There is no Coordination of Unlike Categories

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1. Introduction: As Chomsky (1957) formalizes, it is said that conjuncts must be of the same category in a coordinate structure. However, it is also widely observed that conjuncts may diverge in category in certain instances of coordination. Observe:

(1) a. Pat is a Republican and proud of it. (Sag et al. (1985:118))
b. Bill could be a plumber and making a fortune. (Peterson (2004:647))
c. Danny became a political radical and very antisocial. (Bruening and Al Khalaf (2020:1))
d. I consider that a rude remark and in very bad taste. (Sag et al. (1985:117))

(1a) and (1c) represent NP-AP coordination while NP and VP are coordinated in (1b) and NP and PP in (1d). This type of coordination has been analyzed in light of a particular feature, *Pred*, (e.g. Sag et al. (1985)) or more functional aspects (e.g. Peterson (2004)), with a focus on the licensing conditions of such coordination. This paper claims that the coordination of unlikes is apparently coordination but is indeed an adjunction structure in syntax (cf. Munn (1993)) and that its syntactic structure is facilitated with a head, $Conj_{[SUB]}$. This will be substantiated through examinations of extraction possibilities. The current proposal also suggests that the category of the second conjuncts is ignored as long as they are interpreted as modifiers of the first conjuncts. At the end of this paper, we will see that there is no coordination of unlike categories since it is an adjunction structure, rather than coordination.

2. Surveys: First, the coordination in question shows order sensitivity.

(2) a. ?? Bill could be making a fortune and a plumber. (cf.(1b))
b. ?? I consider that in a very bad taste and a rude remark. (cf. (1d))

Adding to that, the second conjuncts must be interpreted as modifiers of the first conjuncts.

(3) a. ?? Bill could be a plumber and playing soccer in the park.
b. ?? Bill could be a plumber and on the roof.

Given the fact that the positions of adverbs are relatively stable (cf. Cinque (1999)) and the interpretational requirement, these data are enough to assume that the second conjuncts serve as adjuncts. It is noteworthy that in such coordination, extraction of elements in the first conjuncts is permissible, regardless of the Coordinate Structure Constraint (cf. Ross (1967)), while that in the second conjuncts is barred.

(4) a. What town is Bill a plumber of ___ and making a fortune?
b. * What is Bill a plumber and making ___?

If the second conjuncts work as adjuncts, extracting elements from them is prohibited since such a movement violates the Adjunct Condition (cf. Huang (1982)). On the other hand, the movement from the first conjunct in (4a) is licit since this movement occurs at a matrix level.

3. Source of Unlike Coordination: If the second conjuncts serve as adjuncts in the coordination of unlikes, a question arises as to what creates such an adjunction structure. This

paper suggests that syntax implements two syntactic heads which are phonetically realized as a coordinator, *and*. The head involving adjunction structure is hypothetically dubbed Conj$_{[SUB]}$, where SUB represents "subordination." In Conj$_{[SUB]}$ coordination, the second conjunct adjoins to the first conjunct, forming the following structure:

(5) [$_{XP}$ [$_{XP}$ XP] [Conj$_{[SUB]}$ [$_{YP}$ YP *Adjunct*]]]

Although we will not delve into the existence of the two types of coordinators that share the morphophonologically identical realization, the possible account is that this is accidental. In Japanese, a coordinator "*to*" shares its phonological form with that of a postposition "*to* (with)." However, their functions differ in some perspectives.

4. Extension: The current analysis can capture the nature of coordination where selectional violation apparently occurs.

(6) a. * You can depend on that he will be on time.
b. You can depend on my assistant and that he will be on time.
(Sag et al. (1985:165))

As shown in (6a), the verbal phrase cannot subcategorize for CPs. However, if we place a CP in the second conjunct as in (6b), the sentence is fully grammatical. This mysterious coordination also can be accommodated into the current analysis, since this is coordination of unlike categories, in which the second conjuncts adjoin to the first conjunct and modify them. As expected, the extraction is possible from the first conjunct while is not from the second.

(7) a. Who can you depend on ___ and that the man will be on time?
b. * What time can you depend on my assistant and that he will be ___ ?

If the analysis is on the right track, it can be said that selectional violation does not emerge in the first place: The second conjuncts serve as adjuncts, so they do not involve any selectional relations. Instead, the second conjuncts must be interpreted as modifiers of the first conjuncts.

(8) ?? You can depend on my assistant and that Mary will be on time.

Bruening and Al Khalaf (2020:16) state that such a violation can be seen only in the case that CPs occur in the second conjuncts because (9a), where an NP occurs in an argument position of head which selects only CP, is ungrammatical. This paper shows that their claim is not tenable: If the second conjunct is modified as it is interpreted as a modifier of the first conjunct, the resulting sentence is fully acceptable as in (9b), which is straightforwardly predicted by the current adjunction analysis.

(9) a. * She thinks that the world is flat and another discredited thing.
b. She thinks that the world is flat and a certainty.
(Intended: She thinks that the world is flat, which is certain.)

Selected References: Bruening, B. and E. Al Khalaf (2020) "Category Mismatches in Coordination Revisited," *Linguistic Inquiry* 51 (1), 1-36./ Sag, Ivan A., G. Gazdar, T. Wasow, and S. Weisler (1985) "Coordination and How to Distinguish Categories," *Natural Language and Linguistic Theory* 3, 117-171.

Null Objects in Japanese in Terms of Labeling Algorithm

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Introduction: It is well-known that Japanese can have null arguments (NAs) regardless of subjects and objects. In the literature, NAs are accounted for by pronominal (Kuroda (1965), Hoji (1985)) or argument ellipsis analysis (Oku (1998), Saito (2007), Takahashi (2008)). Instead, we argue that Miyamoto's (2024a, b) analysis of null subjects (NSs) can be extended to null objects (NOs) and NAs can be explained by copy deletion in terms of labeling algorithm (LA). Although NOs are analyzed in the same way as NSs, an asymmetry between subjects and objects about Case-particle drop stems from the base positions of subjects and objects.

Theoretical Background: Given that syntactic objects (SOs) must be assigned a label for interpretations, Chomsky (2013, 2015) proposes labeling algorithm (LA) where minimal search (MS) identifies the closest head as a label. (1) shows how LA works.

(1) a. $\{_{\alpha}$ H, XP$\}$ (α=H) b. $\{$XP $\{_{\alpha}$ ~~XP~~, YP$\}\}$ (α=Y) c. $\{_{\alpha}$ XP$_{[F]}$, YP$_{[uF]}\}$ (α=<F, F>)

In (1a), which is an H-XP configuration, MS identifies the head as the label. In an XP-YP structure, there are two ways to determine the label. One is via internal merge: Y serves as the label of α based on the assumption that the lower copy is invisible to MS as in (1b). The one is via feature sharing: shared features determine the label of α as in (1c).

As pointed out by Saito (2016, 2018), LA proposed by Chomsky (2013, 2015) cannot be straightforwardly extended to Japanese because it lacks overt agreement (Fukui (1986, 1988)). Given this, Saito suggests that Case particle plays a crucial role in labeling. Concretely, Case particle works as an anti-labeling device which makes SOs with Case particle invisible to MS.

Proposal: Extending Miyamoto (2023, 2024a, b), we suggest a revised LA. Under the revised LA, a label of an H-YP structure is determined in the same way as (1a). In the case of an XP-YP structure, following Saito (2016, 2018), MS finds both heads (feature sharing) or only one of two heads (attachment of Case particle) as in (2a, b).

(2) a. $\{_{\alpha}$ XP$_{[uF]}$, YP$_{[F]}\}$ (α=<F, F>) b. $\{_{\alpha}$ XP-Case, YP$\}$ (α=Y)

However, the revised LA is different from Chomsky's original LA in that it does without stipulation that lower copies are invisible to MS. Without shared features and Case particle, optional labeling applies (free labeling) as in (3a, b) following Mizuguchi (2019).

(3) Free Labeling

a. $\{_{\alpha}$ XP, YP$\}$ (α=X) b. $\{_{\alpha}$ XP, YP$\}$ (α=Y)

Under Chomsky's analysis, the necessity of labels at the sensorimotor (SM) interface is not obvious. Refining Miyamoto's (2024a) suggestion where SOs which do not involve the identification of a label are not externalized in (3a, b), we propose that SOs are externalized as in (5) according to the principle in (4).

(4) In (3a, b), SOs which do not participate in the label determination are not interpretable as the SM interface, and thus they should undergo phonological deletion.

(5) a. $\{_{\alpha}$ XP, ~~YP~~$\}$ (α=X) b. $\{_{\alpha}$ ~~XP~~, YP$\}$ (α=Y)

Thus, the necessity of the label at the SM interface is attributed to the externalization of SOs.

Analysis: Before explaining NOs, see the difference between overt subjects and NSs. First, the sentence with an overt subject is presented as in (6).

(6) a. Taro-ga mikan-o tabeta. b. $\{_{C}\{_{\alpha}$ DP$_i$-ga $\{_{T}\{_{\beta}$ ~~DP$_i$~~, *v**P$\}$ T$\}\}$ C$\}$ (α=T, β=*v**)

As shown in (6b), only T is visible to labeling for α and serves as its labeling because of the attachment of Case marker *ga* ((2b)), while β is determined as *v** for the SM interface reason according to free labeling in (3) (if β is D, the selection failure by T will occur). Note that since the labeling of α is done via (2b) without relying on the principle in (4), both heads can be overt. In β, in contrast, DP cannot be externalized by (4), resulting in the pronunciation of (6a).

Then, the derivation of the sentence without overt subjects is illustrated as in (7).

(7) a. ø mikan-o tabeta. (ø=null DP) b. $\{_{C}\{_{\alpha}$ ~~DP$_i$~~ $\{_{T}\{_{v^*}$ ~~DP$_i$~~, *v**P$\}$ T$\}\}$ C$\}$ (α=T)

Unlike (6b), subjects have no Case in (7). Since DP and TP do not share features and Case

particle is not attached to DP, either head, T or D, optionally takes part in the label identification by free labeling in (3). In (7b), DP does not serve as the label and is not externalized. Consequently, only TP is externalized, yielding a sentence in (7a). Under the assumption that covert DP can be allowed to have no Case (Authier (1988), Oku (1998), Hornstein (1999), Saito (2007), Miyamoto (2024b)), this derivation does not cause any problems. Thus, the difference between overt and covert subjects stems from the presence/absence of Case particle.

(8) a. Taro. b. $\{_C \{_\alpha$ DP $\{_T \{_{v^*}$ DP, v^*P$\}$ T$\}\}$ C$\}$ (α=D)

Since T does not serve as the label, in contrast, T is not externalized in (8b). This derivation predicts that only the subject is pronounced, yielding fragment answer of subjects (given that C selects TP, this DP moves to SPEC-CP not SPEC-TP. See Miyamoto (2024b) for details).

Let us move to a case involving objects. First, see the sentence with overt objects in (9).

(9) a. Taro-ga mikan-o tabe-ta.

b. $\{_C \{_T$ DP$_j$-ga $\{_T \{_{v^*}$ ~~DP$_j$~~ $\{_{v^*} \{_\alpha$ DP$_i$-o $\{_R$ ~~DP$_i$~~, V$\}\}$ $v^*\}\}$ T$\}\}$ C$\}$ (α=V)

Following Chomsky (2015), we assume that objects internal merge to SPEC-VP. In (9b), where Case marker *o* is attached to the object in SPEC-VP, the label of α is identified as V since *o* makes the object invisible to MS. Since the label of α is determined in the way of (2b), (4) does not apply to (9b), yielding the pronunciation of (9a).

Next, consider the possible derivations of (10a) as in (10b, c).

(10) a. Taro-ga ø tabe-ta.

b. $\{_C \{_T$ DP$_j$-ga $\{_T \{_{v^*}$ ~~DP$_j$~~ $\{_{v^*} \{_\alpha$ ~~DP$_i$~~ $\{_V$ ~~DP$_i$~~, V$\}\}$ $v^*\}\}$ T$\}\}$ C$\}$ (α=V)

c. $\{_C \{_T$ DP$_j$-ga $\{_T \{_{v^*}$ ~~DP$_j$~~ $\{_{v^*} \{_\alpha$ DP$_i$ ~~$\{_V$ DP$_i$, V$\}$~~$\}$ $v^*\}\}$ T$\}\}$ C$\}$ (α=D)

Since the object lacks accusative Case and there is no shared agreeing feature, V or D serves as the label of α according to free labeling in (3). In (10b), DP is not identified as the label and is not externalized obeying (4). Thus, this derivation results in the pronunciation of (10a). This derivation converges because v^* selects VP. In contrast, in (10c), where V is not identified as the label, VP is not externalized. This derivation predicts that an object without Case particle *o* is pronounced like "Taro-ga mikan tabeta". However, this derivation crashes because v^* selects DP not VP. Thus, (10b) represents the correct derivation of (10a). Under our analysis, NOs can be captured by copy deletion like NSs, and thus NAs are explained in a unified way.

Extension: Although nominative Case marker *-ga* drop is unacceptable, accusative Case marker *-o* drop is acceptable as in (11) (Kuno (1973), Saito (1983), Masunaga (1988)).

(11) Blond-no otokonoko-*(ga) kukki-(o) tabe-ta.
Blond-GEN a boy-NOM cookie-ACC eat-PAST
'a blond boy ate cookies.'

We argue that this difference stems from the base positions of subjects and objects. The base position of subjects is SPEC-v^*P, so subjects always occupy SPEC-positions regardless of whether they move or not. Thus, nominative case maker is necessary to determine the label as in (6b), otherwise subjects must be null as in (7b). In contrast, the base position of objects is a complement of V. Thus, the attachment of *o* to the object is not obligatory to determine the label of α if the object remains in the complement of V because the label is determined successfully via (1a) (Recall our proposal is doing away with (1b), keeping (1a, 1c).)

(12) $\{_C \{_T$ DP$_j$-ga $\{_T \{_{v^*}$ ~~DP$_j$~~ $\{_{v^*} \{_\alpha$ DP$_i$, V$\}$ v$^*\}\}$ T$\}\}$ (α=V)

(12) shows that unlike subjects, objects can occupy a position except SPEC-positions. We suggest that Case-particle drop is possible in Japanese when SOs can occupy the position other than SPEC-positions.

Our analysis can be extended to subjects in exceptional case marking constructions and dative objects in ditransitive sentences: they can be null, but Case-particle drop is impossible. This is because they always occupy SPEC-positions not the complement positions.

<Selected References> Chomsky, N. (2013) "Problems of Projection," *Lingua* 130, 33-49. Saito, M. (2007) Notes on East Asian argument ellipsis. *Language Research* 43, 203-227.

Comparing English Implicit Comparison and Japanese *Motto*-Sentences

Overview. We propose that Japanese *motto*-sentences work in a way similar to English implicit comparison (e.g., *compared to me, he is tall*, see KENNEDY 2007, SAWADA 2009), involving the introduction of a local threshold so that the positive interpretation of a gradable adjective is true of the target under comparison and false of alternatives to the target. Thus, *motto* is like a **vagueness sharpener** (BARKER 2002), sharpening what counts as, e.g., tall, in a local context.

Data. English shows a morphological distinction between the positive and comparative use of gradable adjectives: E.g., *tall* vs. *taller* (see (1)). In contrast, languages like Japanese (and Chinese, etc.) lack an *-er*-like morpheme. In (2), the same adjectival form *taka* ('tall(er)') has a positive and a comparative use, which can be disambiguated by the presence of a *yori*-phrase.

(1) a. Bill is taller. With the presence of comparative morpheme *-er*: **Comparative use of *tall***

b. Bill is tall. Without the presence of comparative morpheme *-er*: **Positive use of *tall***

(2) Bill wa (Kyle yori) se ga taka-i STDD:=standard marker

Bill TOP Kyle STDD back NOM tall(er)-DECL **Pos/Comp**: Bill is tall(er than Kyle)

However, in both English and Japanese, the meaning of comparison can be conveyed in other ways, without the presence of comparative morpheme *-er* (see (3)) or a *yori*-phrase (see (4)).

(3) Compared to Junko, Hanako is tall. **English implicit comparison**

(4) Taro wa motto se ga taka-i

Taro TOP MOTTO back NOM tall(er)-DECL **Japanese *motto*-sentence**: Taro is (even) taller

Empirically, English implicit comparison (3) and Japanese *motto*-sentence (4) share at least three similarities. First, different from the explicit comparatives in (1)/(2), neither (3) nor (4) is compatible with a numerical differential (e.g., *3 cm*) that specifies the height difference between the target (here *Hanako* in (3) and *Taro* in (4)) and alternatives (here *Junko* in (3) and unuttered in (4)) (see also BECK et al. 2004). E.g., **Compared to me, he is 3 cm tall.* is ungrammatical.

Second, neither English implicit comparison nor Japanese *motto*-sentence can be used in a Crisp-Judgment context. E.g., under a context where the height difference between the target and alternatives is too small to be significant (e.g., 1 cm), uttering (3) or (4) is infelicitous.

Third, in addition to expressing the meaning of comparison, both English implicit comparison (3) and Japanese *motto*-sentence (4) convey inferences that are pragmatic implicatures. Specifically, English implicit comparison seems to involve a contextual positive threshold **lower than the regular one** (SAWADA 2009). The target reaches this lower threshold while alternatives don't (see (5)). The use of Japanese *motto* seems to involve a contextual threshold **higher than the regular one**, and the target even reaches this higher threshold (see (6)). These implicatures are cancellable. E.g., (3) can be followed by *and notice that Junko is already a tall basketball player*; (4) can be followed by *but of course, other kids are not really tall, and neither is Taro*.

(5) **English implicit comp. (3)** $\rightsquigarrow$ Junko is not tall, and Hanako is not definitely tall. (SAWADA 2009)

Implicature of (3): $d_{\text{CONTEXT}} < d_{\text{REGULAR}}$ ((3) means: $\text{HEIGHT(J)} < d_{\text{CONTEXT}} < \text{HEIGHT(H)}$)

(6) **Japanese *motto*-sentence (4)** $\rightsquigarrow$ (Alternatives are already tall, and) Taro is even taller.

Implicature of (4): $d_{\text{CONTEXT}} > d_{\text{REGULAR}}$ ((4): $\text{HEIGHT(alterna.)} < d_{\text{CONTEXT}} < \text{HEIGHT(Taro)}$)

Analysis. We propose that in both English implicit comparison and Japanese *motto*-sentences, (i) the use of gradable adjective is not a comparative but a positive use; (ii) *motto* introduces a contextual threshold for this positive use. (4) means 'compared to alternatives, Taro is tall.'

We follow Baker (2002) and Zhang & Zhang (2024) and combine dynamic semantics and an interval-based analysis of gradable adjectives. The dynamic denotation of gradable adjective ⟦taka/tall⟧ in (7) takes two interval arguments and an individual argument and returns an update function, meaning that along a height scale, for world-assignment function pair $\langle w, g \rangle$, x is mapped to a position I s.t. I **exceeds** (for Japanese *taka*) **/ reaches** (for English *tall*) a reference position I_{STDD} by a **positive** (for Japanese *taka*) **/ non-negative** (for English *tall*) difference I_{DIFF}.

(7) $[\![\text{taka}]\!] = \lambda I_{\text{DIFF}}.\lambda I_{\text{STDD}}.\lambda x.\lambda C.\{\langle w,g\rangle \in C \mid [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - I_{\text{STDD}} = I_{\text{DIFF}}], \underline{I_{\text{DIFF}} \subseteq (0,+\infty)}\}$
$[\![\text{tall}]\!] = \lambda I_{\text{DIFF}}.\lambda I_{\text{STDD}}.\lambda x.\lambda C.\{\langle w,g\rangle \in C \mid [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - I_{\text{STDD}} = I_{\text{DIFF}}], \underline{I_{\text{DIFF}} \subseteq [0,+\infty)}\}$

For measurement uses like (8), the reference I_{STDD} is the absolute zero point along a height scale $[0,0]$ and a measure phrase like *1.7m* restricts the difference argument I_{DIFF}.

(8) $[\![\text{1.7m tall}]\!] = \lambda x.\lambda C.\{\langle w,g\rangle \in C \mid [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - [0,0] = I_{\text{DIFF}}], I_{\text{DIFF}} = [1.7\text{m}, 1.7\text{m}]\}$

In explicit comparatives, the reference I_{STDD} is the measurement of the standard, e.g., HEIGHT(Kyle) for (2). In English, [\![-er]\!] restricts the default difference I_{DIFF} to a positive interval, $(0,+\infty)$. A numerical differential can be optionally included (e.g., *5cm*) to further restrict I_{DIFF}.

We propose that inside the domain of assignment functions, there are variables that are mapped to positive thresholds of gradable adjectives: e.g. $i_{\text{tall}} \mapsto I_{\text{tall-pos}}$, $i_{\text{long}} \mapsto I_{\text{long-pos}}$. For the positive use in (9), the reference I_{STDD} is $[\![i_{\text{tall}}]\!]^{w,g}$, the regular threshold of being tall in w:

(9) $[\![\text{POS}^{i_{\text{tall}}}\text{taka}]\!] = \lambda x.\lambda C.\{\langle w,g\rangle \in C \mid [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - I_{\text{tall-pos}} = I_{\text{DIFF}}], I_{\text{DIFF}} \subseteq (0,+\infty)\}$
$[\![\text{POS}^{i_{\text{tall}}}\text{tall}]\!] = \lambda x.\lambda C.\{\langle w,g\rangle \in C \mid [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - I_{\text{tall-pos}} = I_{\text{DIFF}}], I_{\text{DIFF}} \subseteq [0,+\infty)\}$

In an implicit comparison or a *motto*-sentence, the gradable adjective has a positive use (see (10)), but with two differences from the regular positive use in (9): (i) presupposing there are alternatives under measurement and (ii) introducing a new contextual threshold (here $I_{\text{tall-pos-c}}$) and restricting it to a value exceeding the measurement of alternatives.

(10) $[\![\text{motto}^i\ \text{taka}]\!] = \lambda x.\lambda C.\underline{\exists y \in \text{ALT}(x)}.\{\langle w, g^{i/I_{\text{tall-pos-c}}}\rangle \mid \langle w,g\rangle \in C, [\![\text{HT}(x)]\!]^{w,g} \subseteq \iota I[I - I_{\text{tall-pos-c}} = I_{\text{DIFF}}], I_{\text{DIFF}} \subseteq (0,+\infty), I_{\text{tall-pos-c}} - \max\{[\![\text{HT}(y)]\!]^{w,g} \mid y \in \text{ALT}(x)\} \subseteq (0,+\infty)\}$
(For English implicit comparison, the difference is non-negative, i.e., $[0,+\infty)$, not $(0,+\infty)$.)

Consequences. (I) Incompatibility with numerical differences. In an implicit comparison or a *motto*-sentence, the gradable adjective has a positive use. Thus the vagueness of a context-dependent threshold value is at odds with a numerical specification of I_{DIFF}.

(II) Infelicity in a Crisp-Judgment context. With the introduction of a new contextual threshold value $I_{\text{tall-pos-c}}$, the heights of the target and alternatives are on the two sides of this threshold, giving the impression that their heights are qualitatively/significantly different. This explains why an insignificant difference makes the implicit comparison or the use of *motto* infelicitous.

(III) Implicatures of implicit comparison and *motto*-sentences. Under the current analysis, implicit comparison and a *motto*-sentence have the same semantics (see (10)), but as shown in (5)/(6), they involve opposite implicatures w.r.t the newly-introduced local thresholds. Our explanation has two steps. **First**, the presence of *motto* is similar to English *even* or other additive particles in being obligatory when the context guarantees the satisfaction of a stronger presupposition (see (11), HEIM 1991: Maximize presupposition!): here the new local threshold exceeds the regular one, leading to stronger informativeness in addressing the target's height. Thus the presence of *motto* (see (6)) implies a local threshold stronger than the regular one. **Then**, English implicit comparison without *even* implies otherwise: a weaker, lower local threshold.

(11) a. Junko is tall. *(Even) compared to Junko, Hanako is tall.
b. Hiro wa se ga takai. Taro wa *(motto) se ga takai.
c. A person came. Then *(other) people came.

(IV) A prediction: Incompatibility with metaphorical / hyperbolic reading. (12) sounds funny, because the positive inference of alternatives cannot hold true locally w.r.t the newly-introduced threshold. If lions are not considered brave, no metaphorical reading could arise.

(12) ??(Even) compared with lions, Mary is brave. (Cf. Mary is braver than lions.)

Summary. In an English implicit comparison or a Japanese *motto* sentence, a gradable adjective has a positive use, but there is a comparison between the target and alternatives to the target. The current observations and analysis also work for Chinese *gèng*. All these phenomena hinge on the dynamics of sharpening vagueness and the introduction of a threshold in a local context.

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Readings of the subtractive particle *ʔilla*

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Observation: Subtractive *ʔilla* in Palestinian/Jordanian Arabic functions as a discourse particle which is ambiguous between two interpretations: an exceptive meaning and another modality meaning based on deontic/epistemic necessity as exemplified in (1) and (2).

(1) **Context 1**: *a discourse domain consisting of students in a classroom including Fatima*

kull/wala	*tˁaalib*	*nadjħ*	***ʔilla***	*Fatima*	EXCEPTIVE
every/ no	student	passed	PRT_{EXP}	Fatima	

'Every/ no student passed except Fatima.'

(2) a. **Context 2**: *Kamal is a teacher. Fatima is one of Kamal's students who requested to turn in her homework late. Kamal declined the request with the following deontic necessity.*

ʔilla	*tyesalim*	*l-wadjib*	*ʕala*	*l-waqat*	DEONTIC NECESSITY
PRT_{MOD}	she turn in	the-homework	on	the-time	

'She is required to turn in the homework on time.'

b. **Context 3**: *Kamal is a teacher. Kamal knew that Fatima, her student, is very busy. Despite this, Kamal has good reason to believe that Fatima will turn in the homework on time as stating the following epistemic necessity.*

ʔilla	*tyesalim*	*l-wadjib*	*ʕala*	*l-waqat*	EPISTEMIC NECESSITY
PRT_{MOD}	she turn in	the-homework	on	the-time	

'It must be the case that she will turn in the homework on time.'

For the ambiguous *ʔilla* sentences in (1) and (2), we develop a uniform compositional analysis of *ʔilla* as a subtractive focus-sensitive implicature-trigger which gives rise to the exceptive and modality readings in context (See Gajewski 2008, 2013, Hirsch 2016, Crnič 2018). These two readings are captured under two interpretative parameters: (i) the type of expression that the *ʔilla* operator takes as its complement. (ii) And what value context takes in the characterization of the relevant alternatives in the computation of the scalar implicature induced. The uniform analysis utilizes basic insights from the distributed semantics of subtractive particles (See Crnič 2018) in a novel way in which the exceptive and modal necessity readings are derived through subtraction and exhaustification.

Exceptive *ʔilla*: We propose an exceptive semantics for subtractive *ʔilla* based on Hirsch (2016). Accordingly, the truth conditional meaning of (1) consists of the two semantic inferences of *subtraction* and *exhaustivity*: ⟦ (1) ⟧ is true iff (i) ∀x. [x is a student & ¬ [x and Fatima OVERLAP]] → x passed (**subtraction**). (ii) for any z ∈ D_e such that z ≠ Fatima, ¬ [∀x. [x is a student & ¬ [x and z OVERLAP]] → x passed] ⇔ ∃x. [x is a student & ¬ [x and z OVERLAP]] & ¬ x passed ⇔ Fatima (**exhaustivity**) (i.e., α and β overlap iff there exists γ such that γ is a subpart of α and γ is a subpart of β). To capture the *subtraction* inference in (1), the *ʔilla* operator composes as relating two atomic or plural individual-denoting sub-constituents of the sentences with following composition: ⟦ *ʔilla* ⟧ =: λyλx. ¬ [x and y OVERLAP] (**by definition**); ⟦ *ʔilla* (Fatima) ⟧ =: λx. ¬ [x and Fatima OVERLAP] (**by function application**); ⟦ (student) ⟧ =: λx. x is a student (**by definition**); ⟦ (student *ʔilla* (Fatima)) ⟧ =: λk. k is a student & ¬ [k and Fatima OVERLAP] (**by predicate modification**). The predicate of individuals serves as the restriction of the universal quantifier resulting into the plain subtractive truth conditions =: ∀x. [x is a student & ¬ [x and Fatima OVERLAP]] → x passed. To obtain the exhaustivity inference, the plain meaning gets exhaustified by an exhaustivity operator which relates two arguments: (i) the plain subtractive meaning S (i.e., S =: [∀x. [x is a student & ¬ [x and Fatima OVERLAP]] → x passed]) and (i) the set of alternative propositions C to the plain subtractive meaning S (i.e., ALT(S,C)) which is relativized to a context of use based on individuals of type e (i.e., ALT(S, C) =: { [∀x. [x is a student & ¬ [x and Fatima OVERLAP]] → x passed]; [∀x. [x is a student & ¬ [x and z OVERLAP]] → x passed], where Fatima and z ∈ De}) with the innocently excluded set defined as IE(ALT(S, C)) =: { [∀x. [x is a student & ¬ [x and z

OVERLAP]] → x passed]}. The exhaustivity inference is given by the following composition: ⟦ *exh* ⟧ (⟦ IE(ALT(S, C))⟧) (⟦ S ⟧) is true iff ∀x. [x is a student & ¬ [x and Fatima OVERLAP]] → x passed & ¬ [∀x. [x is a student & ¬ [x and z OVERLAP]] → x passed]] ⇒ ∃x. [x is a student & ¬ [x and z OVERLAP]] & ¬ x passed ⇔ Fatima.

Generalizing the analysis to modal *ʔilla*: The exceptive semantics of *ʔilla* based on Hirsch (2016) may be generalized and extended to modal *ʔilla* as a deontic/epistemic necessity. As a modal subtractive, we assume that the truth conditions of deontic/epistemic *ʔilla* consist of the following *subtraction* and *exhaustivity* inferences: ⟦ (2) ⟧ is true iff for possible world w and actual world $w_0 \in D_s$, TURN_IN(w) & ¬ [w and w_0 OVERLAP]] (**subtraction**). (ii) For any w' $\in D_s$ compatible with the laws/instructions (deontic) or with the available knowledge/evidence (epistemic) such that w' ≠ w_0,[TURN_IN(w) → [w and w' OVERLAP]] (**exhaustivity**). To extend the analysis, (i) the subtractive operator *ʔilla* is to operate on world-denoting arguments. (ii) And the context variable C in the denotation of the formal alternatives ALT (S, C), which is involved in the computation of the associate scalar implicature, gets saturated by the contextually-determined modal base defined in Kratzer (1991) as BEST (*f, g, w).* To show this, let w_1 and w_2 be two worlds belonging to the set of accessible worlds in question. We say that w_2 is at least as normal/good/lawful etc.. as w_2 (henceforth, $w_1 \preccurlyeq_{g(w)} w_2$) iff w_2 satisfies every proposition in the ordering source g(w) that w_1 does: $w_1 \preccurlyeq_{g(w)} w_2$ iff {α : α ∈ g(w) & w_1 ∈ α } ⊆ { β : β ∈ g(w) & w_2 ∈ β }; BEST (*f, g, w)*=: {w′: w′ ∈ ∩*f*(w) and there is no w″ ∈ ∩*f*(w) such that w′$\prec_{g(w)}$ w″}. To derive the *subtraction* inference of modal *ʔilla*, the *ʔilla* operator composes as relating two atomic or plural world-denoting sub-constituents of the sentences: the possible world variable w and the actual world variable w_0, which is assigned semantic value contextually by assignment function. The computation proceeds as follows: ⟦[(*ʔilla* (w) (w_{01}))] ⟧^{K_I} =: λw. ¬ [w and w_0 OVERLAP] (**by function application**). ⟦ [(*ʔilla* (w) (w_{01})) (p(w)] ⟧^{K_I} =: λw. TURN_IN(w) & ¬ [w and w_0 OVERLAP] (**by intensionalizing the prejacent and predicate modification**). To derive *exhaustivity*, the plain meaning gets exhaustified by an exhaustivity operator which relates two arguments: (i) the plain subtractive meaning S (i.e., S =: [λw. TURN_IN(w) & ¬ [w and w_0 OVERLAP]) and (i) the set of alternative propositions C to the plain subtractive meaning S (i.e., ALT(S,C)) which is relativized to a contextually-determined modal base by getting BEST (*f, g, w*) saturating the variable C as defined as follows: ALT(S, BEST (*f, g, w*)) =$_{def}$ {S': S' is the output of substituting the focused item (w_0) in S= [(*ʔilla* (p(w) ($w_{0\,F}$))]$_f$ with (w′), where w′ $\lesssim_{BEST\,(f,\,g,\,w)}$ w_0 }; ALT'(S, BEST (*f, g, w*)) =$_{def}$ { S" ∈ ALT(S, BEST (*f, g, w*)) such that ¬ S"}; IE(ALT(S, BEST (*f, g, w*))) =$_{def}$ ∩{ ALT' (S, BEST (*f, g, w*)) ⊆ ALT(S, BEST (*f, g, w*)), where ALT' (S, BEST (*f, g, w*)) is the maximal subset of ALT(S, BEST (*f, g, w*)) such 'that ALT' (S, BEST (*f, g, w*)) ∪ {S} is consistent}. The *exhaustivity* inference is given by the following composition: let S =: [TURN_IN(w) & ¬ [w and w_0 OVERLAP]; ALT (S, BEST (*f, g, w)*) =: {[TURN_IN(w) & ¬ [w and w_0 OVERLAP]], [TURN_IN(w) & ¬ [w and w′ OVERLAP], where w_0 and w′ ∈ D_s}; and IE(ALT(S, BEST (*f, g, w)*)) =:[TURN_ IN(w) & ¬ [w and w′ OVERLAP]}. Then ⟦ *exh* ⟧ (⟦ IE(ALT(S, BEST (*f, g, w*)))⟧) (⟦ S ⟧) is true iff TURN_IN(w) & ¬ [w and w_0 OVERLAP] & ¬ [TURN_IN(w) & ¬ [w and w′ OVERLAP] ⇔ [TURN_IN(w) → w and w′ OVERLAP] ⇒ [TURN_IN(w) → w and w′ OVERLAP]. A modalized interpretation of the *ʔilla* sentence says that for any world w, if he turns in the homework on time in w, then it is the case that w and w′ overlap where w′ ∈ IE(ALT(S, BEST (*f, g, w)*)), which is interpreted as the set of innocently excludable world alternatives to w^0 in S(w) as intersected with the set of maximally best worlds BEST (*f, g, w)* in which the law/instruction (deontic) or evidence /knowledge (epistemic) holds.

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Banishing Neg-Raising from Syntax: A View from Causative

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I. Introduction: This presentation highlights a series of new facts regarding scopal relations in causative sentences with respect to negation, particularly by proposing that no syntactic neg-raising takes place; instead, the alleged neg-raising should be analyzed as *local dislocation* (Embick and Noyer 2001). If our proposal is on the right track, the current proposal reinforces the minimalist view that no head movement takes place in narrow syntax.

II. Background: Since Kuroda (1965), the fact that causative sentences in Japanese involve the bi-clausal structure, in which the causee argument works as a subject of the embedded clause, has been widely acknowledged (Harada 1971, Miyagawa 1993, among others). The motivation to adopt the bi-clausal structure is the result of the fact that the reflexive pronoun *zibun* 'oneself,' whose antecedent is the subject of a clause, takes the causee argument as its antecedent, as illustrated in (1). Recent studies have taken over this idea (Harley 2009, Saito 2020).

Another aspect of the background of the current study pertains to negative concord items (NCIs) in Japanese. When the indeterminate pronoun accompanies the scalar particle *-mo* 'too/also,' it behaves in the manner of NCIs (Watanabe 2004). As illustrated in (2), it has been accepted that NCIs are subject to the *clausemate condition*, which requires that both NCIs and negation should be included in the same clause (Kato 1985, Watanabe 2004, Shimoyama 2011). Example (2) is unacceptable because the clause that the NCI contains does not include negation.

III. Proposal and Analysis: Based on the background, let us consider example (3). In this example, both negation and the causee argument can take a wide scope over the other. When negation takes a wide scope, we obtain interpretation (4a); however, when the causee argument takes a wide scope, we obtain interpretation (4b). Since the negation marker lies in the matrix clause in (3), we expect that negation should always take a wide scope (i.e., (4a)). However, the causee argument also takes a wide scope over negation. This fact is not expected to the extent that negation lies in the matrix clause and the causee argument lies in the embedded clause.

NCIs induce a similar problem. As the examples presented in (5) indicate, the matrix negation marker can license NCIs in the embedded clause. These examples clearly violate the clausemate condition. Nonetheless, they are completely acceptable. According to the traditional bi-clausal analysis, this fact is not expected.

The examples presented above strongly suggest that negation should exist in the embedded clause in causative sentences. On the basis of these considerations, this presentation proposes that causative sentences should have two LF structures: (6a) and (6b). The matrix clause hosts negation in (6a), whereas the embedded clause does so in (6b). This duality gives rise to ambiguity in (3): (6a) is in charge of interpretation (4a), and (6b) is in charge of interpretation (4b). Once we accept these two structures, we can overcome the problems highlighted above. This analysis can be extended to the scope ambiguity between negation and the causative marker *-sase* 'make.' (7) has two interpretations: (8a) and (8b). Once we adopt the two LF structures, we can explain this ambiguity easily: the former interpretation is rooted in (6a), while the latter interpretation is rooted in (6b). Furthermore, some speakers find that examples (5) force the latter interpretation (*neg > *sase*, *sase* > neg). Our analysis correctly predicts this fact. To license NCIs in (5), their LF structure must be (6b), where negation lies in the embedded clause. In this case, the causative marker—*sase*—occupies a higher position than does negation. Therefore, the causative marker must take a wide scope over negation (*sase* > neg). In this fashion, offering two distinct LF structures with respect to a single causative sentence resolves all the issues indicated above.

One might consider that syntactic neg-raising (Kishimoto 2007 et seq.) can explain these facts. Here, suppose that in (6a), negation undergoes syntactic movement to the matrix clause and that not only the higher copy but also the lower copy works for the semantic interpretation. In this case, nothing prevents negation from taking a wide scope over the causative marker (neg > *sase*) in (5). However, as previously noted, this interpretation is unavailable. As far as the causative sentences are concerned, no syntactic neg-raising occurs. Given this conclusion, it may well be asked how we obtain surface word order *tabe-sase-nakat-ta* 'eat-Cause-NEG-PAST' for (6b). In

response to this question, we propose that *local dislocation* (Embick and Noyer 2001) inverts the order between the causative marker and negation. In (9), the causative marker adjoins to the verbal stem owing to its morphological properties. In the case of (6b), this process takes place after linearization at PF. For this reason, we obtain proper surface word order regardless of whether negation lies in the embedded clause or in the matrix clause.

In summary, this presentation proposes that causative sentences have two LF structures (i.e., (6a) and (6b)). This distinction enables us to provide an appropriate explanation for a series of facts that are unexpected by the syntactic neg-raising analysis. Even if the embedded clause hosts negation, local dislocation results in proper word order.

IV. Implications for Linguistic Theory: The motivation of the current research is to avoid employing (string-vacuous) head-raising, such as syntactic neg-raising (cf. Fukui and Sakai 2003). This presentation suggests that head movement at the PF component is an empirically correct analysis with respect to causative sentences in Japanese, thus implying that head movement does not take place in narrow syntax but rather in the course of externalization (i.e., PF), which is compatible with the minimalist view of head movement (Chomsky 2000 et. seq.).

Examples

(1) Taro-ga [Hanako$_i$-ni zibun$_i$-no heya-o soozis]-ase-ta.
Taro-NOM [Hanako-DAT self-GEN room-ACC clean]-make-PAST
'Taro made Hanako clean her room.'

(2) *Taro-ga [**dare-mo** Bill-o tatai-ta]-to iw-**anakat**-ta.
Taro-NOM [**anyone-also** Bill-ACC hit-PAST]-that say-**NEG**-PAST
'Taro didn't say that anyone hit Bill.'

(3) Hanako-ga [**san**-nin(-izyoo)-no otoko-ni mesi-o ogor]-ase-**nakat**-ta.
Hanako-NOM [three-CL(-more.than)-GEN man-DAT dinner-ACC treat]-make-**NEG**-PAST

(4) a. It was not the case that Hanako made three men treat her to dinner. (neg > three)
b. For three men, Hanako didn't make them treat her to dinner. (three > neg)

(5) a. Taro-ga [**dare-ni-mo** yasai-o tabe]-sase-**nakat**-ta.
Taro-NOM [**anyone-DAT-also** vegetable-ACC eat]-make-**NEG**-PAST
'Taro didn't make anyone eat vegetables.'
b. Taro-ga [Hanako-ni **nani-mo** tabe]-sase-**nakat**-ta.
Taro-NOM [Hanako-DAT **anything-also** eat]-make-**NEG**-PAST
'Taro didn't make Hanako eat anything.'

(6) a. s[… s[QP/NCI …]-sase-**NEG**-PAST]
b. s[… s[QP/NCI … **NEG**]-sase-PAST]

(7) Taro-ga [Hanako-ni yasai-o tabe]-sase-nakat-ta.
Taro-NOM [Hanako-DAT vegetable-ACC eat]-make-NEG-PAST
'Taro didn't make Hanako eat vegetables.'

(8) a. It was not the case that Taro made Hanako eat vegetables. (neg > *sase*)
b. (Lit.) Taro forced Hanako not to eat vegetables. (*sase* > neg)

(9) Local dislocation: [[[tabe-**nak**]-**sase**]-ta] → [[[tabe + **sase**]-**nak(kat)**]-ta]

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An Anti-Labeling Device from MERGE and Remove

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Issues and Previous Analyses: Since the origin of generative grammar, it has been recognized that English requires the subject at the Spec TP. The requirement, known as the Extended Projection Principle (= EPP), is, for example, observed by the necessity of the subject *John* in (1) below:

(1) *(John) won the race.

In order to capture this effect, Chomsky (2013, 2015) proposes a labeling algorithm, which determines a label of a set formed by Merge in the following ways:

(2) (i) $\{_{\alpha=X}$ X, YP$\}$ (ii) $\{$XP … $\{_{\alpha=Y}$ ~~XP~~, YP$\}\}$ (iii) $\{_{\alpha=<F,F>}$ $\{X_{[F]}$ ZP$\}$ $\{Y_{[uF]}$ WP$\}\}$

If the merged set consists of a head X and a phrase YP as shown in (2i), the label of the set is determined as X because X is the first head detected by Minimal Search. When XP and YP constitute a set, its label is provided in the way of (2ii) or (2iii). First, by moving XP in (2ii), the lower copy of XP is protected from Minimal Search by its higher copy, thereby the head of the other phrase, i.e. Y in (2ii), becomes a label. In (2iii), where the two heads X and Y have a shared agreement feature, that feature provides a label.

Significantly, the labeling algorithm described in (2) can deduce the EPP effect as schematized in (3):

(3) $\{C\ \{_{\gamma}$ John$_{[\varphi]}$ $\{_{\beta}$ T$_{[u\varphi]}$ $\{_{\alpha}$ John $\{_{v*P}$ won the race$\}\}\}\}\}$ (α = v*, β =T, γ = <φ, φ>)

Chomsky assumes that the T head in English is too weak to serve as a label unless it is strengthened by the label <φ, φ>. In (3), the subject *John* is internally merged with the set whose label is β so that γ can be labeled as <φ, φ>. Thanks to the label <φ, φ>, the T head can gain strength and become the label of β. As for the label of α, the movement of *John* enables it to be determined as v*. In a nutshell, the EPP effects stem from the weakness of the T head under the labeling algorithm.

However, Saito (2016) points out that Japanese poses a problem for this account. Given that Japanese does not show any verbal inflectional morphemes at all unlike English, he presumes that Japanese lacks a φ-feature (cf. Miyagawa (2022)). Under this presumption, derivations in Japanese cannot rely on the label <φ, φ>. Note that the absence of the label <φ, φ> does not disallow the T head in Japanese to function as a label. Considering that the EPP effects are absent in Japanese, as represented by the optionality of the subject *John-ga* 'John-Nom' in (4a) below, Saito assumes with Chomsky (2015) that the T head in null subject languages like Japanese is strong enough to serve as a label without the label <φ, φ>. Rather, the problem is that the lack of φ-features causes the label indeterminacy of α in the configuration of $\{_{\alpha}$ $\{$D, NP$\}$ $\{$T, v*P$\}\}$. The relevant problem is illustrated in (4b) below, which exhibits the derivation of (4a). In (4b), γ cannot be labeled because the T head and the subject *John-ga* 'John-Nom' do not have φ-features.

(4) a. (John-ga) reesu-ni katta.
(John-Nom) race-Dat won
'John won the race.'

b. $\{_{\gamma}$ John-ga $\{_{\beta}$ T $\{_{\alpha}$ John-ga $\{_{v*P}$ reesu-ni katta$\}\}\}$ (α = v*, β = T, **γ = ??**)

In order to resolve this problem, Saito (2016) proposes that Japanese case morphemes function as an anti-labeling device: the item that makes the attaching phrase invisible for the labeling. Under this proposal, γ in (4b) can be labeled as T because the subject with a nominative case marker *-ga* is unavailable for labeling. Although Saito's (2016) proposal is illuminative in that it simply resolves the problem for the labeling algorithm in Japanese, there are also fundamental problems with it: why is a case morpheme able to function as an anti-labeling device? More generally, what kind of items have an anti-labeling property?

This study aims to answer these problems by formalizing MERGE as its original version in Chomsky (2019) and proposing Remove as an operation that eliminates one or two of the targets of MERGE.

Proposals: Chomsky (2019) regards the place where operations take place as a workspace (WS) and proposes MERGE, the operation that maps a WS into another WS in the way of (5), where WS_1 has the two terms X and Y (note that X and Y in the subsequent discussion can be a head or a phrase):

(5) WS_1 = [X, Y]: MERGE (X, Y, WS_1) = WS_2 = [{X, Y}, X, Y]

The WS_2 in (5) includes not only the newly formed set {X, Y} but also the earlier introduced terms X and Y. The formalization of MERGE in (5) is based on the notion of Recursion, namely, the desideratum that requires any syntactic objects generated before, e.g. X and Y in the WS_2, to be available for further computations. However, Chomsky rejects (5) in his latter discussion due to its conflict with another desideratum, Restrict Computational Resources (RCR), which forces MERGE to yield just one new accessible term. Given RCR, he revises MERGE in (5) into an operation that replaces X and Y in the WS_1 with the set {X, Y} in the WS_2 (which always results in WS_2 = [{X, Y}]). This definition of MERGE obeys RCR because WS_2 has three accessible terms, {X, Y} as well as X and Y in this set, whereas accessible terms in WS_1 are X and Y. Nevertheless, this paper retains the formalization of MERGE in (5) by proposing that Remove can eliminate one or two of the targets of MERGE to satisfy RCR (cf. Chomsky

(2019), Nakashima (2022)). Concretely, MERGE in (5) can obviate the violation of RCR by removing X and Y, which leads to WS_2 = [{X, Y}, ~~X, Y~~], because only the accessible term {X, Y} is newly added to WS_2. Moreover, we assert that removing either X or Y from the WS_2 is enough to satisfy RCR when terms in the constructed set become inaccessible to further syntactic operations due to the phase impenetrability condition (PIC). Building on the perspective on head movement that it is not a part of narrow syntax (e.g. Chomsky (2021)), we assume that PIC makes a phase head in addition to its complement inaccessible to further syntactic operations. (6a) and (6b) illustrate possible outputs from MERGE of a phase head H and a phrase ZP, followed by removing one of them (hereafter, strikethrough shows that terms are removed):

(6) a. WS_2 = [{$_H$ H, ZP}, ~~H~~, ZP] b. WS_2 = [{$_Z$ H, ZP}, H, ~~ZP~~] (shaded parts = PIC domain)

In (6), the WS_2 has two accessible terms: the set {H, ZP} and ZP in (6b) or H in (6c) remaining in the WS_2. Note that H and ZP within {H, ZP} are made inaccessible by PIC. Moreover, we assume with Chomsky (2013) and Nakashima (2022) (i) that a syntactic object can provide a label only when it is within the domain of the set and (ii) that a syntactic object is in a domain only when all of its occurrences are terms of that domain. The assumptions in (i) and (ii) are based on the invisibility of the moved item for the labeling in (2ii), where every occurrence of XP is not contained within the domain of α, and thus X cannot label α. Under these assumptions, the sets {H, ZP} in (6a) and (6b) are labeled as H and Z respectively.

It is time to demonstrate that MERGE and Remove can explain why Japanese case morphemes can function as anti-labeling devices. Let us consider (4a) as an example. MERGE of the proper noun *John* and a nominative case marker *-ga* forms the set {John, -ga} and Remove eliminates *John* from the resulting WS. Assuming that a case marker is a phase head, we claim that terms in the created set become inaccessible due to PIC, avoiding the violation of RCR:

(7) WS = [{$_\alpha$ John, -ga}, ~~John~~, -ga] (α = John)

In (7), the nominative case marker *-ga* cannot provide a label because it is not in the domain of the created set {John, -ga}; one of its occurrences in the WS is not a term of {John, -ga}. Therefore, the label of α is unambiguously determined as *John*. MERGE of the set {John, -ga} and the set {T, v*P}, followed by MERGE of the C head, leads to the derivation schematized in (8) below. The completion of the CP phase triggers labeling. The Search for labeling β finds the two heads simultaneously: the T head and the nominative case marker *-ga*. However, the latter cannot provide a label for the same reason as in the case of labeling α in (7). Consequently, β is correctly labeled as T.

(8) WS = [{$_\gamma$ C {$_\beta$ {John, -ga} {$_\alpha$ T {v*P …}}}}, -ga] (α = T, β = T, γ = C)

The proposed analysis in this study explains why case morphemes function as an anti-labeling device; a case morpheme cannot provide a label for the domain that does not contain all of its occurrences. Moreover, our proposals can answer what kind of item becomes an anti-labeling device: it is a syntactic object whose occurrence in the WS is not removed after MERGE.

Extension: Importantly, the proposals of this study do not regard the anti-labeling property as special to a case morpheme. This consequence enables the resolution of another issue for the framework in Chomsky (2013, 2015): the labeling algorithm in Chinese. This language displays no verbal inflectional morphemes like Japanese, as represented by (9):

(9) Wo/ni/ta/women/tamen chang.
I/you/he/we/they sing
'I/you/he/we/they sang.'

If the lack of verbal inflectional morphemes indicates the absence of φ-features, Chinese disallows the label of α in the configuration {$_\alpha$ {D NP} {T, v*P}} to be determined as <φ, φ>, unlike English. However, Chinese cannot depend on case morphemes as anti-labeling devices in the sense of Saito (2016) to resolve this problem because this language lacks case morphemes too.

The proposed analysis of anti-labeling devices can resolve the problem of the labeling algorithm in Chinese by claiming that the subject in Chinese stays within the v*P phrase. Under the analysis developed in this study, the derivation of (9) can proceed as illustrated in (10):

(10) WS = [{$_\beta$ {$_{DP}$ wo} {$_\alpha$ v*, {$_{VP}$ …}}}, {$_{DP}$ wo}] (α = v*, β = v*)

In (10), MERGE of the subject *wo* 'I' completes the v*P phase and PIC makes v* and VP inaccessible to further syntactic operations, satisfying RCR. In this case, the subject survives in the resulting WS. Since the subject is not in the domain of the set with the label of β because an occurrence of the subject remains in the WS. Thus, only the v* head is a candidate for the label of β. In conclusion, our analysis enables the labeling algorithm to cover derivations in Chinese without any additional stipulations (cf. Saito (2016)).

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A Simpler Syntax of Middles, Unaccusatives and (Fake) Passives

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Previous approaches to middles can be roughly divided into two. Approach A holds that the middle subject is base-generated as an internal argument (IA) of the verb and moves to its surface position (Tsimpli 1989, Schäfer 2008b: 236-237, Pitteroff & Schäfer 2014), whereas Approach B holds that it is not a derived subject, with no movement involved (Bruening 2024). This paper argues for Approach A, examining the properties shared by middles, unaccusatives and fake passives. With the purpose of unifying voice constructions and simplifying clause building, this paper justifies the following proposals: **1)** IA, base-generated within VP, moves to Spec of VoiceP so that external arguments (EA) cannot merge there; **2)** movement of IA may give rise to middles, unaccusatives and fake passives; and **3)** interpretative differences between these constructions are attributed to the distinct patterns of their labile alternations and as well as their distinct lexical aspectual organization.

MIDDLES In middles, IA is promoted to the subject position via internal merge (IM), with EA absent from syntax (Lekakou 2005 and others), as evidenced by the fact that (dispositional) middles in English do not allow modification by agentive adverbials, can control into purpose clauses, and do not tolerate the *by*-phrase (Alexiadou 2014: 21). In this sense, middles are one-place predicates. That middles are derived from transitives is just an illusion. Morphologically, middles are either active-, passive- or reflexive-marked according to the morphosyntactic parameters of the particular languages (Alexiadou 2014: 21ff). This allows us to say that the middle subject is introduced by a head, H, that is unspecific with respect to voice type. This means that the primary function of H is to reintroduce IA, but not to specify the voice type as middle. This paper shows that H is Voice, which is simply an argument-introducer, without being endowed with voice-specifying features. Voice introduces a DP as a potential subject (sbj). Since nothing prevents DPs from merging under Free Merge (Chomsky 2013, 2015), sbj may be either a DP extracted from the numeration or one from the working station.

(1) a. [$_{\text{VoiceP}}$ sbj [$_{\text{VP}}$ DP1]]
b. [$_{\text{VoiceP}}$ DP2(=sbj) [$_{\text{VP}}$ DP1]] (transitive by default)
→[$_{\text{TP}}$ DP2$_i$(=SBJ) [$_{\text{VoiceP}}$ t_i(=sbj) [$_{\text{VP}}$ DP1]]]
c. [$_{\text{VoiceP}}$ DP1$_i$(=sbj) [$_{\text{VP}}$ t_i]] (middle (as well as unaccusative and fake passive))
→[$_{\text{TP}}$ DP1$_i$(=SBJ) [$_{\text{VoiceP}}$ t_i(=sbj) [$_{\text{VP}}$ t_i]]]

If external merge (EM) applies, DP2, a different DP, is introduced as sbj, which is what we refer to as EA. The derived structure is transitive by default, which is what we refer to as "active". If IM applies, DP1 moves to sbj, yielding the so-called "middle structure".

(2) [$_{\text{TP}}$ this book$_i$ [$_{\text{VoiceP}}$ t_i [$_{\text{VP}}$ read t_i]]]

With Spec of VoiceP filled by IA, there is no position open to EA. In this sense, EA is just syntactically absent from the beginning but not suppressed or demoted. The would-be agentive interpretation of EA in middles arises from the ability of the verb to participate in a transitive-middle alternation. Where no alternation is available, the would-be agentive interpretation of EA would not follow, which is the case of unaccusatives (of the *arrive* type). In this sense, the middle itself is intransitive, just like unaccusatives.

UNACCUSATIVES Unaccusatives are derived in the same way: IA is promoted to sbj, agentive phrases failing the competition for Spec of VoiceP.

(3) [$_{\text{TP}}$ the vase/the guests$_i$ [$_{\text{VoiceP}}$ t_i [$_{\text{VP}}$ break/arrive t_i]]]

Break-type unaccusatives participate in labile alternations and therefore are also interpreted as two-place predicates in transitives, whereas *arrive*-type unaccusatives do not. Both types of unaccusatives differ from middles in that they carry change-of-state/location meaning, whereas

middles carry a stative generic meaning. The change-of-state/location meaning of unaccusatives arises from their special structuring of roots and/or inner aspectual organization, whereas the generic meaning of middles arises from being existentially bound. When both hold, the verb may be both middle and unaccusative.

(4) This kind of vases break easily. (Alexiadou 2014: 36)

FAKE PASSIVES Fake passives, which are morphologically passive but semantically active, typically and productively found in Mongolian, are derived in the same way. Fake passives do not allow agents at both the interpretive and formal levels, unlike canonical passives. For example, *neme-gd*, which is morphologically analytical as "V + passive morpheme", means "increase (spontaneously)", not "be added". The dative argument is interpreted as a recipient or a beneficiary.

(5) Nad hüč neme-gd-be.
1st-DAT strength-NOM add-PS-PST
'My strength increased.' (Literally: To me, strength was added.)

IA *hüč* moves into Spec of VoiceP as sbj. The "passive" suffix *-gd* spells out Voice. It has nothing to do with a passive meaning; instead, it contributes an active (spontaneous) semantics, as is the case with unaccusatives. The promotion of IA, in this case, is not passivization.

(6) [$_{TP}$ … [$_{VoiceP}$ hüč$_i$ [$_{VP}$ t_i neme] -gd]]

Demotion of the agent (to benefaciary, recipient, "low agent", etc.) always gives rise to lexical idiosyncracy, which renders promotion of the patient possible. In this regard, the proposed analysis of fake passives gains support from languages such as Latin, in which deponent verbs go with mismatch between form and function (Grestenberger 2018).

CONSEQUENCES AND IMPILICATIONS **First**, the voice domain is a layered voice projection, which splits into separate projections. Each voice head is a sbj-introducer, where a last-merged sbj, the highest one, is promoted to the surface nominative subject (SBJ), with others, if any, remaining non-nominative, as a Relativized Minimality effect. Spec of VoiceP is open for both EA and IA. If EM applies, EA is generared and if IM applies, IA is promoted.

(7) [$_{TP}$ SBJ … [$_{VoiceP2}$ sbj2 [$_{VoiceP1}$ sbj1 [$_{VP}$]]]]

The following cross-linguistic fact points to this. As opposed to canonical passives, "non-canonical" passives are observed in many languages. Deponent verbs in Latin (Grestenberger 2018) and medio-passives in Greek (Alexiadou et al. 2015) are morphologically passive/non-active but syntactically active. The common property shared by fake passives in Mongolian and Latin/Greek-type passives is that no agent is syntactically generated in Spec of VoiceP. In contrast, canonical passives are derived out of verbs that bear an agent. Thus, the structural difference between Mongolian/Latin/Greek type of passives and canonical passives comes down to the difference in height between positions into which IA moves, not to distinctive features on Voice. In canonical passives, IA targets Spec of a higher Voice, whereas it targets Spec of a lower Voice in the other. In canonical passives, the lower Voice introduces DP1 as sbj, which is EA, mostly an agent. EA is a KP, which may be either a DP or a PP (Collins 2024).

Second, clause building (building of subject-predicate relations) can be simplified by minimizing it to introduction of arguments as sbjs at different heights. Spec of VoiceP (traditionally *v*P) is thus open for both EA and IA.

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Further evidence of the multifunctionality of *-ed* and its non-morphomic explanation

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INTRODUCTION *-Ed* is arguably the most multifunctional suffix in Present-day English. In verbal inflection, it produces the past tense, perfective, and passive forms of a verb, and the latter two forms are syncretic with adjectival participles. While this range of formal identity is puzzling enough, *-ed* is also observed in denominal adjectivalization. In this paper, we provide further evidence of the multifunctionality of *-ed* in the denominal domain and offer a lexicalist analysis of it without reference to the concept of morphome, i.e. purely morphological mapping function (Aronoff 1994). A close look at a small pocket of the English lexicon will reveal a more satisfactory approach to the messy landscape involving *-ed*.

OBSERVATION *-Ed* occurs in denominal possessional adjectives such as *a long-haired person* (Beard 1995: 211–213, Ishida 2024). Kageyama (ed.) (2009: 71–72) states that the base of this suffix should be a body-part noun (*long-haired*), dimension noun (*oval-shaped, rose-colored*), or clothing noun (*helmeted*), and "alienable possessums such as *lover, husband, friend, house, car,* etc. do not constitute a base for the N-*ed* adjective" (p.72, our translation). However, a random sampling from large-scale corpora reveals that *-ed* can attach to such nouns:

(1) A **sheltered** and zealously **husbanded** woman will remark to a **widowed** friend, 'So you're sailing Thursday.' (OED, 1934)
(2) A week later, Laurence Humphrey, president of Magdalen College and very well **friended** in high places, wrote urgently to the two chancellors. (OED, 1986)
(3) Last night ninety-four vessels were berthed, all fairly well **fished**. (OED,1947)

Still, these *-ed* adjectives differ from the "*long-haired*" type in both form and meaning. They accompany an adverb, not an adjective, and semantically, the base noun is more loosely related to the noun modified by the *-ed* adjective. Thus, the possessional relationship between a woman and her husband is more abstract than the one between a woman and her long hair. Furthermore, the two nouns in *a widowed friend* embody a copular relation.

While data can be sometimes ambiguous, the "*husbanded*" type cannot be reduced to adjectival passivization of denominal verbs. For instance, the *-ed* adjective in (3) is distinct from the one in (4). Only in the latter, the derivation unmistakably corresponds to the verb phrase *to fish a pond*.

(4) "The pond is getting pretty well **fished**, and booking (someone fresh) is getting harder and harder," acknowledges Michael Hirschorn, [...] (COCA, 2005)

RESEARCH QUESTION The multifunctionality of *-ed* ranges over both deverbal and denominal domains, with the latter domain containing not only the *long-haired* type but also the *husbanded* type. How can we make sense of this observation in the lexicalist approach without using a morphome?

FRAMEWORK We explore the question in the Lexical Semantic Framework (LSF) (Lieber 2004, 2016). The LSF is a lexicalist morphological theory with an explicit emphasis on lexical semantics over syntactic categories. Each morpheme is decomposed into a hierarchical

representation of those semantic features that are of relevance to the syntax in a specific language. Word formation expires when two such representations, called *skeletons*, are merged into one. The skeletal features for English include: [±material] (for N), [±dynamic] (for V and predicative A), [±Loc] (for existence), [±IEPS] (for path), [±scale] (for scalarity), [±B] (for boundedness), and [±CI] (for plurality).

PROPOSAL AND ARGUMENTS In the traditional scholarship, too much emphasis has been placed on the linkage between verbal and adjectival passives, leading some to imagine a process of conversion from verbal to adjectival passive forms. However, this analysis overlooks the enormous challenge that it presents for any standard theory in which inflection occurs after derivation. Fortunately, the basic tenets of LSF offer a novel perspective on the multifunctionality of *-ed*. First, LSF distinguishes derivation from inflection. If so, the adjectival passivization is a derivational process that is distinct from the verbal passivization. Lieber (2016: 147) proposes the following skeleton for this process:

(5) [−dynamic, +scalar ([ ], <base>)]

Second, in LSF, the underspecification of the skeleton is the root of the lexical polysemy and affixal multifunctionality. As demonstrated in Lieber (2004, 2016), a single skeleton can capture formations such as *printer* (person and instrument), *sinker*, *roaster*, *fiver*, and *all-rounder* when the target morpheme is the suffix *-er*. In theory, the application of the skeleton in (5) is not limited to verbal bases. We argue that this is precisely what is demonstrated by denominal adjectives like those in (1-3). We contend that the "*husbanded*" type and the adjectival passive are realizations of the same skeleton, i.e., (5). The newly observed type can be seen as empirical proof of the underspecified nature of the lexical skeleton.

Furthermore, the skeleton can be more underspecified than the way it is. The eventive and referential readings of *construction* are captured by the assumption that skeletally, the former reading is sparser than the latter (Lieber 2016: 103). Following this, we suggest that *long-haired* is associated with the skeleton in (5) from which the feature [+scalar] is absent.

In the presentation, we will provide several arguments in support of this proposal, including: (i) the cross-categorial nature of derivational base selection; (ii) the ambiguity between denominal adjectives and adjectival passives (the point mentioned above (4)); (iii) the affixal rivalry between *-ed* and *-en*; and the similarity between denominal adjectives and adjectival passives in (iv) parasynthetic formation and in (v) the relationship between the derived adjective and its head noun.

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An Exploration of Identity Based on Label Sequence

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1. Introduction: The Identity Condition on Ellipsis

In the syntactic literature, it has been claimed that linguistic expressions can be omitted if their information can be recovered from their antecedents. For example, a verbal phrase can be elided under identity with its correlate, as illustrated in (1), where the missing part is represented by a strikethrough.

(1) John *likes dogs*, and Mary does ~~like dogs~~, too.

The elements marked with the strikethrough are not pronounced, but this sentence is interpretable because the information of the missing part can be recovered under identity with its correlate *like(s) dogs* in the first clause. Thus, it has been assumed that ellipsis involves some kind of identity, but there has been no consensus on what kind of identity condition is imposed on the phenomenon (cf. Merchant (2001, 2013)). Assuming that the relevant identity is based not on constituency but on label sequence (cf. Saab (2022)), this presentation provides empirical support for the label-based identity.

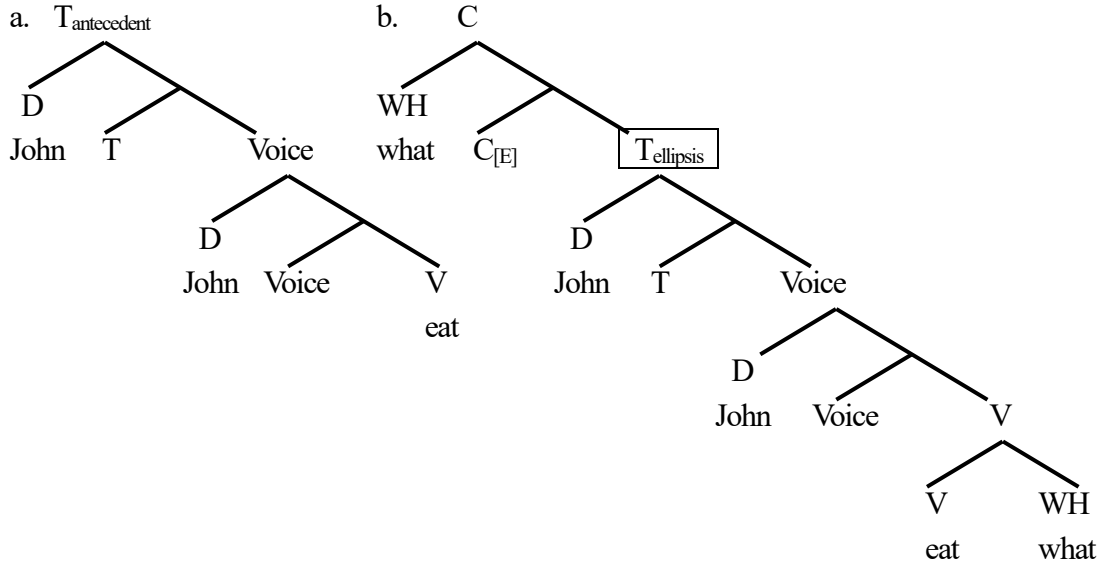
2. Identity Based on Label Sequence

For theories of identity, it is important that they can explain allowable mismatches between missing parts and their sources because such mismatch data clarify what information is (or is not) required for recoverability. In this presentation, I follow Saab (2022) in assuming that recoverability depends on label-based identity, which can explain mismatches in *sprouting*, where an ellipsis remnant has no overt correlate, as shown below:

(2) *John ate* but I don't know what$_i$ ~~John ate t_i~~. (Saab (2022: 195))

In (2), the elliptical clause and its antecedent clause differ in the presence/absence of an overt internal argument of the verb *ate*, but this constituency difference does not matter for licensing the clausal ellipsis. This suggests that ellipsis licensing requires an identity relation other than constituent identity. Saab proposes that the relevant identity is evaluated based on whether the ellipsis domain has the same label sequence as its antecedent. In other words, ellipsis is licensed if the elided elements are dominated by the same label sequences as their correlates, from the top node of the ellipsis domain to each of the elided elements. This identity condition is satisfied in (2), as illustrated by the structural analysis in (3), which is simplified compared to Saab's (2022) analysis for the sake of brevity and space. Here, it is assumed that the [E]-feature on the C-head triggers the TP-ellipsis (cf. Merchant (2001)).

(3) a. $T_{antecedent}$ b. C



In (3), terminal elements within the ellipsis domain, except for the lower *wh*-copy, can be recovered based on label-based identity: assuming that the verbs *eat* in the elliptical and antecedent clauses are lexically identical elements with optional transitivity, elided elements and their correlates are dominated by the same label sequences from the TP node. Additionally, Saab analyzes the lower *wh*-copy as recoverable based on a copy relation with the ellipsis remnant. Thus, label-based identity, along with copy identity, successfully explains the allowable constituent mismatch, suggesting that the identity condition under ellipsis depends not on constituency but on label sequence.

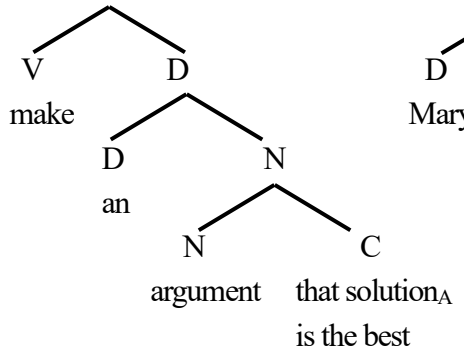
3. Empirical Support

In this presentation, I empirically support label-based identity by analyzing more ellipsis data with constituent mismatches. A piece of supporting evidence involves the transitivity mismatch of NPs (i.e. mismatch between NPs with and without a complement). Recall from the previous section that a verb with optional transitivity can be elided even if there is a transitivity mismatch. It is then predicted that, even if there is a transitivity mismatch of NPs between an ellipsis domain and its antecedent, it does not affect the licensing of the ellipsis. This prediction is borne out, as shown below:

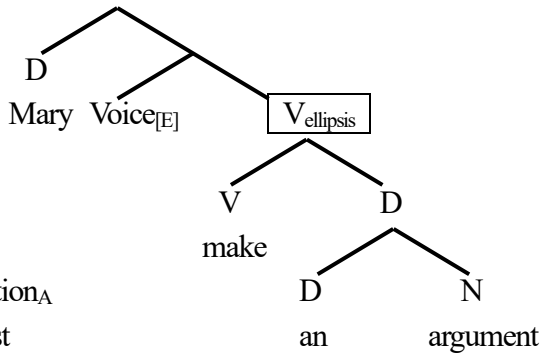
(4) (?) In the meeting, most participants kept silent, but John [$_{VP}$ made an argument that solution$_A$ is the best]. Mary also did [$_{VP}$ ~~make an argument~~], but her argument is different from John's: she argued that solution$_B$ is the best.

Note that the NP within the VP-ellipsis domain does not have a structurally identical correlate; the NP completely recovered from its correlate (*an argument that solution$_A$ is the best*) would be inconsistent with the continuation (*she argued that solution$_B$ is the best*). A conceivable candidate for the elided NP element is the one without a complement clause (*an argument*). The elided verbal phrase and its antecedent are analyzed as in (5), where it is assumed that the [E]-feature on the Voice head triggers the VP-ellipsis (cf. Merchant (2013)).

(5) a. $V_{antecedent}$



b. Voice



The allowable VP-ellipsis with a constituent mismatch strengthens the validity of the identity based on label sequence. In this presentation, I provide further support for label-based identity by extending the analysis to other ellipsis phenomena and unpronounced elements.

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Binding, Parallelism, and Elliptic "Do So" in Japanese

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Synopsis: This paper aims to verify a Japanese VP anaphoric expression, "soo su (do so)", is not a proform, but involves ellipsis (Sakamoto 2020). The expression is shown to allow extraction from "soo su (do so)" by brand new binding facts and to satisfy syntactic parallelism requirement of ellipsis. Ban of string vacuous scrambling (Hoji 1985) is also pointed out to be alleviated if scrambling is forced by parallelism of ellipsis. This supports ATB movement approach to V-V Compound Ellipsis and A movement to Spec TP in Japanese.

Background: Japanese has a VP anaphoric expression, "soo su (do so)" (soo su anaphora, SSA). SSA has been treated as a proform in the literature. However, Sakamoto (2020) argues that SSA is derived by ellipsis with insertion of phonological exponents of "soo su" in PF, as in (1). (1b) indicates that "soo su" in (1a) has the same form in narrow syntax (NS) as the antecedent VP, "John-o sika (scold John)". The VP is elided in NS when v merges in (1c) (strikethrough = ellipsis). The ellipsis site is filled with the phonological exponent of "{soo su}" in PF, as in (1d).

(1) a. Mike-wa John-o sikatta si, Mary-mo soo sita.
M.-Top John-Acc scold and Mary-also so did
'Mike scolded John and Mary did so, too.'
b. NS: Mary-mo John-o sika.
c. NS: Mary-mo ~~John-o sika~~.
d. PF: Mary-mo {soo si}-ta.

Observations: New data of binding uphold the view that SSA is not a proform, but is derived by ellipsis. Proforms disallow extraction from itself while ellipsis allows it (Fiengo and May 1994, Thompson 2014, a.o.). This predicts SSA bans extraction from itself if it is a proform. However, SSA allows extraction from itself, as in (2), (4), and (5). These facts indicate that SSA involves ellipsis. First, (2) demonstrates that the anaphor, "otagai (each other)", in (2b) is bound by the phonologically null NP, "Mary-to Mike-wo", which is moved from "soo su".[1]

(2) a. [Mary to Mike-o]$_1$ John-wa [$_{VP}$ yasasiku t$_1$ sikat]-ta.
M. and M.-Acc John-Top kindly scold-PAST
'[Mary and Mike]$_1$, John scolded t$_1$ kindly.'
b. [~~Mary to Mike-o~~]$_2$ otagai-no buchou-mo soo sita.
M. and M.-Acc each other-Gen manager-Nom so did
'Their$_2$ fathers scolded t$_2$ kindly.'

Note1:
Objects extracted
from ellipsis = orange)

This data suggests that "soo su (do so)" in (2b) has its internal syntactic structure, from which the NP is extracted, as shown in (3). (3) shows that the VP, "Mary-to Mike-o sika (scold Mary and Mike)" is deleted once v is introduced in (3a). Then, the deleted NP, "Mary to Mike-o", is scrambled to Spec TP in (3b). (3c) indicates that the deleted VP is replaced by "soo su" in PF. As a result, the elided NP, "Mary to Mike-o", serves as the antecedent for the anaphor, "otagai (each other)", in (2b). On the other hand, the NP in (2b) could not bind the anaphor if SSA were a proform (SSA would hinder extraction from itself).

(3) a. Otagai-no buchou-mo [$_{VP}$ ~~Mary to Mike-o sikat~~] (deletion of the VP once v merges)
b. ~~Mary to Mike-o$_2$~~ otagai-no buchou-mo [$_{VP}$ ~~t$_2$sikat~~]-ta. (IM of the deleted NP)
c. PF: ~~Mary to Mike-o$_2$~~ otagai-no buchou-mo {soo si}-ta. (PF insertion of "soo su")

In addition, (4) demonstrates that scrambling of the phonologically elided NP, "taitei-no gakusei-o (most students)", from the SSA site to serve the antecedent for the anaphor, "soitu (their)" is possible. Bound variable interpretation of the anaphor is available in the sentence.

(4) a. [Taitei-no gakusei-o]$_1$ John-wa [$_{VP}$ yasasiku t$_1$ sikat]-ta.
most employees John-Top kindly scold-PAST
'[most employees]$_1$, John scolded t$_1$ kindly.'
b. [~~Taitei-no gakusei-o~~]$_2$ soitu-no sidoukyouin-mo soo sita .
most students their-Gen supervisor-also so did
'Their$_2$ fathers scolded t$_2$ kindly.'

Finally, (5) shows that the elided NP, "kare-o (him)", is extracted from the SSA site. This violates binding condition C. The NP, "Taro-wa", binds the A' trace of "kare-o" in "soo su".

(5) a. [Kare-o]$_1$ Mary-wa Hanako-wa [$_{VP}$ yasasiku t$_1$ sikat]-ta to itta.
him-Acc M.-Top H.-Top kindly scold-PAST C said

'Him$_1$, Mary said that Hanako had scolded t$_1$ kindly.'

b. *[~~Kare-o~~]$_2$ Taro-wa$_2$ Nancy-ga soo sita to itta.
him T.-Top N.-Nom soo
'Taro$_2$ said that Nancy did so (= scolded him$_2$).'

Support: The argument that SSA involves ellipsis is further supported by syntactic parallelism of SSA. (6a) do not move the NP, "Mary to Mike-o". (6b) indicates that the anaphor, "otagai-(each other)", in (6b) cannot be bound by the NP, "Mary to Mike-o" extracted from the SSA site. This suggests that extraction from SSA is only available if the preceding clause involves movement. The parallelism requirement of SSA is identical to that in ellipsis, as in (7).

(6) a. John-wa [$_{VP}$ yasasiku [Mary to Mike-o]$_1$ sikat]-ta.
John-Top kindly M. and M.-Acc scold-PAST
'John scolded [Mary and Mike]$_1$ kindly.'

b. *Otagai-no buchou-mo soo sita.
each other-Gen manager-Nom so did
'Their$_2$ fathers scolded t$_2$ kindly.'

The universal quantifier, "every" in the vP Ellipsis site in (7) takes the scope over the existential quantifier, "some", iff the scope relation is also maintained in the preceding sentence by QR.

(7) A boy admires every teacher. A girl does [~~admire every teacher~~], too. (Fox 2000)

Consequences: This study shows that string vacuous scrambling is available if syntactic parallelism requirement of ellipsis is satisfied, which verifies ATB movement approach to V-V Compound Ellipsis (VVCE) and A movement to Spec TP. Hoji (1985) argues that scrambling that does not affect word order (string vacuous scrambling) is prohibited. However, the binding facts discussed in (2), (4), (5), and (6) indicate that string vacuous scrambling of the elided NPs are available only when syntactic parallelism of ellipsis is met.

This consideration supports ATB movement approach to VVCE (Kasai to appear). (8), a part of a sentence which is predicated by some predicates such as "doudemoii (no interest)", shows that VVCE elides a part of the V-V compounding verb, "omoi" and the other elements constituting the VP after the other part of the verb, "dasu" is moved to T (Δ = VVCE). The NP, "boku-o (I)", cannot be moved from the VVCE site, as in (8). Kasai (to appear) ascribes it to phonological non-uniformity of members of a chain created by ATB movement of the vP1 and the vP2 from a disjunctive structure made by "ka (or)" in (8) (See Kasai in detail). One may think that the unavailability of extraction of the NP, "boku-o (I)", from the deleted vP comes from string vacuous scrambling of the NP. Then, (8) can be explained by vP ellipsis. However, this paper shows that string vacuous scrambling is available when parallelism requirement is satisfied. The preceding sentence in (8) can scramble the NP, "boku-o (I)", above the vP1 and the PP, "kokode (here)" in a non-string vacuous fashion. The movement allows the NP, boku-o (I), to be extracted from the deleted vP, which confirms ATB movement approach of VVCE.

(8) Taro-ga [$_{vP1}$ boku-o$_2$ kokode t$_2$ omoi-t$_1$]-dasu$_1$-ka(*boku-o)[$_{vP2}$ Δ] -das-anai-ka-wa…
T.-Nom I-Acc here think-extract-or I-Acc -extract-Neg-or-Top
'(It does not matter that) Taro remembers me or not.'

Moreover, ban of string vacuous scrambling and syntactic parallelism of ellipsis validates A movement to Spec TP in Japanese (Kishimoto 2001, 2013, a.o.). (9b) shows that the NP, "aoi nanika-ga (something blue)", can be extracted from "soo sa (do so)". Note that (9a) must move the NP, "akai nanika-ga (something red)" due to parallelism of ellipsis. Since string vacuous scrambling is banned, the NP plausibly undergoes A (case driven) movement to Spec TP in (9a).

(9) a. Dono heya-ni-mo akai nanika-ga$_1$ t$_1$ ok-are-ta no wa sitteita ga,
every room-in-also red something-Nom put-Psss-Past Nml Top knew but
'In every room, I knew that something red was put.'

b. Aoi nanika-ga soo sa-re-ta no wa siranakatta.
blue something-Nom so do-Pass-Past Nml Top didn't know
'I didn't know that something blue was done, too.'

Selected references: Kasai (to appear). ATB movement approach to V-V compound ellipsis. ConSOLE XXXIII. Sakamoto, Y. (2020). Elliptic *Do So* in Japanese. CLS55.

Focus Systems and Exhaustivity: Insights from Basque

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Argument-focus constructions, such as English *It*-Clefts, often imply exhaustivity, marking the focus as uniquely satisfying the proposition. While exhaustivity strength varies cross- and intra-linguistically, much of this variation is linked to preceding contexts. However, differences in interpretation suggest that additional structural factors, beyond context, influence exhaustivity strength. This study investigates formal markedness as one such factor.

In English, *it*-clefts are strongly associated with *wh*-questions and typically result in exhaustive interpretations. While non-exhaustive readings are possible, they require special contexts, such as corrections or contrasts. Destruel and De Veaugh-Geiss (2018) found that violating exhaustivity in English clefts increases processing costs, unlike in French *C'est*-Clefts, which are more flexible and less tightly linked to preceding *wh*-questions. This flexibility allows *c'est*-clefts to accommodate non-exhaustive readings with relative ease, illustrating how context types associated with focus constructions influence interpretive defaults.

This study examines Navarro-Lapurdian Basque to explore how focus constructions influence exhaustivity. The language has two structurally distinct argument-focus constructions—Synthetic and Analytic Mention-All—and both serve to answer *wh*-questions requiring mention-all responses. The synthetic construction uses a single finite verb, encoding event type, tense, aspect, and modality synthetically, while the analytic construction splits these elements between a participle and an auxiliary. Consider the examples in (1). In both cases, the focus is on *Miren*, positioned immediately before the finite element *du*. These constructions are used to answer questions like *Who has the key?* or *Who saw Jon most recently?*

(1) a. *Gakua Mirenek du.* 'It's Miren who has the key.'

b. *Jon Mirenek du ikusi.* 'It's Miren who saw Jon.'

Each construction has a mention-some counterpart, which does not imply exhaustivity and is used to answer questions like *Who has an extra pen?*, indicating availability rather than exclusivity. Table 1 summarizes the structural and interpretive distinctions.

Table 1. Formal Markedness and Exhaustivity Strength in Navarro-Lapurdian Basque

	Mention-Some	Mention-All
Synthetic	Mirenek *ba*=du. '*Miren* among others has it.'	Mirenek du. 'It's Miren (and not anyone else) who has it.'
Analytic	Mirenek ikusi du. '*Miren* (among others) saw him.'	Mirenek du ikusi. 'It's Miren and not anyone else who saw him.'

To measure exhaustivity strength, this study examines cancellation resistance—how well a construction allows other possible entities to satisfy the proposition without anomaly. Data includes elicited speaker judgments on using those constructions with mention-some questions, negative responses, and *adibidez* 'for example', as well as scalar implicatures they generate.

The key distinction lies in the fragility of scalar implicature. When a numeral is focused, both mention-all constructions imply that no number exceeds the stated quantity. For example, in (2), *hogoi ikaslek* 'twenty students' suggests that twenty is the upper limit:

(2) a. *Liburua hogoi ikaslek dute.* 'Twenty students have the book (and no more).'

b. *Liburua hogoi ikaslek erosi dute.* 'Twenty students bought the book (and no more).'

Crucially, this implicature is cancellable only in synthetic mention-all—at least when the focus is not on a numeral. For example, in a scenario with four babies, three shaking rattles (one blond, one brown-haired, one black-haired), and a fourth black-haired baby holding a balloon, synthetic mention-all was accepted, while analytic mention-all was not, as shown in (3). This finding was confirmed using visual stimuli, following the Destruel & De Veaugh-Geiss (2018) method.

(3) a. *Txintxirrina ile horiko haurrak du, eta ile marroinekoak ere bai.*
'It's the blond baby who has a rattle, and the one with brown hair does, too.'

b. **Txintxirrina ile horiko haurrak du inarrosten, eta ile marroinekoak ere bai.*
'It's the blond baby who is shaking a rattle, and the one with brown hair is, too.'

These results suggest that synthetic mention-all tolerates additional referents, whereas analytic mention-all resists such additions, indicating stronger exhaustivity. This interpretive difference challenges question-association theory in the literature, which predicts that focus constructions aligned with mention-all *wh*-questions should impose uniform exhaustivity. Instead, the data suggest that formal markedness plays a critical role: synthetic mention-all is unmarked relative to its mention-some counterpart since the latter includes the proclitic *ba=*. This unmarked status corresponds to weaker exhaustivity, whereas analytic mention-all, being no less marked than its mention-some equivalent, correlates with stronger exhaustivity.

These findings align with cross-linguistic trends, such as the strong exhaustivity of English *it*-clefts relative to plain focal stress constructions, which are more tolerant. By incorporating formal markedness into the analysis, this study offers a fresh perspective on how focus constructions shape interpretive defaults across languages.

Reference

Destruel, Emilie and Joseph DeVeaugh-Geiss (2018) On the interpretation and processing of exhaustivity: Evidence of variation in English and French clefts, *Journal of Pragmatics* 138: 1–16.

Accidental Locative Relationships as Expressed by the HAVE-verbs in Czech and English

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1. Purpose

The HAVE construction with inanimate subjects in Czech and English (hereafter referred to simply as HAVE) can express "stable" locative relationships, as seen in (1) between a park and a fountain, where the spatial relationship does not change freely. In contrast, it generally cannot express "accidental" locative relationships, as seen in (2) between a park and a boy, where the spatial relationship can change freely (cf. Lakoff 1987: 556ff.). However, in both languages, HAVE can occasionally express accidental locative relationships, influenced by factors like contrastive contexts and co-occurring locative phrases, as in (3). This presentation explains the shared mechanisms that enable these expressions in Czech and English.

(1) a. *Tenhle park má fontánu*. (this park.NOM have.PRS fountain.ACC)
    b. *This park has a fountain*.

(2) a. **Tenhle park má kluka*. (this park.NOM have.PRS boy.ACC)
    b. **This park has a boy*.

(3) a. *Ne, tento stůl má na sobě knihu*. (no this table.NOM have.PRS on itself book.ACC)
    b. *No, this table has a book on it*.

2. HAVE Describes Individuals

The distinction between the two types of locative relationships correlates with whether the focus is on describing an INDIVIDUAL or its STAGE (Carlson 1977). Attributing to an individual the property of being in a stable locative relationship with an entity constitutes a description of that individual. For example, attributing to a park the property of being in a stable locative relationship with a fountain characterizes the park as an individual, distinguishing it from other parks. In contrast, attributing to an individual the property of being in an accidental locative relationship with en entity constitutes a description of a stage (i.e. the state of an individual at a particular point in time) of that individual. For instance, attributing to a park the property of being in an accidental locative relationship with a boy describes a specific stage of the park, distinguishing it from other stages of the same park.

HAVE functions as a predicate that describes individuals, not stages. This is motivated by the fact that the primary function of HAVE is to express whole-part relationships. Generally, what parts a whole possesses does not fluctuate according to the stages of the whole. Thus, attributing the property of possessing a particular part to an individual primarily describes how that individual is distinct from other individuals, rather than describing its stages. Therefore, it is natural that HAVE, whose primary function is to express whole-part relationships, is used to describe individuals.

3. Why Does Contrast Increase Acceptability?

The sentences in (3) are acceptable in contrastive contexts, such as when comparing tables as options for placing items. Why does contrast allow HAVE to express accidental locative relationships? HAVE distinguishes an individual from other individuals within a superordinate category. In the sentences in (1), it could be the general category of parks (i.e. all other parks). However, depending on the context, the superordinate category in the speaker's mind can shift. In a scenario where one is deciding which park within a city to visit, for instance, the park in question would be compared to other parks within the same city. This is evident in *The park has the biggest fountain*, which, when uttered in such a context, typically conveys that the park's fountain is larger than those of any other parks in the city—not larger than those of all parks in existence. In a contrastive situation like (3), the speaker is not attempting to distinguish the table in question from all tables in general but rather from

other tables within an AD HOC CATEGORY (Barsalou 1983) created by the specific context, such as "tables being considered as options for placing items."

HAVE attributes to the subject a property sufficient to distinguish it from other individuals within the superordinate category assumed in the context. It is acceptable only when such a property can be attributed. The reason HAVE typically cannot express accidental locative relationships is that having an accidental spatial relationship with something at a specific moment hardly constitutes a property that distinguishes the subject from all other individuals. However, in contrastive contexts, even an accidental locative relationship can qualify as a distinguishing property when it serves to differentiate the subject from specific individuals within the group being compared in that particular situation.

4. Why Does Co-occurrence of Locative Phrases Increase Acceptability?

To express accidental locative relationships, HAVE typically requires not only a contrastive context but also the co-occurrence of a locative phrase (e.g., *na sobě* in Czech and *on it* in English, as in (3)). Why is this necessary? In HAVE, which primarily expresses whole-part relationships, the location of the part tends not to be specified. This is because, in the relationship between a clearly singular entity (Spelke 1990) and its part, the position of the part relative to the whole is usually fixed and predictable. That is, a typical whole-part relationship is a stable locative relationship. This makes the location of the part self-evident (e.g., the position of a trunk in a tree is obvious), rendering the locative information provided by a locative phrase unnecessary and redundant. Similarly, the relationship between a park and a fountain in example (1), though not necessarily a whole-part relationship involving a singular entity and its part, is a stable locative relationship similar to typical whole-part relationships. That is why it is not necessary to specify the location with a locative phrase in such cases. In contrast, accidental locative relationships involve two distinct entities whose spatial relationship is inherently variable. Because their positions are not fixed, specifying the location becomes essential for the utterance to make sense as a statement of locative relationship. This necessity naturally leads to the inclusion of locative phrases in such cases.

Thus, the correlation shown in (4)(5) can be observed. A typical whole-part relationship is a stable locative relationship, and when predicated of a subject, it describes what kind of individual the subject is. So it is expressed with HAVE without a locative phrase. On the other hand, a typical accidental locative relationship, such as the one between a park and a boy, when predicated of a subject, describes what kind of stage the subject is in. So it is not expressed with HAVE and requires a locative phrase (cf. *There is a boy in this park*). In cases like (3), the contrastive context leads to the description of an individual, which allows the use of HAVE. However, because they involve an accidental locative relationship, a locative phrase is required. In this sense, examples like (3) exhibit characteristics of both typical whole-part relationships and accidental locative relationships.

(4)

Descriptiontype	Individual	Stage
HAVE	Possible	Not possible

(5)

Locative relationship type	Stable	Accidental
Locative phrase	Not needed	Needed

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Some Comparative Notes on Argument Ellipsis

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This study explores the current theories on argument ellipsis by focusing on the peculiar properties in Chinese and discusses the possible implications on linguistic variation. In many languages internal arguments of verbs can go missing if their content can be recovered from context. Though the missing arguments are often considered to be phonologically empty pronouns (*pro*), there is a growing body of literature showing that these empty positions cannot be uniformly *pro*s but rather involve argument ellipsis (AE). In particular, AE sites support a wide range of readings that cannot be subsumed under a simple *pro*-drop analysis, such as sloppy interpretation.[1] As illustrated in (1), unlike pronominal objects, AE sites support strict and sloppy readings.

(1) a. Zhangsan xihuan ziji-de mama, Lisi ye xihuan.
Zhangsan like self's mom Lisi also like
lit. 'Zhangsan likes his own mother, and Lisi also likes Δ.' (strict/sloppy)

b. Zhangsan xihuan ziji-de mama, Lisi ye xihuan ta.
Zhangsan like self's mom Lisi also like her
'Zhangsan likes his own mother, and Lisi also likes her.' (strict only)

A number of languages have been argued to allow AE (e.g. Burmese (Lee 2016), Chinese (Cheng 2013), Colloquial Singapore English (Sato 2014), Hebrew (Landau 2018), Japanese (Oku 1998), Javanese (Sato 2015), Korean (Kim 1999), Mongolian (Takahashi 2007), Persian (Sato and Karimi 2016), and Turkish (Şener and Takahashi 2010), though it has been hotly debated as to how AE should be implemented theoretically. There are at least three major approaches to AE. First is the LF-copy approach, where an ellipsis site is empty both in overt syntax and PF, but it has full-fledged internal structure in LF via copying of its antecedent (Oku 1998, Shinohara 2006, Saito 2007, Li 2008, Takita 2010, Sato 2014, Sakamoto 2017). Second is the PF-deletion approach, under which an ellipsis site involves full-fledged internal structure both in overt and covert syntax, but the identical string is deleted at PF so that the relevant site is phonologically null (Cheng 2013, Fujiwara 2022). In this regard, Fujiwara (2022) particularly argues that an element affected by AE undergoes movement to the matrix SpecTopP in overt syntax before it is PF-deleted. The third approach, recently advocated by Landau (2023), offers a new derivational path to ellipsis, which invokes neither PF-deletion nor LF-copy. Precisely, he argues that the

[1] This talk focuses on null object constructions that receive AE analysis, but this does not argue against the existence of V-stranding VP-ellipsis (VSVPE). That is, here we only consider cases that cannot be analyzed as VSVPE; they don't rule out the possibility that VSVPE is available in languages.

elided category must be of type <e> and this position is initially generated as a *pro*, which later gets replaced by a constituent recoverable from the antecedent immediately after TRANSFER. In this talk, I will offer data from Chinese and show that this language seems to support the movement-deletion view, endorsing Fujiwara (2022).

I suggest that the availability of eliding an argument in Chinese does not depend on whether it is an argument of type <e> (contra Landau 2023), but rather on whether it can undergo overt movement to the left periphery so as to ensure its recoverability from the discourse-given topic. This correlation can be observed with double object constructions, small clauses and variations among argumental measure phrases. For instance, as shown in (2), Chinese measure phrases of price are unelidable, but those of length can be elided, which neatly corresponds to their (im-)movability. Note Landau (2023) would predict (2) and (3) to be equally ill-formed since he considers measure phrases denote predicates, not of type <e>, and hence should resist AE altogether.

(2) na-jian hongse yangzhuang hua-le si-qian yuan, danshi
that-CL red dress cost 4000 dollar but
'That red dress cost $4,000, but…'

a. *zhe-dinglanse maozi mei hua Δ.
this-CL blue hat NEG cost
lit. 'this blue hat didn't cost.'

b. *si-qian yuan, Lisi juede zhe-ding lanse maozi mei hua.
4000 dollar Lisi think this-CL blue hat NEG cost
lit. '$4,000, Lisi thinks that this blue hat didn't cost.'

(3) shizhongxin henduo dalou dou da yibai mi, danshi
downtown many building all reach 100 meter but
'Many buildings in the downtown reach 100 meters, but…'

a. zhe-dong dalou yuanyuan bu da Δ.
this-CL building far NEG reach
'this building doesn't reach 100 meters.'

b. yibai mi, Lisi juede zhe-dong dalou yuanyuan bu da.
100 meter Lisi think this-CL building far NEG reach
lit. '100 meters, Lisi thinks that this building doesn't reach.'

It has been a major concern as to what characterizes the languages that allow AE and the literature proposed several possibilities, including the possibility of scrambling (Oku 1998), the absence of obligatory φ-agreement (Saito 2007), the DP-NP language parameter (Cheng 2013), the non-fusional case morphology parameter (Otaki 2014) among others. Though admittedly this remains a difficult challenge, this talk will also discuss the implications of the current proposal on the crosslinguistic difference.

The Loss of Past Participle Movement in the History of English

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This paper investigates the historical development of English past participle movement, focusing particularly on its distribution with floating quantifiers (FQs) and adverbs in passive and perfect constructions. This study reveals a systematic asymmetry between passive and perfect participles in Old English (OE), and traces how this asymmetry was gradually lost, leading to the rigid word order of Present-day English (PE).

Based on extensive data from historical corpora (YCOE, PPCME2, and PPCEME), I demonstrate that OE passive participles could appear to the left of both FQs and adverbs, a pattern that is impossible in PE. This phenomenon has long been considered a puzzle in English syntax, as exemplified in (1) (van Gelderen (2022: 120)).

(1) a. ac hys wundra næron **awritene** *ealle*
but his misdeeds NEG.were written all
'but all his misdeeds were not written'. (coaelhom, ÆHom 6.318/Bartnik (2011: 143))

b. * His misdeeds were not written all. (van Gelderen (2022: 120))

This pattern parallels the behavior of lexical verbs in Romance languages. Following Pollock (1989), I assume that FQs and adverbs occupy fixed positions in the clause structure. As exemplified in (2), French allows verbs to appear to the left of these elements, while English requires them to remain in situ:

(2) a. My friends (*all*) **love** (**all*) Mary

b. Mes amis (**tous)* **aiment** (*tous*) Marie.
My friends all love all Mary

c. John (*often*) **kisses** (**often*) Mary.

d. Jean (**souvent*) **embrasse** (*souvent*) Marie.
John often kiss often Mary (Pollock (1989: 367))

This contrast has been analyzed as reflecting a parameter of verb movement: French verbs raise to a higher functional position, while English verbs remain in their base position. My study extends this insight to participle movement, arguing that OE passive participles, like modern French verbs, could raise to a higher position - a possibility that was later lost as part of a broader typological shift in English syntax. The distribution of participle-FQ orders shows a gradual development throughout the OE period: though sporadic in Early OE (with only a few attested examples), their frequency steadily increased to reach 25% of all passive participle constructions in Late OE. Likewise, participle-adverb order increased from 1.4% to 14.4%. In contrast, perfect participles show a strong preference for pre-participial position: FQ-Part order is rare (only 3 instances total), while Part-FQ order is completely absent. Similarly, while Adv-Part order is dominant (67 instances), Part-Adv order appears only once (1.5% of all examples).

The analysis adopts Multiple Agree (Hiraiwa (2005)) and Phase Theory (Chomsky (2001, 2008)) to explain this distribution. I argue that the movement possibility correlates with agreement morphology: passive participles showed rich agreement and could move out of their base position, while perfect participles, with minimal morphology, remained in situ. This correlation is supported by parallel patterns in Italian and Icelandic. In Italian, both passive and perfect participles show agreement and can move:

(3) a. I libri sono stati **letti** *tutti* (Italian passive)
the books.M.PL are been read.M.PL all.M.PL (Cirillo (2009: 32))
b. Gli studenti hanno **letto** *tutti* il libro (Italian perfect)
the students have read all.M.PL the book (Cirillo (2009: 30))

In contrast, Icelandic patterns with OE: only passive participles show agreement and movement possibilities, while perfect participles appear in default form and remain in situ:

(4) a. Bækurnar voru **lesnar** *allar* af nemendunum. (Icelandic passive)
books.the.F.PL were read.F.PL all.F.PL by students
'The books were all read by the students.' (Verified by a native speaker)
b. Þessar ungu stelpur hafa **lært** *allar* málvísindi. (Icelandic perfect)
these.NOM.F.PL young girls have studied all.NOM.F.PL liguistics
'These young girls have all studied liguistics' (Thráinsson (2007: 9))

The gradual loss of this movement possibility can be traced through Middle English (ME). In Early ME (1150-1350), I still find considerable flexibility: 31% participle-FQ and 16% participle-adverb orders. However, by Late ME (1350-1500), participle-FQ order drops to 17% and participle-adverb order disappears completely. Both patterns are entirely lost by Early Modern English. This change can be attributed to two factors under van Gelderen's (2022) Economy Principle: (i) the decline of inflectional endings by the late 14th century, which made participle movement unnecessary, and (ii) the general reduction of verb movement in English. The timing of these changes aligns with the loss of participle movement: the decline begins in Late ME, exactly when English was losing its rich agreement morphology. This analysis provides a unified account of both the synchronic distribution and diachronic development of English participles. It explains why only passive participles showed movement in OE, why this movement was lost, and how similar patterns manifest across Germanic and Romance languages. The study contributes to our understanding of the relationship between morphological richness and syntactic movement, while offering new insights into the nature of parametric variation and language change.

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Learning the A- vs A-Bar-Movement Distinction

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An important and enduring discovery of generative syntax is that phrasal movements are not all alike. Since Chomsky 1981, they have been broadly classified into two types:

(1) a. **A-movement**: feeds case/agreement, creates new antecedents for binding, more local;
b. **A-bar-movement**: does not feed case/agreement/binding, induces crossover, allows pied-piping, licenses parasitic gaps, generally reconstructs, can be long-distance.

Furthermore, decades of work across diverse languages have shown that:

(2) a. The A- vs A-bar-properties in (1a) vs (1b) tend to (but not always) pattern together; and
b. there is substantial cross-linguistic regularity in what sorts of movements pattern as A- or A-bar, for instance with passivation generally being A-movement and relativization/*wh*-/focus/topic-movements being A-bar-movements.

Despite this, there is no consensus as to the nature of the A- vs A-bar distinction. Work in the P&P model through the 80's often implicitly treated these two classes of movements as theoretical primitives, in describing a set of parameters related to specific types of movements. However, with the conceptual shift away from parameter-setting in the past 30 years (in particular, adoption of the Borer-Chomsky Conjecture), the division can not and should not be treated as a theoretical primitive. Chomsky (2004:125) notes: "no principles can be formulated in terms of the A-/A-bar-distinction, a strong and highly controversial conclusion."

In this talk, I pursue the view that the relative cross-linguistic stability of the A- vs A-bar-classification (2b) can be explained by considering *how learners postulate movement rules based on the input* that they are exposed, together with recent work on the geometry of A-bar movements (Safir 2019 a.o.). The A- vs A-bar behaviors (2a) and the corresponding classification of movement types (2b) are not innate, but are artifacts of the learning process.

Proposal: First, I assume that learners presuppose featural Relativized Minimality (Rizzi 1990) as an inviolable heuristic: Movement attracts the closest target that bears a particular *trigger feature* [F]. Second, for simplicity, let us assume that the learner has knowledge of the target language's basic word order, for instance if there is a frequent, rigid word order for information-structurally neutral declarative sentences. I then hypothesize the following learning procedure:

(3) Learning movement rules: Given sufficient exposure to a movement-derived word order, the learner will attempt to postulate a movement rule, which requires determination of its trigger feature (Roeper & de Villier 2011). If the movement always targets the closest possible target bearing feature [X], and [X] is an inherent feature of the moved phrase (e.g. a categorial feature), [X] will be learned as the trigger feature of the movement. However, if there appears to be no shared feature among moved phrases and/or the movement does not always target the closest possible phrase with a particular feature, the learner will postulate a *particle* adjoined to the moved phrases. The particle introduces an optional feature [Y], which is the trigger feature of the movement.

First, consider the case of English passivization. Passivization consistently attracts the closest NP. (Hewett 2024 argues that this is based on *linear* closeness, not structural closeness.) Given this consistent pattern, (3) leads to a movement rule that simply attracts the closest [N].

(4) a. [NP The kids] depend on [NP Krishna] for [NP money]. (Hewett 2024)
b. [NP *Krishna*] is depended on ___ for [NP money] (by the kids).
c. *[NP *Money*] is depended on [NP Krishna] for ___ (by the kids).

In contrast, consider "focus movement" to the immediately preverbal position in Hungarian, also with basic SVO word order. Examples (5a,b) differ only in the position of focus:

(5) a. János *Pétert* mutatta be __ Marinak.
John Peter.ACC introduced Mary.DAT
'John introduced PETER to Mary.'

b. János *Marinak* mutatta be Pétert __.
John Mary.DAT introduced Peter.ACC
'John introduced Peter to MARY.'

Hungarian focus movement clearly does *not* attract the closest target with a particular inherent feature; for example, it cannot target the closest [N], as it can skip an intervening nominal in (5b). (It can also attract non-NPs, not shown here.) Assuming featural Relativized Minimality to be an inviolable heuristic, the learning procedure (3) forces us to postulate a *particle* — a morpheme, but in this case apparently covert — that introduces an optional feature. Let us call this optional feature [FOC]. We then analyze both (5a) and (5b) as moving the closest target bearing [FOC], with a covert particle $\emptyset_{FOC}$ adjoined to *Peter* in (5a) but *Mary* in (5b).

Particles and the A- vs A-bar distinction: As demonstrated above, the learning procedure in (3) hypothesized from first principles, assuming only featural Relativized Minimality, leads to the postulation of (often unpronounced) adjoined *particles* that form targets of A-bar-movements, but not of A-movements. This derives the view that A-bar-movements necessarily target phrases formed by the adjunction of optional particles (Horvath 2007, Cable 2010, Safir 2019, Branan & Erlewine 2023) and consequently also Van Urk's (2015) characterization that A-bar-movements necessarily target "optional" features rather than inherent features. Safir (2019) argues that many A- vs A-bar behavioral differences in (1a,b) can be explained from the presence or absence of this adjoined particle. (At the talk, I also discuss the relation of this view of the A-/A-bar distinction with that of Obata & Epstein 2011 and Takahashi & Hulsey 2009.)

Predictions and case studies: I will also discuss a number of case studies that support different aspects of the learning procedure described in (3), including the following two: First, (3) predicts that not having a shared inherent feature amongst targets of a particular movement will serve to support the postulation of A-bar-movement. Meisazahl (2024) reports that, amongst historical Germanic and Romance varieties with verb-second (with A-bar-movement to the first position), lower variability in the category of the phrase in the prefield leads to the loss of verb-second. Second, as particle postulation is a variety of lexical learning, we predict that the presence of recognizable semantic contribution (such as exhaustive/answer focus in Hungarian, above) supports the postulation of a covert particle, and hence, A-bar-movement behavior. Patrianto & Chen (2023) and Lohninger & Katochoritis (to appear) survey the behavior of "movement to pivot" across a range of Austronesian languages and shows that having semantic/pragmatic restrictions on the target of "movement to pivot" (such as definiteness/specificity or topic status), as well as variability in the category of moved phrases, correlate with an increase in A-bar-properties.

Selected references: Chomsky 2004 "Beyond Explanatory Adequacy" • Hewett 2024 "The precedence component to intervention effects" ms. • Meisazahl 2024 *Learning to lose: The role of input variability in the loss of V2*, Edinburgh PhD • Obata & Epstein 2011 "Feature-splitting internal Merge," *Syntax* • Patrianto & Chen 2023 "Two sides of the same coin: Reappraising Indonesian-type 'pasive' and object voice in Javanese," AFLA 29 • Rizzi 1990 *Relativized Minimality* • Safir 2019 "The A-/Ā-Distinction as an Epiphenomenon," *LI* • Takahashi & Hulsey 2009 "Wholesale late merger," *LI* • Van Urk 2015 *A uniform syntax for phrasal movement*, MIT PhD

Cyclic Prosodification in Japanese

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1. Introduction to Puzzle This paper argues that prosodic prominence relation is calculated phase-by-phase in Japanese and phasehood is determined by a requirement at PF. It has been observed that when certain maximal projections, XP and YP, and their licensers, α and β, are in a sentence, some ordering restrictions appear between XP and YP as in (1).

(1) a. Nesting Dependency
[XP ... YP ... α ... β]

b. *Crossing Dependency
[XP ... YP ... α ... β]

In (1a), two relations between a licensee and a licenser are nesting, indicated by a line. This is called *nesting dependency* in this paper. On the contrary to (1a), (1b) shows a crossing relation between a licensee and a licenser, called *crossing dependency*. Interestingly, the crossing dependency leads to unacceptability. The asymmetry in question has been observed in LF-intervention effect, distinctive scope-taking of *wh*-phrase, and focus in-situ construction. An example of LF-intervention effect and its schema are illustrated below:

(2) a. dare-ga LGB-shika yoma-nai no?
who-NOM LGB-NCI read-NEG Q
'Who read nothing but LGB?'

b. [wh- ... NCI ... NEG ... Q]

(3) a. *Taro-shika nani-o yoma-nai no?
Taro-NCI what-ACC read-NEG Q
'What did nobody but Taro read?

b. *[NCI ... wh- ... NEG ... Q]

Why is the crossing dependency ungrammatical? This is the puzzle that I address in this paper.

2. Proposal Following Ishihara's analysis of focus prosody of *wh*-questions and NCI in Japanese, I argue that the crossing dependency in (1b) is ruled out because a prosodic prominence relation established in an earlier cycle is not preserved in a later cycle.

(4) Naoya-ga nani-o nomiya-de non-da no?
Naoya-NOM what-ACC bar-LOC drink-PAST Q
'What did Naoya drink at the bar?

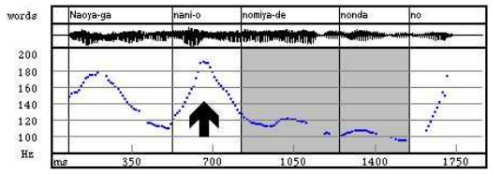


Figure 1: A pitch contour of (4)

As observed in Ishihara (2003, 2007), the F_0 of *wh*-phrases or NCIs is boosted and a pitch of its following elements is strongly reduced until their licenser, Q-morpheme or negation. The prosody of a *wh*-question in (4) is illustrated in Figure 1. Hiraiwa&Ishihara (2012) note that a focused phrase in the focus in-situ construction also shows Focus Prosody. In order to capture this, Ishihara (2003) proposes two phonological operations named *Focus Intonation Prosody rules* (hereafter FIP rules) as in (5).

(5) a. *P-focalization Rule*
If α_{FOC} bears FOC, add ×'s to α_{FOC} until a new line is formed.

b. *Post Focus Reduction Rule*
If α_{FOC} bears FOC and precedes β, and α_{FOC}'s peak (after P-focalization) is at Line n, then delete an × of β on Line n-1.

These FIP rules assume the Metrical Grid representation (Liberman 1975, Liberman&Prince 1975). Ishihara (2003) assumes that (i) these rules apply to a Spell-Out domain if it contains FOC that is a phonological feature that NCIs, wh-phrases, and a focused phrase in the focus in-situ construction have, (ii) FOC will not be visible at the later Spell-Out cycle once these rules apply to it, (iii) these phrases and their licensers are introduced into a derivation with [iFOC] and [uFoc] respectively, and (iv) Agree{[iFOC], [uFOC]} assigns FOC to them once the licensers are introduced into the derivation.

Adopting (5) and his assumptions (i-iii), I propose a new definition of phase:

(6) a. A syntactic phrase, XP, is a phase iff a head X contains a [uFOC] probe.

b. Agree{[iFOC], [uFOC]} triggers Spell-Out of XP that maps XP onto prosody as the smallest prosodic phrase, χ, containing both a goal and its probe.

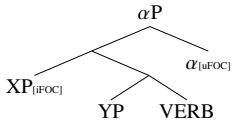
In addition, I formalize the core idea of Ishihara (2003) that prosodic prominence relations must be preserved through a derivation. I define a relative prosodic prominence relation that is established in each Spell-Out as followings, in order to formalize how to verify that the established prosodic prominence relations are preserved through a derivation.

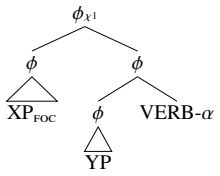
(7) **Relative Prosodic Prominence Relation *RRP***:
   a. RRP_n = {⟨x, y⟩: ∀y≠x∈D_n, where x is an element with the highest prosodic prominence in D_n}
   b. D_n = {z | z is a phonological word in χ_n}

(8) **Formalization of Prominence Preservation**: a union of all RRPs must be asymmetric. Asymmetric: Let *R* be a binary relation over a set S. Then *R* is asymmetric if there is no x, y ∈ S such that both ⟨*x*, *y*⟩ ∈ R and ⟨*y*, *x*⟩ ∈ R.

Let us see how these rule out the crossing dependency.

(9) a. *The first cycle, αP*

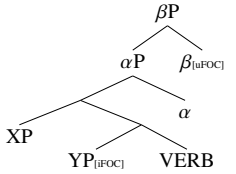


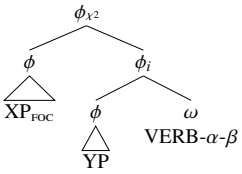


Line 3	×		
Line 2	×	[×]	[×]
Line 1	×	×	×
	XP$_{FOC}$	YP	VERB-*α*

D_1 = {XP, YP, VERB}
RRP_1 = {⟨XP, YP⟩, ⟨XP, VERB⟩}

b. *The second cycle, βP*





Line 4		×	
Line 3	×	×	
Line 2	×	×	
Line 1	×	×	×
	XP	**YP**$_{FOC}$	VERB-*α*-*β*

D_2 = {XP, YP, VERB}
RRP_2 = {⟨YP, XP⟩, ⟨YP, VERB⟩}

c. $RRP_1 \cup RRP_2$= {⟨XP, YP⟩, ⟨YP, XP⟩, ⟨XP, VERB⟩, ⟨YP, VERB⟩}

Spell-Out applies to *α*P and maps it as χ_1. I assume that affixes, *α* and *β*, are prosodified with their host head at Spell-Out. Based on χ_1, (5a) assigns an × on XP to create Line 3 (indicated by **BOLD**) and (5b) deletes ×'s on YP and VERB (indicated by [BRACKET]). In this cycle, we have D_1 = {XP, YP, VERB} and then RRP_1 = {<XP, YP>, <X, VERB>} according to (7). When *β* merges, Spell-Out applies to *β*P. Assuming that χ_n must contain χ_{n-1} due to an economical reason, ϕ_i in (9b) is not χ in the second cycle. As indicated by UNDERLINE, the union of *RRP*s is not asymmetric. Therefore, the crossing dependency is ungrammatical. Note that such a problem does not arise in the nesting dependency. An ordered pair between XP and YP is not established until the second cycle because XP is out of the first Spell-Out domain.

3. Against Focus Alternative Analysis Erlewine&Kotek (2017) propose that Predicate Abstraction over alternatives causes the intervention effect. The proposal in Kotek (2017) is supported by the following generalization of the effect in Japanese that they propose:

(10) Generalization: Intervention correlates with scope-taking:
Scope-rigid quantifiers above an in-situ *wh*- cause intervention. Quantifiers that allow scope ambiguities - i.e., those that allow reconstruction below *wh* - do not.

In order to capture this, Erlewine&Kotek (2017) argue that reconstruction avoids the intervention effect. If this is on the right track, non-scope rigid quantifiers like *subete* 'all' should be interpreted below negation when the intervention effect disappears; contrary to (11).

(11) subete-no gakusei-ga nani-o tabe-nakat-ta no?
all-GEN student-NOM what-ACC eat-NEG-PAST Q
   a. which x is it every student that did not eat x?' ∀>NEG
   b. * which x is it not the case that every student ate x.' *NEG>∀

(12) LF of (a): [$_{CP}$ C ... $DP_{\forall}$ λ**x** ... *wh*- ... [$_{NEGP}$[$_{vP}$ ... x ... V]NEG]]

It is an ∀>NEG reading, not an NEG>∀ reading, that is available in the intervention configuration in (12). Their analysis, therefore, cannot be maintained. Importantly note that the proposed analysis rules in (11) because the quantifiers do not show focus prosody.

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Acquisition and Syntactic Analysis of Ambiguous Comparatives in English and Japanese

Ryosuke Hattori (Kobe Gakuin University)

English mainly has two types of comparative constructions, i.e. phrasal comparatives, where *than* takes a noun phrase as its complement, as in (1), and clausal comparatives, where *than* selects a clause complement, as in (2). There are, however, some apparent phrasal comparatives that can actually have underlying clausal structures based on their interpretations: adverbial comparatives (ADVs; where degrees of adverbs are compared instead of adjectives) as shown in (3a) and attributive comparatives (ATTs; where the adjective appears in front of the noun as an attributive modifier) as shown in (4a). It is assumed that the clausal reading is derived from the covert clausal structures (Lechner 2004), as in (3b, 4b).

Spontaneous production studies like Hohous et al. (2014) show that children acquire ATTs (First of Repeated Use: 4;04) before ADVs (FRU: 5;06). Furthermore, using the Intermodal Preferential Looking task (Hirsh-Pasek and Golinkoff 1991), Hattori et al. (2023) found that children performed better in ATTs than in ADVs. Importantly, they claim that children's delay in acquiring ADVs is caused by the ambiguity found in ADVs, as they can have alternative phrasal readings as in (3c) while this is not available in ATTs as shown in (4c).

Interestingly, not only ADVs but also ATTs show such ambiguity in Japanese, as shown in (5). This means both ADV and ATT in Japanese can optionally have the underlying clausal structures in the complement of *yori* 'than'. If the ambiguity causes the delay in acquisition, then the acquisition of both ADV and ATT in Japanese would be delayed, and thus ATTs would not be necessarily acquired before ADVs in Japanese, contrary to the case in English.

Thus, in this study, I searched through the spontaneous production Japanese corpora from the CHILDES (Child Language Data Exchange System; MacWhinney 2000) database, to confirm this hypothesis. The analyzed corpora are listed in Table 1. As a result, I found 6 utterance samples of ADV, an example of which is shown in (6). The names and the ages of the children at the time of the other utterances are follows: Sumihare 4;11, 5;05, Nanami 4;08, Ayumi 5;01, 5;04. The result shows that Japanese children did not utter ATTs by the end of the recording period of the corpora. Therefore, ATTs are not acquired before ADVs, as predicted. The result thus suggests that the ambiguity of the sentence is a crucial factor in delaying children's acquisition. In the adult input in the Japanese corpora, I found that ADVs are more frequent than ATTs, thus, there is a possibility that the observed children's utterances of ADVs is simply an effect of the differential frequency of these constructions in the adult input.

Furthermore, this study discusses the syntactic nature of the difference between English and Japanese in their non-/ambiguity found in the ATTs. Following von Stechow (1984), Heim (2000), I assume that *than* complement and the Op (null operator, which carries the compared degree) in degree comparatives are base generated in the position of DegP (degree phrase). In the case of English ATTs, the whole DegP sits in the attributive position of the modified noun, and thus *than* PP goes through an extraposition (Beck et al. 2009), only when it is too heavy (i.e. being a clause) in the canonical position, achieving the correct surface word order. The derivation crushes when *than* PP with phrasal complement stays in the attributive position. This is why a clausal reading is forced in English, while there is no such extraposition in Japanese.

Examples and Tables:

(1) Mary is taller than him. (2) This table is longer than that door is wide.

(3) a. The lion is jumping higher than the bear. (ADV)

b. Clausal reading: The lion is jumping higher than [the bear ~~is jumping *d* high~~]. (=how high the bear jumps) *d* = degree

c. Phrasal reading: The lion is jumping higher than [the bear]. (=the height of the bear)

(4) a. The bird is building a taller tower than the ant. (ATT)

b. Clausal reading: The bird is building a taller tower than [the ant ~~is building *d* tall tower~~]. (=the ant's tower)

c. Unavailable Phrasal reading: the bird is building a taller tower than [the ant]. (=the height of ant)

(5) a. Lion-san -wa [kuma-san] yori taka-ku jampu-sita. (Japanese-ADV)

Lion-Mr. -Top bear-Mr. than high-Adv jump-Past

Clausal reading: "Mr. Lion jumped higher than how high Mr. bear jumped."

Phrasal reading: "Mr. Lion jumped higher than the height of Mr. bear."

b. Tori-san -wa [ari-san] yori takai tou -o tate-ta. (Japanese-ATT)

bird-Mr. -Top ant-Mr. than high tower -Acc build-Past

Clausal reading: "Mr. bird built a taller tower than the ant's tower."

Phrasal reading: "Mr. bird built a taller tower than the height of the ant." Available

Table 1: List of the analyzed corpora

Child	*Collected by*	*Age span*	*# of child utterances*
Aki	Miyata (1995)	1;5.7 - 3;00	74,725
Nanami	Miyata, Nisisawa (2009)	1;1.29 - 5;0.17	57,568
Tomito	Miyata, Nisisawa (2010)	2;11.27 - 5;1.23	29,335
Asato	Miyata, Nisisawa (2009)	3;0.01 - 5;00.27	25,347
Sumihare	Noji (1973-77)	0;1.18 – 6;11.12	40,000
Taro	Hamasaki (2002)	2;2.3 - 3;4.22	15,144
Ryo	Miyata (1995)	1;4.03 - 3;00.30	38,473
Ayumi	Ogawa (2016)	0;09 – 6;02	22,671

(years;months:days)

(6) Boku-ra [otochan] yori hayo-o okiru -yo. (Sumihare, 4;08)

I -Plural father than early-Adv wake-up -Cop

"We get up earlier than daddy ~~gets up *d* early~~."

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Do Linguaculture and Age Affect Attitudes towards Use of and Accommodation with Textisms, Emoji, and Emoticons in English Computer-Mediated Communication?

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Theoretical framework

Written computer-mediated communication (CMC) is characterized by several orthographic and visual elements. Firstly, textisms. These include non-standard abbreviations (e.g., 'omg', 'lol') and phonetic respellings (e.g., 'cuz', 'tho'). Secondly, emoji. These ideograms can compensate for a lack of non-verbal cues such as hand gestures (🙏🤌👌) and facial expressions (😢😠😄) in writing, and can add emotion (❤️). Thirdly, emoticons. These consist of typographic characters, often represent faces (e.g., :-) XD ;) =P ^^ :O), and – similar to emoji – can add sentiment to text. Facial emoji and emoticons can serve as politeness markers in CMC, such as adding a smiley face (😊) to soften a message expressing disagreement (Wang, 2021). All these non-standard orthographic and visual elements generally increase the playfulness or informality of writing.

A number of factors may affect attitudes towards textisms, emoji, and emoticons. The first factor of interest is age. Younger people are 'digital natives', who have grown up with CMC, are more used to non-standard linguistic style elements, and may thus have more positive attitudes towards textisms and emoji as compared to 'digital immigrants', who have learnt to use CMC at a later age (Prensky, 2001; Prada et al., 2018). The second factor is linguaculture. Cross-cultural variation in contextuality, where high-context Asian cultures such as Japan depend more on non-verbal communication cues than low-context cultures such as the US and Western Europe (Hall, 1976; Kersten et al., 2004), may result in more positive attitudes among Japanese people towards the use of (especially gestural and facial) emoji and emoticons. Cross-cultural variation in politeness and face work in communication (Brown & Levinson, 1978; Ting-Toomey, 2005), which is more prominent in the Japanese language and culture than in English (Haugh & Obana, 2011), may cause more positive attitudes among Japanese people towards the use of (especially face-softening) emoji and emoticons as compared to people from English-speaking countries (Pflug, 2011), but also more negative attitudes towards the use of informal textisms when used in professional CMC contexts.

People often adapt their language style to match their conversation partner, which is called accommodation (Giles, 2016). Previous research has found much evidence of accommodation with non-standard linguistic elements in written CMC (Adams et al., 2018, 2023; Hilte et al., 2021, 2022, 2024; Marko, 2022). Moreover, Verheijen (2024) found experimental evidence of accommodation by native English speakers and East-Asian EFL speakers with textisms, emoji, and emoticons in English CMC. Although no differences in accommodation based on linguaculture or age were found, these factors did affect the use of linguistic style elements: older NSE participants used more emoticons and (particularly East-Asian) younger participants used more textisms. What *does* affect accommodation is hierarchy: German speakers accommodate their emoji use towards interlocutors in a higher hierarchy position (Kroll et al., 2018). In Japanese politeness, differences in hierarchical and social status are key – but how is this reflected in CMC?

Current study

This presentation will report on a quantitative survey study into younger and older English and Japanese speakers' attitudes towards linguistic style elements that are typical of written CMC. Participants are asked to rate their attitudes towards textisms, emoji, and emoticons in different communicative contexts (personal vs. professional communication) and with interlocutors in different hierarchy positions (peer vs. higher). To determine if linguaculture and age group affect such attitudes, participants are native speakers of English and Japanese

belonging to different generations. They are asked to assess to what extent they consider the use of textisms, emoji, and emoticons to be appropriate in CMC with their friends (personal CMC, hierarchical peers), parents (personal CMC, higher position in hierarchy), colleagues (professional CMC, hierarchical peers), and supervisors (professional CMC, higher position in hierarchy). Based on prior research by Verheijen (2024), it is hypothesized that younger participants will have more positive attitudes towards the use of textisms in all communicative contexts, while older NSE participants will have more positive attitudes towards the use of emoticons. Furthermore, based on linguacultural differences in contextuality and politeness, it is hypothesized that Japanese participants will have more positive attitudes towards emoji and emoticons, but more negative attitudes towards textism usage in professional CMC and with interlocutors a higher hierarchical position.

A second focus of the current study is to explore to what extent accommodation affects attitudes towards linguistic style elements typical of CMC, again comparing different communicative contexts and interlocutors in different hierarchy positions, as well as including participants of different linguacultures and age groups. They are asked to what extent they consider the use of textisms, emoji, and emoticons appropriate in CMC with their friends, parents, colleagues, and supervisors *if these interlocutors use textisms/emoji/ emoticons themselves in communicating with you*? Data are collected using the online survey and recruitment platforms Qualtrics and Prolific. Results of the study will be statistically analysed with IBM SPSS Statistics and presented, and theoretical implications will be discussed.

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