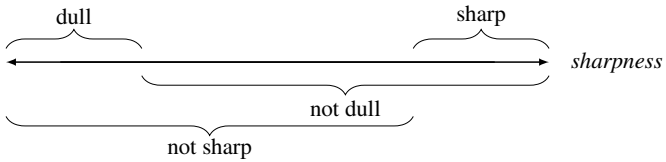
[1] These are inferences because they can be canceled. This example could felicitously be followed up with My apartment is large.

(4) Stella is cutting vegetables with a knife.

a. Hank: Is that knife sharp?
Stella: No, it's not sharp. (The knife is dull or neither sharp nor dull.)

b. Hank: Is that knife dull?
Stella: No, it's not dull. (The knife is sharp or neither sharp nor dull.)

(5)



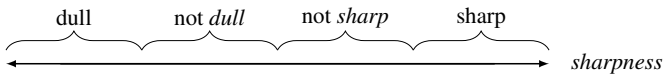
This symmetry is maintained in different prosodic contexts as long as the discourse context stays the same. When rise-fall-rise (RFR) is placed the adjective, the interpretations are still symmetric, but are closer to the non-negated form, as seen in (6a) and (6b) and modeled in (7).

(6) Stella is cutting vegetables with a knife.

a. Hank: Is that knife sharp?
Stella: No, it's not *sharp*. (The knife is neither sharp nor dull.)

b. Hank: Is that knife dull?
Stella: No, it's not *dull*. (The knife is neither sharp nor dull.)

(7)



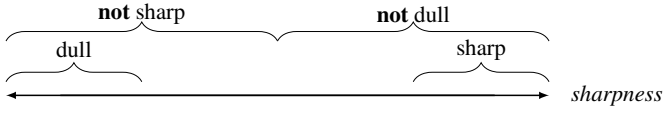
Finally, both positive and negative negated adjectives have a strengthened meaning in these contexts with contrastive emphasis on the negation. The interpretations are not necessarily equivalent to that of the antonym, but they seem to be further from the non-negated adjective, as seen in (8a) and (8b) and modeled in (9).

(8) Stella is cutting vegetables with a knife.

a. Hank: Is that knife sharp?
Stella: No, it's **not** sharp. (The knife is dull or neither sharp nor dull.)

b. Hank: Is that knife dull?
Stella: No, it's **not** dull. (The knife is sharp or neither sharp nor dull.)

(9)



Selected References: Barker, C. (2002). The dynamics of vagueness. *Linguistics and philosophy*; Horn, L. R. (1989). A natural history of negation. *University of Chicago Press*; Kennedy, C. (2007). Vagueness and grammar: The semantics of relative and absolute gradable adjectives. *Linguistics and philosophy*; Kennedy, C., & McNally, L. (2005). Scale structure, degree modification, and the semantics of gradable predicates. *Language*; Ruytenbeek, N., Verheyen, S., & Spector, B. (2017). Asymmetric inference towards the antonym: Experiments into the polarity and morphology of negated adjectives. *Glossa: a journal of general linguistics*

Restricting ignorance

1 Introduction. Mandarin *wh*-indefinites in non downward-entailing (DE) contexts trigger obligatory ignorance inference, meaning that the speaker cannot identify the witness of the indefinite. Liu and Yang (2021) suggest that this obligatory ignorance inference (OII) is derived via Exh, a silent exhaustivity operator (e.g., Chierchia, 2006, 2013; Fox, 2007), scoping over an epistemic operator, K being a covert one (Kratzer & Shimoyama, 2002; Meyer, 2013): $Exh(Kp)$—(roughly) 'I know p, and that's all I know.' However, I will observe that introducing K would lead to two overgeneration puzzles. It allows for negative polarity items (NPIs) where they are forbidden and unattested scopal interactions with *only*. Preserving Liu and Yang's idea requires restricting the distribution of K. In this paper, I lay out these problems and provide a unified solution: Mandarin *wh*-indefinites select for an epistemic operator (e.g., the covert K), and K can only be inserted when it is grammatically licensed (*pace* Meyer, 2013).

2 Ignorance inference via K. Mandarin *wh*-indefinites have both interrogative and indefinite interpretations. The use of existential *wh*-indefinites like *shénme* results in an ignorance inference in positive sentences like (1): 'the speaker knows there is some TV program that ZS is watching, and *that is all* **they know**.' Unlike English *some* and Mandarin numeral-classifier NPs and bare indefinites, ignorance is not cancellable, as attested by the *namely*-test in (2). Ignorance is obviated when the *wh*-indefinite is in DE environments.

(1) Zhāngsān zài kàn *shénme* diànshìjù (*Mod. from* Lin et al., 2014)
ZS ASP watch what TV program
[Question] 'What TV program is ZS watching?'; **[Assertion]** 'ZS is watching some TV program.'

(2) Zhāngsān zài kàn *shénme* diànshìjù, míngzì #(kěnéng) jiào Fánhuā
ZS ASP watch what TV program name possibly call Blossoms Shanghai
'ZS is watching some TV program, whose name is probably *Blossoms Shanghai*.'

Liu and Yang (2021) thus develop a grammatical analysis for OII, based on exhaustification (defined as in (3a)). The proposal is as follows: (i) Mandarin *wh*-indefinites are existential quantifiers and trigger singleton (sub)domain alternatives, from which alternative propositions grow point-wise (Rooth, 1985). As a result, we obtain the alternatives for (1): $ALT = \{\texttt{watch}(a)(ZS), \texttt{watch}(b)(ZS), \texttt{watch}(c)(ZS), ...\}$, where $\{a, b, c, ...\}$ are all TV programs. (ii) Without overt epistemic modals, K is posited in the LF (Kratzer & Shimoyama, 2002) to derive an ignorance and avoid contradiction: in (1), without K, negating the alternatives would amount to *anti-*$\exists$ *inference*, contradicting with the prejacent (see (3b)). Instead, as in (3c), the prejacent of Exh should be (3d), where $p =$ 'ZS is watching some TV program.'

(3) a. $[\![Exh]\!] = \lambda p_{\langle s,t\rangle}\lambda w\,[\,p(w) \wedge \forall p' \in ALT\,[\,p'(w) \rightarrow p \subseteq p'\,]\,]$
b. LF1: $[Exh[\ldots wh(=\exists)\ldots]] = \bot$ (*anti-*$\exists$ inference) c. LF2: $[Exh[K[\ldots wh\ldots]]]$ (OII)
d. $[\![\Box_s p]\!] = \lambda w.\forall w'\,[\,w'$ is compatible with speaker's belief in $w \rightarrow$ the speaker believes $p(w')\,]$

3 Puzzle 1: NPIs. The analysis requires that ignorance in modal-less contexts depend on a covert K operator. Yet, if K can be freely inserted, an overgeneration puzzle results. Chierchia (2006) provides that NPIs are subject to exhaustification. An NPI like *any* cannot appear, except in DE environment (e.g., *John likes **any** movie). Chierchia proposes an LF configuration as in (4a), with an obligatory Exh scope over *any*. Since NPIs like *any* are assumed to trigger subdomain alternatives, (4a) yield the same contradiction as in (3b), due to the anti-$\exists$ inference. However, were K available in the grammar, it could be inserted to rescue an NPI in a matrix environment the same way of deriving OII, contrary to fact.

(4) Non DE contexts (5) DE contexts (K is innocuous)
a. $[Exh\,[\ldots\ any\ \ldots]] = \bot$ (cf. 3b) a. $[Exh\,[\ldots \neg \ldots\ any\ \ldots]]$
b. $[Exh\,[K\,[\ldots\ any\ \ldots]]]$ $\rightsquigarrow$ *Not attested* b. $[Exh\,[K\,[\ldots \neg \ldots\ any\ \ldots]]]$

If one includes K in the grammar (Kratzer & Shimoyama, 2002; Meyer, 2013), the dilemma in (4b) is inevitable. Yet, without K, contradiction arises in (3b). One may appeal to pragmatics to derive ignorance, but it would be hard to account for why ignorance is obligatory with the matrix *shénme*, as shown in (1 & 2). In response, I propose to maintain K, but restrict its distribution in the grammar.

4 Solution: Restricting K. I propose that Mandarin *wh*-indefinites (and possibly, other epistemic indefinites that trigger OII) are licensed by both Exh and an epistemic modal, such as the covert K (Kratzer & Shimoyama, 2002). The syntactic configuration is in (6). I take it that a Mandarin *wh*-indefinite has uninterpretable $[uExh]$ and $[uK]$ features and an interpretable feature $[iF]$, and it must enter into an Agree relation with operators Exh and K via Upward Agree (Zeijlstra, 2012). K itself carries the $[uF]$ feature that would cause the derivation to crash if not deleted after the agreement with *wh*-indefinite.

(6) ZS is watching *shenme* TV program.
LF: [Exh [K [ZS is watching *shenme* TV program]]].
$[iExh]$ $[iK, uF]$ $[uExh,\ uK, iF]$

In the case of *any*, I suggest that K is not in the structure. A core assumption adopted is that K can only appear as a last resort in the structure, when required by syntactic features. See (4a) and (3c):

(7) *Any* and *wh*-indefinite in non DE environment
a. $[Exh\,[\ldots\ any_{[uExh]}\ \ldots]] = \bot$ b. $[Exh\,[K\,[\ldots\ wh_{[uExh,uK,iF]}\ \ldots]]]$

5 Puzzle 2: *Only*. The grammatical restriction of K can also explain why it seems that overt operators like *only* cannot scope over K. As shown in (8a), if K were in the structure and *only* scoped over it, the sentence would read 'The speaker$_i$ only knows Carol saw Amy, and it is possible to them$_i$ that Carol saw Bani', which is coherent but unattested. While this scope-freezing effect between *only* and K might result from *only* being scopally more restricted than Exh (cf. LF in (6) and (8a)), the current proposal offers a straightforward solution: K cannot appear in a context where it is not grammatically licensed by another expression (e.g., *shénme*). Given that assertion is a speech act expressing the speaker's belief, an inference about speaker's beliefs may derive *pragmatically*. That *only* never scopes over the speaker's belief follows naturally: *only* cannot take scope over K if it is not represented as an operator in the syntax.

(8) * Carol saw only Amy$_F$. And possibly, she saw Bani$_F$.
a. LF1: * [[[Only Amy]$_1$ $\boxed{K\ [\ \text{Carol saw } t_1]}$] & ◇[Carol saw Bani$_F$]]
b. LF2: [$\boxed{K\ [\ \text{[Only Amy]}_1\ [\ \text{Carol saw } t_1]\ ]}$ & ◇[Carol saw Bani$_F$]] $= \bot$

6 Discussions. (a) **Mandarin *wh*-indefinites are epistemic indefinites.** We predict that the use of existential *wh*-indefinites necessitates an epistemic operator, even in cases where contradictions are obviated. When the *wh*-indefinites co-occur with deontic modals, the presence of K is supported by the inference that 'there might be more requirement' beyond the obligatory ignorance of the referent.

(9) Lǐsì bìxū zhù zài zhè-zuò fángzi de *nǎ-jiān* wūzi lǐ.
LS must$_{\text{Deontic}}$ stay LOC this-CL house DE which-CL room in
'LS must stay in some room or other in this house.'

(10) a. LF1: [K [Exh [$\Box_{\text{Deontic}}$ [LS stays in *nǎ-jiān* room]]]]
(I know that LS has to stay in some room or other in the house, and she doesn't have to stay in **Room A**, **Room B**, or **Room C**.) ⇝ I know there is no more requirement on room assignment.
b. LF2: [Exh [K [$\Box_{\text{Deontic}}$ [LS stays in *nǎ-jiān* room]]]]
(I know that LS has to stay in some room or other in the house, and I don't know if she has to stay in **Room A**, **Room B**, or **Room C**.) ⇝ There might be some additional requirement.

(b) **Optional ignorance.** In the current proposal, the ignorance triggered by Mandarin *wh*-indefinites is derived from exhaustifying subdomain alternatives of the modalized prejacent: $Exh_{ALT_{\text{Subdomain}}}(Kp)$. Crucially, the obligatoriness results from the feature specification on the *wh*-indefinites—***shénme***$_{[uExh,uK]}$. It leads to a possible typology of indefinite expressions based on features. For cases of optional ignorance, one possibility is that the indefinite is specified for K, but not Exh. If Exh, unlike K, can be freely inserted when not grammatically required (Chierchia et al., 2012), ignorance would be derivable with such an indefinite when Exh is present. Another possibility is that the indefinite has neither K nor Exh features. Without a $[uK]$ feature specified, K could not be inserted in the structure, and if this indefinite triggers subdomain alternatives, crucially, optional ignorance would have to be derived pragmatically (Grice, 1989) because the grammatical route via Exh would lead to contradiction. The pragmatic and grammatical approaches thus differ in the feature specification of $[uK]$. I leave exploring these possibilities to the future.