

Distinguishing *obligatory* and *non-obligatory* grammatical categories with regard to ‘thinking for speaking’

Saartje Ghillebaert, Klaas Willems (Gent University, Gent, Belgium)

Background: According to Slobin (1996; 2003; 2008), the presence of a grammatically encoded category directs the focus of speakers in the ‘thinking for speaking’ process. Slobin adduces evidence for this claim based on experiments with children in which he focuses on the expression of progressive aspect in various languages, e.g. the present and past continuous in English (*is/was running*) as compared to other languages which lack such a category. However, Slobin does not distinguish between *obligatory* and *non-obligatory* categories: while both are encoded form-meaning pairings in a language’s grammar (cf. Levinson 2000, Belligh & Willems 2021), only the former *must* be used in speech in specific contexts.

Dutch has a dedicated construction that encodes the progressive aspect, viz. the prepositional periphrastic construction *aan het* + infinitive (ANS, 2012; Van Pottelberge, 2004). However, unlike the present and past continuous in English, the ‘*aan het* construction’ in Dutch is non-obligatory. Speakers can choose between this construction (1) or a semantically underspecified verbal form that does not encode the progressive aspect, e.g. (2):

- (1) *De kinderen zijn aan het spelen.*
the children are at the play-INF
‘The children are playing.’
- (2) *De kinderen spelen.*
the children play-PRES.3pl
‘The children play/are playing.’

It is important to note that the Dutch ‘*aan het* construction’ is less grammaticalized than the English progressive. It “has not reached the level of abstraction found for the English progressive”, according to Behrens et al. (2013: 128). However, I focus on the use of the ‘*aan het* construction’ when referring to an ongoing activity and this is the most appropriate means of expression according to Flecken (2011) and Behrens et al. (2013).

Objectives and research questions: This paper explores whether the influence of a grammatically encoded category with regard to ‘thinking for speaking’ depends on being obligatory or non-obligatory. The research question is twofold. On the one hand, the study aims to determine whether six-year-old Dutch-speaking children spontaneously express progressive aspect despite the fact that progressive aspect is a non-obligatory grammatical category in Dutch. On the other hand, the study aims to determine whether there is evidence that speakers use a non-obligatory construction that grammatically encodes progressive aspect in Dutch in a way similar to the use of an obligatory category that grammatically encodes progressive aspect such as the present and past continuous in English.

Methodology: An elicitation task was conducted with 34 six-year-old Flemish participants. The children were asked to describe what activities they see on two pairs of drawings that were each presented to them consecutively under two different conditions: first a spontaneous condition and subsequently an elicited condition where the children were specifically prompted to use the ‘*aan het* construction’ by drawing their attention to ongoing activities represented in the drawings. The elicitation was carried out by pointing out that the first activity seen in the drawings is ongoing; this was done without using the construction in the prompt. If the child did not use the ‘*aan het* construction’ after elicitation in either condition, then the child’s knowledge of the construction and its ability of using it in a control condition were assessed. In the control condition the ‘*aan het* construction’ was used in the researcher’s question (priming).

Results: We observe that most children initially **do not** express the progressive aspect by means of a dedicated construction when asked to describe the ongoing activities represented in the

drawings. With regard to the first pair of drawings, 27% of the children expressed the progressive aspect spontaneously by means of a dedicated construction.¹ This number increased to 32% with regard to the second pair of drawings. This finding is at variance with what the ‘thinking for speaking’ claim predicts, given that the ‘*aan het* construction’ encodes the progressive aspect as a form-meaning pairing “enshrined” (Slobin, 1996) in the grammar of Dutch. However, when appropriately prompted, the majority of the participants does use the ‘*aan het* construction’. After elicitation with regard to the first pair of drawings, 69% of the children use the ‘*aan het* construction’. Similarly, with regard to the second pair of drawings, 61% of the children use the ‘*aan het* construction’. This shows that ‘thinking for speaking’ is facilitated when children are prompted to attend to a grammatical category that is readily available in the grammar, even though Dutch does not require speakers to express the progressive aspect by means of a dedicated construction. Optional encoded categories can thus also be shown to have a bearing on ‘thinking for speaking’ **under specific conditions**. These findings call for an adjustment of Slobin’s (1996; 2003; 2008) account: being a grammatically encoded category is a necessary but no sufficient condition for ‘thinking for speaking’, as the encoded category must also be obligatory, yet non-obligatory encoded categories may make the difference in ‘thinking for speaking’ under more specific conditions.

In conclusion, encoded grammatical categories that are non-obligatory direct the speakers attention to certain aspects of an event to a considerably lesser degree compared to obligatory encoded categories.

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¹ One child used the posture verb construction ‘*zitten + te + infinitive*’. Like the ‘*aan het* construction’, the posture verb construction is a dedicated but optional construction to refer to an ongoing activity in Dutch.

Why Does Contrast Allow Relational Adjectives to Be Used Predicatively?

A Qualia Structure-Based Account

Takashi Ishida^{1,2} and Ryohei Naya³

¹*Doctoral Programme in Literature and Linguistics, University of Tsukuba*

²*JSPS Research Fellow, ³University of Tsukuba*

1. Introduction: Predicability of Relational Adjectives and Contrast

Relational Adjectives (RAs) in English are known as attributive-only modifiers, whose function is to *classify* their modifying nouns (Shimamura (2014)). However, previous studies have pointed out that RAs can be used predicatively in certain contrastive contexts (e.g. Levi (1978), Nagano (2016), Ishida (2020)). In (1a), for example, *mechanical* in predicate position is not allowed when it stands alone, but when it is accompanied by *not chemical*, the expression is acceptable. Here, the *not*-phrase evokes an explicit contrast between *mechanical* and *chemical* engineers. This contrast-evoking role is fulfilled by the adverb *primarily* in (1b) and by the prefixes *mono-* and *anti-* in (2a, b).

- (1) a. Our firm's engineers are {?mechanical / mechanical, not chemical}. (cf. *mechanical engineers*)
b. The therapy he does is {?musical / primarily musical}. (cf. *musical therapy*)
(2) a. Those drawings are {*chromatic / monochromatic}. (cf. *(mono-)chromatic drawings*)
b. That fiction is {?colonial / anti-colonial}. (cf. *(anti-)colonial fiction*)
((1a, b), (2a): Levi (1978: 24, 260); (2b): Ishida (2020: 39))

The studies mentioned above argue that RAs in predicate position are still prenominal modifiers and their modifying nouns are merely deleted (e.g. *those drawings are monochromatic ~~drawings~~*). This deletion is possible only when the deleted nouns are recoverable, and it is a contrast that ensures recoverability. However, it remains unclear why contrast allows the deletion of modified nouns (i.e. head nouns), which strands the RAs in the predicate position. This study pays particular attention to the classificatory function of RAs and aims to answer this question by arguing that contrast contributes to identifying the role of the qualia structures of the head nouns which should be specified by the stranded RAs, giving crucial hints to recover the deleted head nouns (cf. Pustejovsky (1995), Johnston and Busa (1999)).

2. Qualia Modification

RAs have nominal properties, and RA-N expressions are fully synonymous with N-N expressions (Levi (1978)). For example, both *industrial output* (RA-N) and *industry output* (N-N) denote 'output of an industry'. Given this, RAs and the first nouns in N-N expressions can be regarded as sharing the same modifying function. In their study of the semantic relationship between the elements of N-N compounds, Johnston and Busa (1999) argue that the modifying noun specifies the role of the qualia structures of the head noun, such as TELIC, AGENTIVE, or CONSTITUTIVE roles. In a *glass door* 'a door made of glass', for example, *glass* denotes a material and functions as specifying the material of which the door is composed; namely, *glass* specifies the elements of the CONSTITUTIVE role of *door*. We can also find such qualia modifications in RA-N expressions. Thus:

- (3) a. CONSTITUTIVE: *monochromatic drawing* ‘the type of drawing that consists of one colour’
 b. TELIC: *insecticidal compound* ‘the type of compound that is used to kill insects’
 c. AGENTIVE: *nuclear energy* ‘the type of energy brought about by the nucleus’
 d. FORMAL: *triangular diagram* ‘the type of diagram that has a triangle form’

As exemplified in (3a), *monochromatic* specifies the CONSTITUTIVE role of *drawings*. Further, the FORMAL qualia modification, which is not pointed out by Johnston and Busa (1999), can be found, as in (3d). Here, *triangular* specifies the FORMAL role of *diagram*. Therefore, RAs in prenominal modification, such as modifying nouns in N-N compounds, specify one of the roles of the qualia structures of the head nouns, thereby fulfilling their classificatory function. The semantics of RAs are determined only when they are associated with certain roles of the head nouns; this is why RAs are called ‘relational’.

3. Analysis

Predicatively used RAs cannot specify the appropriate roles of the head nouns, since there are no modifying targets (and roles) for them to fulfil their classificatory function. We claim that this situation is resolved by a contrastive effect. For example, the prefix *mono-* in (3a) implicitly evokes other alternatives, such as {*di-/tri-/multi-/...*} *chromatic*. These alternatives together point to an appropriate role to be modified (here, CONSTITUTIVE role), which further recovers the deleted noun; in this case, ‘something that (partly) CONSISTS OF (some) colours’, namely *drawing*. Contrastive environments thus highlight RAs’ classificatory function and allow stranded RAs to specify appropriate roles of the head nouns.

4. Implication

Our analysis has interesting implications for cross-linguistic variation. One form of Japanese counterpart of English RAs consists of N+classifier+*-no*, as in *komugi-sei-no* (wheat-made.of-GEN) ‘wheaten, made of wheat’ (see Nagano (2016)). Unlike English RAs, this form can appear in predicate position without recourse to contrastive contexts. In our analysis, the classifier *-sei* ‘made of’ explicitly indicates that the relevant modifier should be associated with the CONSTITUTIVE role, which successfully recovers the deleted noun.

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A Discussion of Grammatical Indeterminacy from a Pedagogical Perspective

Lee, KyoungNam

(Kangwon National University, Korea)

This research explores the problem of grammatical indeterminacy in explaining grammar to English as a foreign language (EFL) learners. In EFL situations, grammar tends to be recognized as a set of strict and rigid rules, which often causes confusion and frustration to nonnative speakers who are faced with exceptions or complicated cases. If grammar is posited as a combination of form, meaning, and use, as suggested in Celce-Murcia and Larsen-Freeman (1999), rather than only as an area of form, the concepts of gradience (the degree of distance from a prototype) and flexibility interconnected with lexis and grammar will be more readily accepted. In this case, the problem of grammatical indeterminacy will not weaken their theoretical framework of linguistics but contribute to reinforcing learners' cognitive power in contemplating various linguistic factors operating in grammar.

For this purpose, the criteria necessary to solve grammatical indeterminacy will be probed. First, case studies of selected lexical verbs, adjectives and adverbs from the 1,000 academic words with the highest-ranking frequency from the Corpus of Contemporary American English (COCA) are examined. In the case of verbs, Hanks' *Pattern Dictionary of English Verbs* is also referred to. Then, the following questions are investigated in terms of meaning, position, and optionality: 1) In what respects do multiple meanings of a word influence grammar? 2) What semantic factors should be considered in respect to word positions? and 3) What determines optional or obligatory elements in a sentence?

With regard to position, for example, the underlined words of the following sentences belong to the adverb category and their positions are flexible. In structural terms, they are treated as adjuncts, but their meanings and grammatical roles differ according to their positions.

- A. a. Tom once dated Mary. (at some unspecified period of time in the past)
- b. Tom dated Mary once. (frequency)

B. a. Really, the public does not have much choice in the matter.

(disjunct of value judgment type)

b. She is really an intelligent child. (subjunct of predication)

c. She has a really beautiful face. (emphasizer of *beautiful*)

d. I really will slug you. (intensifying *will*, intention)

Thus, this study reveals some limitations when we deal with grammar only in terms of form/structure. Also, it highlights the interconnection between form, meaning, and use in order to widen EFL learners' grammatical perspective and improve their linguistic intuition, in that the grammar of a word in isolation is indeterminable.

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A Corpus-Based Analysis of Independent *Although* and *Though* Clauses: Their Commonalities and Differences

Yuko Mizuno

National Institute of Technology, Asahikawa College

This paper compares independent *although* and *though* clauses in terms of their discourse functions. It has recently been reported that *although* and *though* clauses can occur independently without their main clause (cf. Mizuno 2018, 2020), as exemplified in (1) and (2) below:

- (1) CRUZ: (...) And CBO, in fact, projected that, in the first two years, premiums would rise 10 to 20 percent.
DICKERSON: **Although** it did say then they would go down. (COCA)
- (2) SEVERINO: (...) Some say they can't imagine Brett Kavanaugh behaving the way that she described. Her own friend...
CORNISH: **Though** none of those people have said they don't believe it happened. (COCA)

It is generally assumed that *although* and *though* are “alternants” or “synonymous” when they are used as subordinators (cf. Biber et al. 1990: 845, Huddleston and Pullum 2002:736). According to König (1994), both *although* and *though* can express “standard concessive,” “rhetorical concessive,” and “rectifying concessive” relations. However, almost no study has compared *although* and *though* with respect to the following two points:

- (A) How frequently (*al*)*though* clauses occur independently without their main clause.
(B) What kind of functions independent (*al*)*though* clauses have.

The goal of this paper is to examine the commonalities and differences between independent *although* and *though* clauses in spoken discourse with regard to the two respects in (A) and (B) above.

The data were collected from the Spoken section of *the Corpus of Contemporary American English* compiled from 1990 to 2011. I first collected tokens of *although* and *though* which appear in turn-initial position, and obtained a total of 586 tokens of *although* and 194 tokens of *though*. Then, I extracted from them tokens of *although* and *though* clauses which do not accompany their main clause, and obtained a total of 214 tokens of independent *although* clauses and 34 tokens of independent *though* clauses.

My investigation of the data found the following points. First, independent *although* and *though* clauses differ in their frequency: the former is far more frequent than the latter. Second, independent *although* and *though* clauses are similar in that each of them can be classified into two large groups according to what they are connected to. That is, independent (*al*)*though* clauses are connected either to the immediately prior utterance by the same speaker or to the immediately prior utterance by the addressee. Third, independent *though* clauses are more restricted than independent *although* clauses in the kinds of usages: independent *though* clauses can fulfill only two discourse functions, i.e., Rectifying Concessive and Disagreement, while independent *although* clauses can fulfill at least four discourse functions, i.e., Standard Concessive, Rectifying Concessive, Self-correction, and Disagreement, as illustrated in (3), (4), (5), and (6) below, respectively:

- (3) CLAYSON: (...) And you thought the house was secure?

E-SMART: We thought the house was secure.
 CLAYSON: **Although** the alarm was not on? (COCA)

(4) COURIC: I remember seeing her in that gown...
 Ms-RORECH: Yes.
 COURIC: ... and thinking how beautiful she looked in it.
 Ms-RORECH: Yes, she looked radiant.
 COURIC: **Although** she looked beautiful in just about everything.
 Ms-RORECH: Yes, she did. (COCA)

(5) MORALES: So enjoy being a newlywed.
 Ms-EDELMAN: Thank you.
 MORALES: **Although** with two teenage daughters, it's not really being a newlywed. (COCA)

(6) JEFFREY TOOBIN: (...) With Lewinsky, the smart strategy seems to be, keep the grand jury testimony short, because you can't be cross-examined about something you didn't say.
 KEVIN NEWMAN: **Although** as Jackie just said, you know, that may not be possible, because the grand jury seems to be pretty active. (COCA)

Based on the findings, I argue that turn-initial *(al)though* which introduces an independent clause can be analyzed as a discourse marker (Schiffrin 1987) rather than a subordinating conjunction, and that the use of independent *(al)though* can be considered as a counterexample to one of the hypotheses of unidirectionality in the process of grammaticalization, i.e., a cline of clause combining (parataxis > hypotaxis > subordination) (Hopper and Traugott 1993). I will also argue that independent *although* is more grammaticalized than independent *though* based on their frequency.

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Language teachers' and learners' transition to emergency remote instruction

Michał B. Paradowski*, Magdalena Jelińska* & Andrzej Jarynowski†

*Institute of Applied Linguistics, University of Warsaw (応用言語学研究所 ワルシャワ大学)

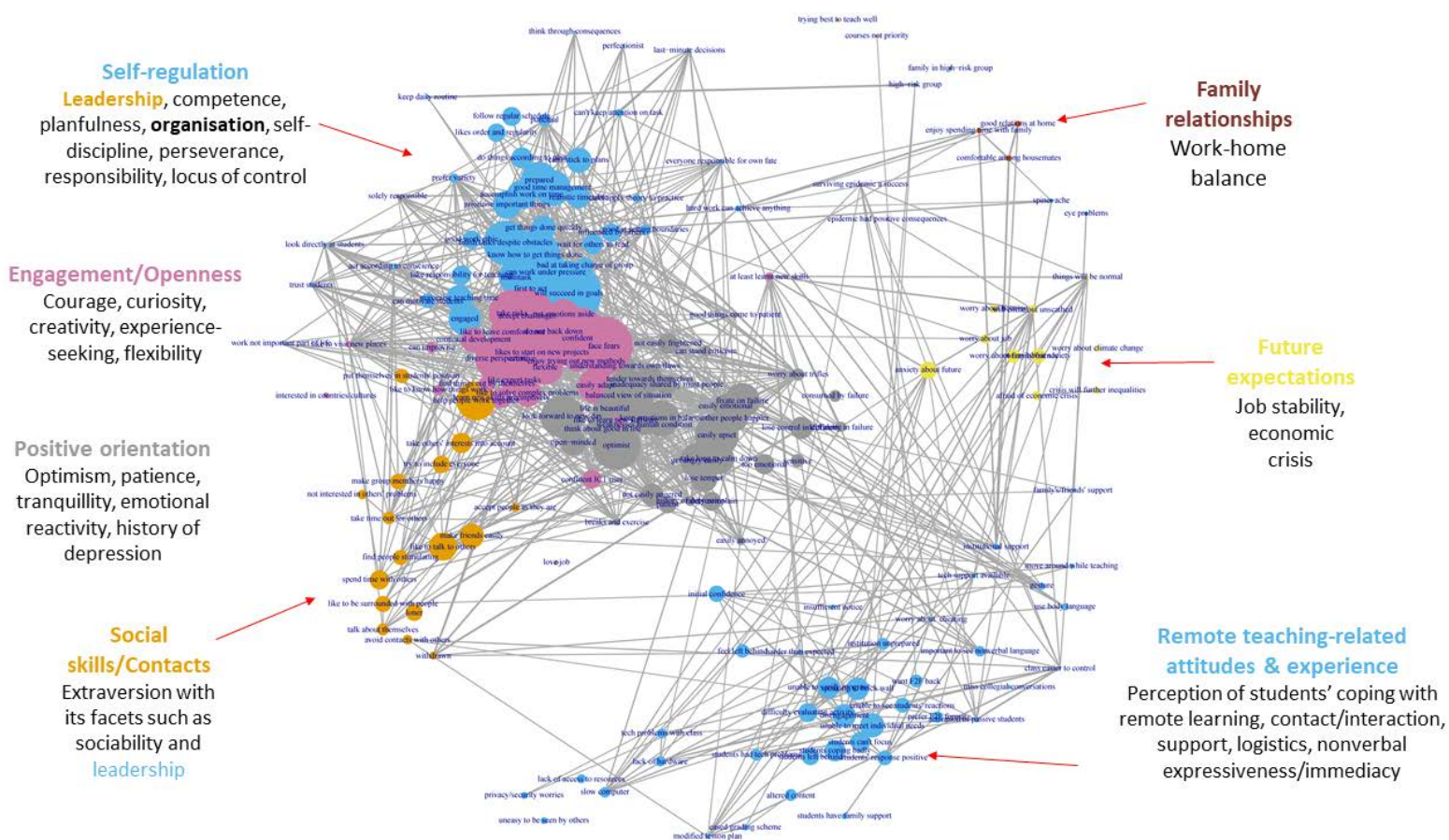
†Interdisciplinary Research Institute in Wrocław

We present the findings of a global longitudinal study (involving over 6,000 participants from 118 countries) investigating how language teachers and learners as well as instructors and majors in linguistics, modern languages, language pedagogy and related fields have been handling the 2020 transition to emergency remote instruction. The data were collected with the help of an online questionnaire active from late April through September 2020, using a snowball sampling technique.

We begin by revealing easily interpretable clusters of naturally correlating variables (Fig. 1). Crucially, the giant component of the four highly interconnected clusters associated with i) self-regulation/leadership-organisation potential, ii) engagement/openness, iii) positive orientation and iv) social skills/contacts (left hand-side of the graph) has a predominantly positive valence, while the three peripheral clusters related to v) family relationships, vi) future expectations and vii) remote instruction-related experiences and perspectives on students' coping (right hand-side) are mainly negative. We also identify clusters of better- and worse-coping teachers and learners, as well as the following meaningful distinguishing features: preparedness level and support received, effectiveness and engagement in using new technologies, perception of students' coping, logistic problems, and general positive orientation in the case of the educators, and motivation, engagement in the learning process, difficulties with staying focused, concern regarding the assessment of in-class activity, the teachers' ability to meet individual/special needs, initial confidence in the ability to learn remotely, general attitudes towards distance teaching, and interaction with the teacher and classmates in the learners' population.

All the survey respondents answered questions about the languages they speak and—where relevant—teach/study and their CEFR-aligned level of competence in each. The second half of the talk will be devoted to a discussion of *how* and *why* the number of languages spoken as well as the proficiency level taught moderates participants' coping behaviour and attitudes to this novel situation – a factor never before explored in the literature.

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What Does Azeri Suggest for Refining Conditions on Genitive Subject Licensing?

Xiao-Shi Qiu (Gifu University) and Hideki Maki (Gifu University)

1. Introduction

This paper investigates the distribution of genitive subject in Azeri, one of the Turkic languages spoken in the Republic of Azerbaijan and Iran, and examines what the examples from Azeri suggest for refining conditions on genitive subject licensing in Altaic languages. We owe all examples used in this paper to Khalida Alizada, a native speaker of the language from Baku, the capital of Azerbaijan.

One of the distinctive properties of Altaic languages including Azeri is the fact that they exhibit the nominative/genitive alternation. In most cases, genitive subject is allowed in relative clauses, which have an overt head nominal. In some cases, however, it is allowed in a clause with no overt head nominal, such a clause followed by the word that corresponds to *until* in English. Interestingly enough, unlike other Altaic languages, Azeri disallows genitive subject in an ‘until’ clause. Close examination of the ‘until’ structure in Azeri reveals that conditions on genitive subject licensing so far proposed need to be revised. In this sense, Azeri examples make a crucial contribution to refining conditions on genitive subject licensing in Altaic languages.

2. Background

First, based on the distribution of genitive subject mainly in Mongolian and Japanese, Maki et al. (2016) propose (1).

(1) Conditions on Genitive Subject Licensing

- a. A genitive subject must be c-commanded by a nominal element in a local domain.
- b. A genitive subject must be in a local relationship with the adnominal form of a predicate.

(1a) corresponds to Miyagawa’s (1993, 2011) D-licensing approach, and (1b) to Watanabe’s (1996)/Hiraiwa’s (2001) adnominal form-licensing approach. Maki et al. (2016) claim that genitive subject in Altaic languages must satisfy both to be licensed, which is evidenced by the examples in (2) and (3).

- (2) Öçügedür Ulayan-ø/*-u ene nom-i qudaldun-abu-γsan-siu.
yesterday Ulagan-Nom/-Gen this book-Acc buy-take-Past.Adn-Prt
‘Ulagan bought this book yesterday.’
- (3) Ene nom-i öçügedür Ulayan-ø/-u t qudaldun-abu-γsan-siu.
this book-Acc yesterday Ulagan-Nom/-Gen buy-take-Past.Adn-Prt
‘This book, Ulagan bought t yesterday.’

(3) shows that the object is moved to the sentence-initial position by scrambling, and the sentence is grammatical with genitive subject. Note that in (3), the genitive subject is c-commanded by the scrambled object and is in a local relationship with the adnominal form of the predicate.

Second, as Hiraiwa (2001) points out, genitive subject can appear without a nominal head in Japanese, as shown below.

- (4) John-wa [ame-ga/-no yam-u made] ofisu-ni i-ta.
John-Top [rain-Nom/-Gen stop-Pres until] office-at be-Past
‘John was at his office until it stopped raining.’
- (5) [Sengetsu ikkai John-ga/-no soko-ni it-ta (k)kiri] daremo
[last.month once John-Nom/-Gen there-to go-Past since] anybody
itte inai.
go not.Pres
‘Nobody went there since John went once last month.’

3. Data

Let us now examine Azeri counterparts of (4) and (5).

- (6) Leyla-ø [yağış-ø/*-ın dayan-an-a qədər] ofis-də idi.
Leyla-Nom [rain-Nom/-Gen stop-PS-Dat until] office-Loc be-Past.3.SG
'Leyla was at the office until it stopped raining.'
- (7) [Eldar-ø/-ın keçən ay bir dəfə get-diyi-ndən bəri], heç kim
[Eldar-Nom/-Gen last month one time go-PN-Abl since] no who
ora get-mə-yib.
there go-Neg-CVB
'Nobody went there since Eldar went there once last month.' (CVB=converb)

Genitive subject is disallowed within the *qədər* 'until' clause, while it is allowed within the *bəri* 'since' clause.

4. Discussion

Let us consider what the above facts suggest. Our research shows that the distribution of genitive subject in Azeri is fundamentally identical to that in Japanese, except the 'until' example in (6). Therefore, genitive subject is allowed in the complement clause to a noun in Azeri, as shown in (8).

- (8) Eldar-ø/-ın gül-düyü fakt-ø bir problem=dir.
Eldar-Nom/-Gen laugh-PN fact-Nom one problem=be.Pres.3.SG
'The fact that Eldar laughed is a problem.'

The crucial difference between the grammatical examples in (7) and (8) and the ungrammatical example in (6) is the fact that the adnominal forms of the predicates are different. In (7) and (8), the predicates are in the non-subject past participle form indicated as PN, and in (6), the predicate is in the subject participle form indicated as PS. If Harada (2002), who argues based on Konoshima (1973), is correct in assuming that *made* 'until' and *kiri* 'since' have a nominal origin, and this is true to their Azeri counterparts as well, the examples with genitive subject in (4)–(8) all satisfy the two conditions in (1). The fact that only (6) with genitive subject is ungrammatical suggests then that Azeri has a language specific property in which the predicate must be in the PS form in the *qədər* 'until' clause, which does not contribute to genitive subject licensing, and consequently, the condition in (1b) should be refined as (9).

- (9) A genitive subject must be in a local relationship with the **non-subject** adnominal form of a predicate.

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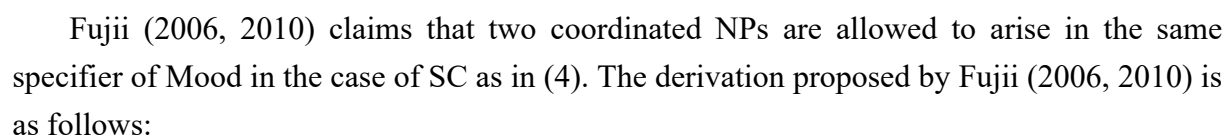
Yuya Sakumoto (Kyushu University)

It has been assumed before the Minimalist Program, for example under the Government and Binding approach, that raising and control constructions should be analyzed differently, as illustrated in (1a) and (1b) respectively.

- With the influential proposal made by Hornstein (1999), obligatory control can be derived through movement, assuming that movement into theta-positions is allowed in principle within the Minimalist Framework. Hornstein argues that obligatory control cannot have split antecedents in MTC by providing the evidence in (2)

- Landau (2000), however, claims that split antecedents are in fact allowed not only in non-obligatory control but also in limited obligatory control types as in (3), contrary to Hornstein's (1999) argument.

- SC is problematic for MTC (Landau (2000, 2003, 2007, 2013)): if obligatory control is derived by movement, how can split antecedents be derived? Although Fujii (2006, 2010) puts forth an ingenious movement analysis for SC in Japanese, to the best of our knowledge, no study has systematically focused on the structure of SC in English under MTC. Fujii (2006, 2010) suggests that SC has the structure as shown in (4).



- However, it is not plausible to assume the structure of (4) for SC since as Landau (2013) points out, the assumption that conjunction is broken up in the syntax is quite dubious.

We propose an alternative analysis for SC as in (6). We demonstrate that the labeling algorithm and Free Merge, which are proposed by Chomsky (2013, 2015), shed new light on the problem of SC. A novel derivation for (6) is as follows:

(6) a. John asked Mary [whether to get themselves a new car]. (= (3))

b. $\{\beta = \langle \varphi, \varphi \rangle \text{ John T } \{_{\nu^*P} \text{ asked } \{\alpha = \langle \varphi, \varphi \rangle \text{ Mary } \{\text{whether to } \{\text{John } \{\text{Mary } \{_{\nu^*P} \text{ get...}\}\}\}\}\}\}$

We claim that under Free Merge nothing prevents the derivation in which two external arguments are generated from one ν^*P , as illustrated in (6b): *John* and *Mary* both gain a theta-role from *get*. Hornstein (1999) demonstrates that theta-criterion is no longer necessary by virtue of eliminating D-structure. Furthermore, Saito (2017) analyzes argument doubling in Japanese, originally observed in Kuroda (1988), as evidence that one verb assigns the same theta-role to two distinct DPs as in (7), thereby concluding that theta-criterion should be dispensed with.

(7) [CP Masao-ga Hanako-ni (hoho-ni) kisusi-ta no]-wa hoho-ni da
Masao-Nom Hanako-Dat cheek-Dat kiss-Past Comp-Top cheek-Dat is
'It is on the cheek that Masao kissed Hanako.' (cf. Kuroda (1988: 26))

Thus, the derivation of (6b) is theoretically possible within the current framework insofar as the labeling algorithm is conducted successfully: *John* and *Mary* are moved into the matrix clause and get successfully labeled as $\langle \varphi, \varphi \rangle$ as in (6b). Then, a question arises: why is SC impossible for all finite clauses? Let us consider (8a) and its derivation in (8b).

(8) a. *John Mary played baseball.

b. $*\{\beta = ?? \text{ John } \{\alpha = \langle \varphi, \varphi \rangle \text{ Mary T } \{\text{John } \{\text{Mary } \{_{\nu^*P} \text{ played baseball}\}\}\}\}\}$

As seen in (8b), β is not labeled, causing the derivation to crash since each syntactic object is needed to be labeled for the interpretation; thus, SC can only appear in nonfinite clauses. Therefore, the proposed movement analysis allows us to account for SC without recourse to stipulated assumptions, which leads to theoretically desirable consequences.

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Not-exactly: a challenge for the QUD-based approach to imprecision

Charlie Siu (Philosophy Department (Zhuhai), Sun Yat-sen University)

Consider:

(1) Peter isn't exactly 1.8m.

(2) Peter isn't 1.8m.

If a speaker utters (1), the hearer can infer that Peter is close to (exactly) 1.8m, but the hearer can't so infer if the speaker utters (2) instead --- for what (2) conveys to be true, Peter can be 1.81m, 1.9m, or even 2m. Let us call the inference from (1) that Peter is close to 1.8m a *just-miss inference*. These inferences are of interest because they bear on the choice between the interval-based approach to numerical imprecision (Krifka 2007; Sauerland and Stateva 2011) and the more recent approach that is based on the notion of question under discussion (QUD) (Klecha 2018; Hoek 2018). I argue that while the interval-based approach can straightforwardly account for those inferences as implicatures, they at least demand modifications to all extant accounts of the QUD-based approach.

According to the interval-based approach, simple un-negated sentences such as (3) can be literally true because the numerical expression "1.8m" denotes an interval of height(s) and (3) says that Peter's height falls into one such interval.

(3) Peter is 1.8 m.

But according to the QUD-based approach, (3) is always literally false because it says that Peter's height is exactly 1.8m (to the dot); the reason why (3) typically conveys a true content is that the QUD (e.g. How tall is Peter to the nearest 0.1m?) --- represented as a set of sets of worlds (cells) each of which is a complete answer to the question (Roberts 2012) --- *coarsens* the overly precise literal content into a less precise, but true and relevant content. Coarsening is achieved by mapping the literal content of (3) to the union of the cells that have a non-empty intersection with the literal content of (3).

So far so good for the QUD-based approach. However, if (3) says that Peter's height is exactly 1.8m, then it is just as strong (informative) as "Peter is exactly 1.8 m", which means that (1) is just as strong as (2). If so, it is not clear how the just-miss inference of (1) can be accounted for.

I argue that the interval-based approach has an advantage over the QUD-based approach here because it can easily explain the just-miss inference of (1) as a scalar implicature. Here's the explanation in two parts.

What's old (Sauerland and Stateva 2011): Every numeral denotes an interval centered at that numeral's point-denotation, and the widths of those intervals vary with the contextual parameter *gran* (for granularity). So, relative to a context, (3) (hereafter (¬2)) says that Peter's height lies within the interval corresponding to that context's granularity. Call that interval *I*. 'Exactly' substitutes a finer granularity --- which need not be the absolute finest one because 'exactly' is vague (Lasnik 1999) --- for the granularity at which the numeral it modifies is interpreted. So 'Peter is exactly 1.8m' (hereafter (¬1)) --- if uttered in the same context in which (¬2) is uttered --- places Peter's height within an interval that is narrower than *I*. So (¬1) is stronger than (¬2), which means that (1) is weaker than (2).

What's new: Assume that the speaker is cooperative and well-informed about Peter's height. Why do they utter the more verbose and the less informative (1) instead of (2)? It is because they believe that what (2) says is not true (since it is too strong). I argue that the negation of what (2) says, when added to what (1) says, explains the just-miss inference. To see this, we can think of what (1) says as the complement (\bar{N}) of a narrower interval (N) centered at the point-denotation of "1.8m", and what (2) says as the complement (\bar{W}) of a wider interval (W) centered at the point-denotation of "1.8m". So the negation of (2) can be thought of as W , the wider interval centered at the point-denotation of "1.8m". To obtain the total information content of (1), we intersect the interval associated with (1), i.e. \bar{N} , with the interval associated with the negation of (2), i.e. W . The resulting interval is just like the one associated with (2), i.e. \bar{W} , except that it does not cover N (the narrower interval centered at the point-denotation of "1.8m"). This interval captures the content of the just-miss inference because it says that Peter's height, while being not close to the point-denotation of "1.8m", falls within the wider interval denoted by "1.8m".

To strengthen the case that just-miss inferences are scalar implicatures, we can observe that they hold when 'not-exactly' appears in upward-entailing environments, but disappear when 'not-exactly' appears in downward-entailing environments. Consider:

(4) Some/ many bars aren't exactly 10m. \rightarrow (implies) Some/ many bars are close to 10m.

(5) Every handmade chair that is advertised to be 50cm wide isn't exactly 50cm wide. \rightarrow Some chair that is advertised to be 50cm wide is close to 50cm wide.

(6) Every chair that isn't exactly 50cm wide has to be remade.

! \rightarrow It isn't the case that every chair that isn't 50cm wide has to be remade. (i.e. some chair that isn't 50cm wide doesn't have to be remade.)

(7) If this chair isn't exactly 50cm wide, it has to be remade.

! \rightarrow It isn't the case that if this chair isn't 50cm wide, it has to be remade. (i.e. if the chair isn't 50cm wide, it doesn't have to be remade.)

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On the location of nominative objects: focus movement-based approach

Mina Sugimura
Ritsumeikan University

Yoichi Miyamoto
Osaka University

Basis Kasai (2018) argues that the nominative object (NO) scrambles out of VP to vP edge to get Nom Case from *v* in sentences like (1a, b), where the stative *-e* ‘can’ and *deki* ‘can’ are restructuring predicates.¹

- (1) a. [TP Taro-wa₁ [T' [vP t₁ [v' **hon-ga**₂ [v' [NP [VP t₂ kau] koto-ga] [v' *deki* v]]]]-ru]]
Taro-top book-nom buy nmlz-nom can pres²
b. [TP Taro-wa₁ [T' [vP t₁ [v' **hon-ga**₂ [v' [VP t₂ ka] [v' *e* v]]]]-ru]]
Taro-top book-nom buy can pres
‘Taro can buy a book’

The verb *ik* ‘go’ in Japanese is also known to be a restructuring predicate, and can license an NO when the potential *-e* and a purpose clause headed by *-ni* (*niP*), which we take to be VP, is adjacent to *ik*, as shown in (2a) (Miyagawa, 1987). In (2b), since this adjacency is not respected, the object fails to obtain NOM.

- (2) a. Taro-wa Kobe-ni [_{niP/VP} hon-ga/o kai-ni] ik-e-ru (/ ik-u koto-ga deki-ru).
Taro-top Kobe-to book-nom/acc buy-ni go-can-pres (/ go-pres nmlz-nom can-pres)
b. Taro-wa [_{niP/VP} hon-*ga/o kai-ni] Kobe-ni ik-e-ru.
Taro-top book-nom/acc buy-ni Kobe-to go-can-pres
‘Taro can go to Kobe to buy a book.’

Notice, however, under Kasai’s proposal, nothing prohibits the object from raising to vP and getting NOM-marked, as shown in (3); consequently, (2b) with the NO, is incorrectly predicted to be grammatical.

- (3) [TP Taro-top₁ [T' [vP t₁ [v' **book-nom**₂ [v' [VP t₂ buy-NI Kobe-to go] can]]] pres]]

Puzzle Significantly, in contrast to (2b) with the NO, we find (4) acceptable, although the adjacency condition is not met:

- (4) hon-ga₁ Taro-wa [_{niP} e₁ kai-ni] Kobe-ni ik-e-ru-yo.
book-nom Taro-top buy-ni Kobe-to go-can-present-C
lit. ‘A/The book, Taro can go to Kobe to buy.’

The grammaticality of this example appears to indicate that the NO is a major subject or a proleptic object (cf. Takano, 2003). However, this is untenable, as highlighted by Kasai (2018). Consider (5a, b):

- (5) a. Hanako₁-wa [**zibunzisin**_{1/2}-no hon-ga [Taro₂-ga kai-ni Kobe-ni ik-e-ru]-to] omottei-ru.
Hanko-top self-gen book-nom Taro-nom buy-ni Kobe-to go-can-pres-C think-pres
‘Hanako thinks that Taro can go to Kobe to buy self’s book.’

¹ Kasai (2018) assumes that a phrase selected by *deki* or *-e* involves a bare VP complement (Wurmbrand 2001).

² top = topic, pres = present, nom = nominative, acc = accusative, nmlz = nominalizer

- b. *Hanako₁-wa [[Taro₂-ga [**zibunzisin**_{1/2}-no hon-ga kai-ni] Kobe-ni ik-e-ru]-to] omottei-ru.
 Hanco-top Taro-nom self-gen book-nom buy-ni Kobe-to go-can-pres-C think-pres

In (5a), both *Hanako* and *Taro* can be antecedents for *zibunzisin* ‘self’, which strongly suggests that the NO was originally in the canonical object position to be bound by *Taro* and moves afterwards. Accordingly, we need to conclude that movement is involved in (5a), and thus also in (4). Crucially, (5b) shows that the NO cannot remain in its original position. What remains unclear is what forces the movement in point.

Proposal We propose that the NO in (5a), which cannot get NOM-marked in its canonical object position due to its non-restructuring context, undergoes focus movement (cf. Kuno 2002) to the embedded CP/Foc(us)P, with the option of moving further to the matrix CP, as shown in (6).

- (6) [CP/FocP ↑ [TP Hanako₁-wa [T [VP [VP [CP/FocP ↑ [TP Taro₂-ga [T [_{VP} t₂ [_{V'} [VP [_{NP/VP} **zibunzisin**_{1/2}-no hon-ga kai-ni] [VP Kobe-ni ik]]-e]]-ru]]-to] omot-te] -i] ru]] C/Foc].

We claim that in (4), since the object has undergone focus movement, it gets NOM-marked, parallel to a focused phrase in Kumamoto dialect (e.g. Kato, 2007; Fukuda, 2008; and, Nishioka 2010) with the stative predicate *-rare* raised to Foc (i.e. *Hanako-wa (Hanako-Top) hon-ga (book-Nom) ka-u (buy-Pres) ‘Hanako buys a book’) (see Tada (1992)). Given this licensing requirement, assuming that FocP is also available in the *v*P-domain (e.g. Belletti 2004), we predict that (2b) with the NO becomes acceptable when the NO is stressed. This expectation is fulfilled, as shown in (7). Note that that the contrast between (2b) with the NO and (7) proves difficult to explain without stipulations under Kasai’s Case-oriented approach.

- (7) (?) Taro-wa (**Tyomusukii-no**) hon-ga kai-ni Kobe-ni ik-e-ru.
 Taro-top Chomsky-gen book-nom buy-ni Kobe-to go-can-present
 ‘It is (Chomsky’s) book that Taro can go to Kobe to buy.’ (Bold-faced = Stressed)

Implication Interestingly, the bold-faced disjunctive NO exhibits scope interaction with *-e* ‘can’, whereas the bold-faced NO with *-dake* ‘only’ necessarily takes scope over the modal in point.

- (8) Hanako-wa Taro-ga [**sushi-ka soba-ga/ sushi-dake-ga** [tabe-ni Kobe-ni ik-e-ru]]-to omottei-ru.
 Hanako-top Taro-nom sushi-or soba-nom/ sushi-only-nom eat-ni Kobe-to go-can-pres-C think-pres
 ‘Hanako thinks that Taro can go to Kobe to eat sushi or soba/ only sushi.’

Note that the availability of reconstruction in (8) with disjunction further supports the current proposal, and may be surprising to Shibata (2015) who argues for an exhaustivity operator (= covert only) -based approach to disjunction in Japanese (see Tamura, Miyamoto and Sauerland 2019).

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Monadic Concepts for *Maximalizing Relative* Constructions as Generalized Quantification

Norio Suzuki *Kobe Shinwa Women's University (former professor)*

This paper gives a description of the relations creating a ‘generalized quantification over degrees’ configuration between the relative clause and matrix clause in *Maximalizing Relative* (or *amount relative*) constructions MRs (in English; Cinque/C 2020, Grosu & Landman/GL 1998, 2017). I emphasize the differential interpretation of the ‘relative head’ in the two clausal positions. The semantic interpretation of the examples is couched in Hornstein & Pietroski’s/HP’s (2009) *Minimal Semantic Instructions* framework featuring *monadic concepts* MCs (Pietroski/P 2011, 2012, 2018). As for the basic syntactic structure of ‘raising restrictive relative clauses,’ I follow a ‘single, double-Headed, universal structure of C (2020).

MR Examples & Some Assumptions Some MR features are: MRs are restricted to relatives of the ‘raising’ restrictive type, their complementizers limited to **that**, \emptyset , & only definite and universal determiners allowed to modify an external head in the matrix clause (C 2020, GL 2017). See some MR examples (1a, 2a) with the MC containing representations a la HP (2009) in (1b, 2b). For (1a), ‘ $MAX\Delta$ ’ (with $MAX\Delta(e \times d)$ as the relevant MC) serves as ‘head’ of the MR taking two arguments, with ‘SUE-LIKES-ACTOR’ as the internal argument IArg of $MAX\Delta$ creating a singleton set of the ‘maximalized degree’ for ACTOR and ‘JACK-MET-ACTOR’ as its external argument EArg allowing of two possibilities: the ‘maximalized individual’ members corresponding to the IArg singleton set and the ‘non-specified,’ infinite set of individual members:

(1) a. Jack met every actor Sue likes.

b. $MAX\Delta(e \times d)/EVERY(Q) \wedge \exists[\text{INTERNAL}((e \times)d/Q, x)$
 $\wedge[\text{MAX}(e \times)d: \text{SUE-LIKES-} \sqcup \text{ACTOR}(x)]$
 $\wedge \exists[\text{EXTERNAL}(e(\times d)/Q, x) \wedge [\text{MAX}e(\times d)-d \text{SUE/MAX}e(\times d)-\infty:$
 $\text{JACK-MET-} \sqcup \text{ACTOR}(x)]]$

($MAX\Delta$ for singleton predicates obtained via maximalization, $e \times d$ for individual-degree pairs, d for degree predicates, Q for quantifiers, \sqcup for sums, e for individual predicates, $(e \times)d$ for degrees (initially paired with individuals))

(2) a. Did you drink the champagne that was served last night at the party?

(C 2020: “... the more natural interpretation is that we drank *some* of the champagne that was served at the party...”)

b. $MAX\Delta(e \times d)/THE(pdc)/\text{Force}(PQ) \wedge \exists[\text{INTERNAL}((e \times)d, x)$
 $\wedge[\text{MAX}(e \times)d: \text{CHAMPAGNE}(x)\text{-WAS-SERVED} \dots]]$
 $\wedge \exists[\text{EXTERNAL}(e(\times d)/pdc/PQ, x) \wedge [\text{MAX}e(\times d)-d \text{SERVED-LESS/MAX}e(\times d)-\infty:$
 $\text{YOU-DRINK-CHAMPAGNE}(x)]]$

(pdc for *presuppositional definiteness check* (GL 2017), with pdc checked at the matrix CP-

level and constituting a ‘reprojection’ of Uriagereka & Hornstein 2002; *PQ* for *polar questions*, applying at the matrix CP-level and creating a ‘reprojection’)

In (2), the *polar question* Force may create ‘doubt’ about the total amount of the served wine you drank, leading to the ‘implicature-like’ conjecture (with ‘ $\text{MAX}_{e(\times d)-\infty}$ ’) that you may have drunk less than the total amount of the served wine at the party. But it seems possible enough to create a situation where ‘you drank something else’ on top of ‘*some* of the champagne that was served at the party,’ maintaining the semantic condition (with ‘ $\text{MAX}_{e(\times d)-\infty}$ ’ in place) of ‘EArg set \supseteq IArg set’ for ‘generalized quantification’ purposes.

More on MRs MRs/amount relatives, involving an operation of (degree) *maximalization* at the CP-level, produce an interpretation of the relative clause as a *singleton predicate*, restricting the set of degrees to the singleton set containing the maximal degree (if there is one) (GL 1998, 2017). (E.g., ‘books that there were _ on the table’ denotes $\{<4, \text{BOOKS}, a \sqcup b \sqcup c \sqcup d>\}$ with the singleton set containing the cardinality ‘4’ of the sum of the books on the table, the sortal predicate BOOKS, and the sum of the books on the table ‘a, b, c, and d.’) The semantics allows a predicate interpretation for the gap derived from a variable over individual-degree pairs, and *the grammar treats this variable on a par with degree variables* (GL 2017). Certain aspects of the interpretation of the external noun may well be contributed both inside and outside the relative (GL 2017). Following Kayne (1994), in “books that there were _ on the table,” the syntactic movement operation for the degree phrase ‘d-many-books’ is assumed to be: $[\dots \text{books}_{e(\times d)}] \dots [\text{d-many-(books)}_{(e \times d)}]_2 [\text{that } \dots (\text{d-many-books}_{e \times d})_2 \dots]]$ (GL 1998). The MC $\text{MAX}_{\Delta}(e \times d)$ applies (in (1b)) to some ordered pairs iff they meet three conditions: each of their ‘internal participants IPs’ is one of their ‘external participants EPs’; their IPs are the actors Sue likes; and their EPs are the actors Jack met. The concept $\text{MAX}_{\Delta}(\Phi)$ applies to some things iff they are (all and only) *the* things to which $\Phi(_)$ applies (P 2018). In (1b with $\text{MAX}_{e(\times d)-d} \text{SUE}$), a ‘contextual definition’ (HP 2009) of the MC $\text{MAX}_{\Delta}(e \times d)$ is given for both IPs and EPs as they are (all and only) the things to which either ‘ $(e \times d)\text{-PRED}(_)$ ’ or ‘ $e(\times d)\text{-PRED}(_)$ ’ applies (‘ $(e \times d)\text{-PRED}$ ’ for *predicates of degrees (initially paired with individuals)*). I.e., EArg creates a set of individuals (‘actors Jack met’) of the same number as that of a set of degrees that IArg creates (‘actors Sue likes’). In (1b with $\text{MAX}_{e(\times d)-\infty}$), the EArg does not specify a set (HP 2009).

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Ethical dative in forming the *get*-passive

Junichi Toyota

Osaka City University

This paper analyses the origin of the *get*-passive and lends support to the reflexive-causative origin hypothesis (e.g. Givón and Yang 1994, Toyota 2008), but revises the earlier research by considering the ethical dative as a key element for the emergence of the *get*-passive instead of the reflexive pronoun. Among the Indo-European languages, the beneficiary or adversative reading is sometimes overtly expressed by adding an extra argument, commonly in the dative or instrumental case. This use of the dative is known as the ethical dative. For instance, *nam*, the dative form of *mi* ‘we’ in (1b), is simply added to a neutral clause (1a) and the pronoun in the dative case denotes a recipient of adversity. Gamkrelidze and Ivanov (1995: 291) claim that the Indo-European languages have a beneficiary which is always co-referential to the subject, and the object-oriented beneficiary never existed. Note that a self-beneficiary is a part of numerous characteristics found in the middle voice, e.g. Vedic Sanskrit *yájati* (active) ‘s/he performs a sacrifice’ (said of a priest); *yájate* (middle) ‘s/he performs a sacrifice’ (said of a person for whose benefit the sacrifice is made-), and the middle voice and ethical dative denote a similar meaning in Indo-European languages.

Serbian

- (1) a. *Beba plače noći*
baby cry.3SG at night
‘The baby cries at night.’
b. *Beba nam plače noći*
baby us.DAT cry.3PL at night
‘The baby cries at night to our detriment.’

The ethical dative may not be a common topic in English linguistics because examples have been rare throughout its history. Visser (1963-73: 633-635) says that it can be still found in ME, as exemplified in (2), but its occurrences were marginal and rare. However, the paucity of this construction proves to be extremely useful in solving the mystery of the origin of the *get*-passive.

Middle English

- (2) *Envye ... bynymeth hym the love of alle goodnesse.*
‘Envy takes away the love of all goodness from him to his detriment. (c1386 Chaucer, *C.T.* I 676)

As argued in Toyota (2020), the origin of the *get*-passive is heavily influenced by contact with Old Norse, and what has to be noticed is the fact that Old Norse had the productive ethical dative, as exemplified in (3). Since this structure was practically non-existent in earlier English, contacts with Old Norse made speakers of older English notice the construction existed, and the ethical dative could have been replicated. Data from earlier English also suggests a beneficiary or adversary was normally expressed by a dative, a reflexive pronoun or later a nominal proceeded by *to* or *for* (OED *get* v. I 18a, 18b). A construction with a dative beneficiary started to appear around 1300, as in (4). Earlier instances of reflexive pronouns are scarce, and the ethical dative seems to be a

better candidate for the origin of the *get*-passive. In addition, *get* itself was not an Anglo-Saxon verb, but a loan from Old Norse. Influence from Old Norse cannot be underestimated, and it is argued here that the ethical dative also made it possible to use *get* in a ditransitive clause (i.e. (4)).

Old Norse

- (3) *Geirr fann af skynsemi sinni at honum eyddusk skot-in*
 Geirr felt of reason his that him.DAT eroded shots.NOM-DEF
 ‘Geir sensed that his shots were being wasted (to his detriment).’ (EB 222)

Old English

- (4) *Ay was he bone, To **gete** [Cott. Fete] his fadir venisun*
 always was he ready to get his father.DAT venison
 ‘He was always ready to get his father venison.’ (a1300 Cursor M. 3502 (Cott.))

The causative can be a source of the passive voice typologically, but what is unique to this origin is that the passive can denote adversity, e.g. the Turkic languages and some of the Austronesian languages. The adversative reading can also be detectable in some instances of the *get*-passive, but not in the *be*-passive (cf. Toyota 2008: 164-72). This is a clear sign that the *get*-passive is not derived from the *get* cum adjectival complement clause as previously often argued, and that the causative or other sources are involved in the origin of the *get*-passive. However, contrary to previous arguments, the causative cum ethical dative is a better candidate for the origin of the *get*-passive. The ethical dative may take the form of a reflexive when a subject referent and a dative NP are co-referential, but what should be noted here is that it is not a simple co-reference, but rather a sense of adversity/beneficiary should be present at the initial onset of the development. The involvement of the ethical dative indicates that contact with Old Norse was indispensable, and that influence from Old Norse is indeed deeply rooted in the English language, even more so than previously assumed.

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An Investigation of Second Language Perception of English Word-Boundary by Mandarin Learners of English

Chiu-Ching Tseng

George Mason University, U.S.A.

Previous studies on word-boundary perception in English have reported a preference for a prevocalic glottal stop cue (e.g., ‘seen [ʔ]ice’ vs. ‘see nice’) over word-initial aspiration (e.g., ‘keeps [t^h]alking’ vs. ‘keep s[t]alking’) both by native English speakers (Nakatani & Dukes, 1977) and by learners of English from various L1 backgrounds (Spanish: Altenberg, 2005; Japanese: Ito & Strange, 2009; French: Shoemaker, 2014). Therefore, it has been proposed that the glottal stop is the preferred word-boundary cue universally. This study investigates the same issue with Mandarin L2 English learners, whose native language inventory contains highly aspirated stops (Cho & Ladefoged, 1999), but not the glottal stops (Duanmu, 2007). The question is whether their sensitivity to stop aspiration would cause them to prefer it in L2 word-boundary segmentation.

38 Mandarin L2 English learners, sub-grouped into three proficiency levels based on their length of residence in the U.S., and 28 monolingual native English speakers participated in this study. The participants were tested with stimuli containing pitch-manipulated English pseudo-words with either an aspirated stop or a glottal stop marking the word-boundary.

The results showed that Mandarin speakers identified word-boundaries more accurately when the stimuli had glottal stops than when they had aspirated stops, despite their native language lacking a phonemic glottal stop ($p = 0.0038$). This outcome suggests that perceptual sensitivity to a specific acoustic cue in learners’ L1 does not help them use the cue readily in L2 word-boundary perception. The overall between-group comparison showed no significant difference in accuracy between native English speakers and Mandarin L2 English learners (75.46% vs. 72.75%, $p = 0.9366$, also see Figure 1 & Table 1 below). In other words, when the effects of lexical knowledge and potential pitch cue for word-boundaries were controlled, the English group and the L2 group performed similarly, although the English group still performed significantly faster than the L2 group concerning the response time ($p = 0.0020$).

The analysis of the linear mixed-effects model on the length of the residence revealed no significant difference between beginners (less than 12 months), intermediates (between 13 and 24 years), and the advanced learners (24+ months); although the advanced learners were marginally better than beginners ($p = 0.0749$). In other words, even with the limited exposure to English, the beginners (LOR = 2.57 months) were still able to perform at somewhat high accuracy (70.60%) with the preference of the glottal stop cues over stop aspiration. Other than Mandarin, future studies should look at a language with an inventory that does not feature glottal stop but stop aspiration to broaden our understanding of the topic.

In keeping with results found from previous studies, the current results suggest that glottal stop may indeed be a universally unmarked acoustic cue for the task of word-boundary segmentation. The outcome proposes that perceptually in the L2 word-boundary segmentation task, L1-transfer seems to play a lesser role regardless of their English proficiency.

The overall result suggests that with other things being equal, a language instructor should reflect the importance of L2 learners’ phonetics information and consider the possibility of the

language learners' universal knowledge and capability of word-boundary perception to enhance their L2 comprehensibility.

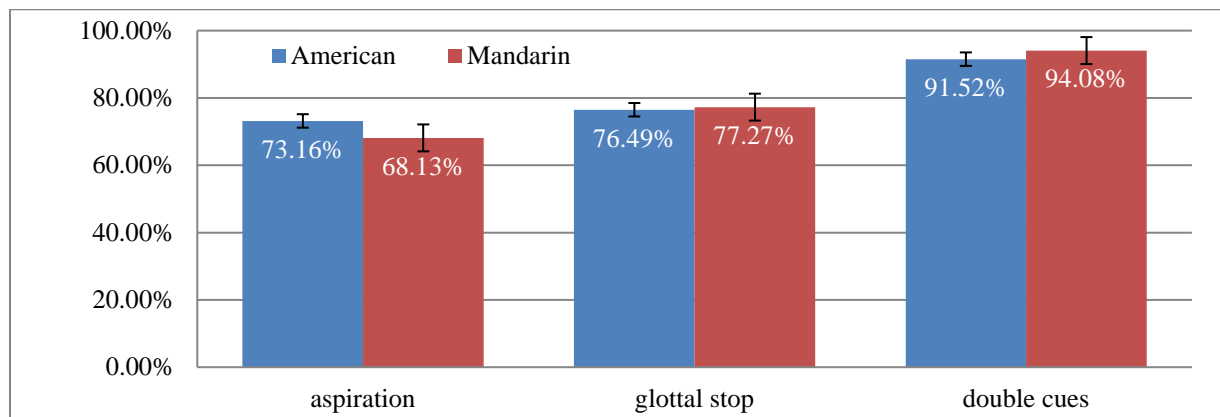


Figure 1. Group comparison of overall response accuracy % by categories

Table 1. results of previous studies and present study concerning response accuracy

	L2 speakers	American	Stimuli	Pitch-controlled	L2 language
Altenberg (2005)	76.0% asp < gl ≈ dc	97.0% asp ≈ gl ≈ dc	Real word	No	Spanish
Ito & Strange (2009)	74.6% asp < gl ≈ dc	96.8% asp ≈ gl ≈ dc	Real word	No	Japanese
Shoemaker (2014)	74.6% asp < gl < dc	---	Real word	No	French
Alammar (2015)	66.0% asp < gl	80.0% asp < gl	Non-word	No	Arabic
Present study	72.75% asp < gl < dc	75.46% asp ≈ gl < dc	Non-word	Yes	Chinese Mandarin

---: not tested, <, "worse than", = "equal to", and , ≈ "approximately equal to"

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A comparative analysis of frequency lists of derived words across specialist varieties of written English

Piotr TWARDZISZ, University of Warsaw, Poland

Abstract

The goal of this study is to establish a lexical repository consisting of morphologically complex (derived/ affixed) words characteristic of academic (research) texts in the area of the humanities and social sciences. Complex words are lexical items which consist of a word-formation base and an affix, or a few affixes. As for derived nouns, which are the most frequent category of words in academic texts, these are: *-ation*, *-ment*, *-al*, *-ance/-ence* (*Nomina Actionis*), *-ness*, *-ity*, *-ancy/-ency*, *-acy*, *-ism* (*Nomina Essendi*), and a few other nominal categories. Moreover, there are also derived adjectives and verbs, appropriately categorized by various authors (Adams 2001; Bauer 2003; Katamba 2005; Biermeier 2008). Recent morphological accounts (Bauer et al. 2013) include several other affixes designating spatial, temporal or abstract relations (e.g., *down-*, *hyper-*, *intra-*, *multi-*, *pre-*, *sub-*, *under-* etc.). The overall number of affixes initially involved in this study is approx. 90. Further, more fine-tuned, analyses involve smaller numbers of preselected prefixes and suffixes.

The data are obtained from the Corpus of Contemporary American English (COCA). In COCA's academic genre (ACAD), there are ten sub-divisions, abbreviated as follows: education, history, geog/soc-sci, law/pol-sci, humanities, phil/rel, business, sci/tech, medicine and misc. For the purpose of this study, we select three out of these ten and conduct individual searches there. The search sub-strings are sequences of characters, preceded or followed by *, according to affixes under consideration, e.g. **ation*, **ment*, *pre**, *un** etc. Given numerous search sub-strings and three discipline-based sub-corpora, the analyses result in high numbers of discipline-based wordlists. In this study, only a sample of the final results will be reported. Only affixed formations with lexicalized word-formation bases are retained. The items retained after manual cleaning of the raw-data lists enter frequency morphologically-complex wordlists (M-CWLs) for each discipline studied. Needless to say, COCA's ten discipline-like sub-divisions may be viewed as somewhat problematic for analyses whose goal is to retrieve vocabulary lists characteristic of these disciplines.

Each M-CWL is a raw-frequency list, with items arranged from the one with the highest number of tokens to the one with the lowest. Frequencies on different M-CWLs vary between these lists. It is necessary to take into consideration normalized frequencies (*nf*), which are comparable across different lists. Cutting-off points for high- and low-frequency items are established on the basis of the overall numbers of word types for each affix in each sub-corpus. Quantitative similarities and differences regarding individual affixed words in different lists are identified. Objective criteria are tested for recognizing certain word types as characteristic of the stable lexical core.

Numerous studies have shown that textual features such as grammatical constructions, lexical bundles (Hyland 2008: 7), or phraseology (Vincent 2013: 44), vary systematically across disciplines (Cunningham 2017: 72). Individual disciplines frequently develop their own patterns of discourse which tend to depart from those found in general English (Montero-Fleta 2011: 4). As for vocabulary in academic discourse, the existence of some lexical core, common to a wide range of disciplines, has also been questioned by some scholars. The behaviour of individual lexical items has been claimed to vary across disciplines as for their range, meanings, collocations they enter or frequencies that they show (Hyland & Tse 2007:

235). This research signifies as much individuation in morphological styles as possible. Although generalizations are necessary, it is important to arrive at them on the basis of individual texts from different genres.

In the course of our analysis, we establish a certain amount of stability across disciplines involving affixed words. It seems inevitable that certain “cores” of complex words are used by individual authors for all kinds of purposes in specialist writing across disciplines (cf. Brezina & Gablasova 2015: 17). We indicate candidate affixes which constitute the core of lexical complexity of academic texts in the humanities and social sciences. Some high-frequency, but also – unpredictably – some low-frequency, affixed words appear to be common to more varieties, that is belong to the stable core of written English. We also identify affixation areas which are characteristic of only certain fields within the humanities and social sciences. Our preliminary results are not conclusive, but rather indicative of certain tendencies signalled in this study.

Our findings have the potential of informing both theoretical and applied morphology. The former receives systematic data showing more detailed tendencies in morphological productivity. The latter is informed about morphological (ir)regularities applicable to academic writing across disciplines.

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