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ON AGREE FEEDING INTERPRETATION:
HONORIFICATION, EMPATHY, AND SWITCH REFERENCE

By

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ABSTRACT OF THE DISSERTATION

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Abstract

Agree is one of the few core syntactic operations posited in minimalist syntax (Chomsky, 2000, 2001) and as such its nature has been subject to debate from various perspectives. While the standard assumption is that the result of Agree does not affect interpretation, this dissertation shows that Agree can not only affect PF but can also affect LF by providing arguments to some semantic predicates. In particular, I claim that some functional heads are semantic predicates that select their arguments via Agree over index features.

I first establish the claim by examining Object Honorifics in Japanese. Previous syntactic literature has considered object agreement over an honorific feature borne by the object (Toribio, 1990; Hasegawa, 2017, a.o.). This approach has been supported by the observation that the distribution of the object that controls object honorific marking is constrained by the configurational constraints on Agree (Niinuma, 2003; Boeckx and Niinuma, 2004; Boeckx, 2006). I show, however, that the Object Honorific construction expresses an honorific relationship between the subject referent and the object referent, which cannot be reduced to the semantics of the honorific feature on the object. I claim that the head responsible for the Object Honorific marking is a

semantic predicate *honor*, and finds its arguments via Agree.

I go on to extend the idea to three other phenomena, Japanese Benefactive auxiliaries, the Direct / Inverse system in Japhug and the typology of Switch Reference. In each of these phenomena, the pivotal head establishes a relationship with some nominal expressions already in the sentence. While this relationship can be established only in a configuration where an Agree relationship can be established, each phenomenon involves components that cannot be reduced to a feature on the nominal expressions. I will show that the idea that semantic predicates can select their arguments via Agree straightforwardly captures these apparently conflicting observations.

At an empirical level, this dissertation sheds light on the aspects of the four phenomena that have been ignored or considered problematic and set aside in many of the previous syntactic studies. At a theoretical level, the conclusion of this dissertation has implications not only on the issue of the interpretability of Agree but also on the mechanism of selection and on the direction of Agree.

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Chapter 1

Introduction

1.1 Theoretical background

This dissertation aims to show that Agree can not only affect PF but can also affect LF by providing arguments to semantic predicates. Through examining four distinct phenomena, I claim that some functional heads are semantic predicates that select their arguments via Agree over index features.

Agree is one of the few core syntactic operations posited in minimalist syntax (Chomsky, 2000, 2001) and as such its nature has been subject to debate from various perspectives. The central empirical case that has motivated the postulation of Agree is morphological ϕ -agreement. In ϕ -agreement, a ϕ -feature on a nominal expression appears on a different head under certain configurations, and such agreement does not obviously affect the interpretation of the expression. Accordingly, Agree was originally defined as an operation that deletes an uninterpretable feature as shown in (1) (Chomsky (2000, 2001); See also Chomsky (1995)).

- (1) “... the uninterpretable features, and only these, enter the derivation without values.... Their values are determined by Agree, at which point the features must be deleted from the narrow syntax... but left available for phonology”

(Chomsky, 2001, 487)

The lack of effect on interpretation has also led to the idea of deriving ϕ -agreement solely by operations at PF (Marantz, 1991; Halle and Marantz, 1993; Bobaljik, 2008; Landau, 2016; Choi and Harley, 2019). Such an approach to morphological ϕ -agreement even makes it possible to sever Agree from narrow syntax if ϕ -agreement is the sole instance of phenomena involving the operation Agree.

But Agree by itself is an operation that creates a potentially long-distant relationship between two syntactic objects under a specific configuration defined by c-command, phases and intervention. Crucially, there is no inherent reason why uninterpretability and the relationship of these with specific configurational characteristics have to be tangled together. In fact, theoretically, Pesetsky and Torrego (2007) propose that Agree does not have to be initiated by an uninterpretable probe. Empirically, there have been attempts to account for broader phenomena, including some that have a semantic nature, using the configurational dependency established by Agree (e.g. binding (Reuland, 2005, 2011; Hicks, 2009; Antonenko, 2012), Switch Reference (Arregi and Hanink, 2018, 2019, 2021; Baker and Camargo Souza, 2020; Camargo Souza, 2020; Clem, 2019, 2021) and negative concord (Zeijlstra, 2004, 2012; Bjorkman and Zeijlstra, 2014)). This dissertation aims to contribute to this line of research by showing that Agree can be involved in semantic selection: some heads are semantic predicates that select their semantic arguments via Agree.

At the empirical level, I deal with following four phenomena: Object Honorifics in Japanese, Benefactive auxiliaries in Japanese, the Direct / Inverse system in Japhug, and the typology of Switch Reference systems. In each of these phenomena, the responsible head establishes a relationship with some nominal expressions already in the sentence. I show that the nature of the relationship between the head and the nominal expressions is semantic selection. Crucially, however, I show that this selectional

relationship can be established only in a configuration where an Agree relationship can be established. Based on these observations, I claim that the responsible heads in these phenomena select their arguments via Agree.

In this dissertation, I assume the definition of Agree shown in (2). I here adopt the valuation view of Agree following Chomsky (2000, 2001).¹ I follow the view by Pesetsky and Torrego (2007) that the unvaluedness of a feature is independent of the uninterpretability of the feature and it is the unvalued feature that serves as a probe, whether it is interpretable or not. Note that the definition in (2) allows both downward probing and upward probing, following Baker (2008) and Merchant (2006).

- (2) Agree
- a. An unvalued feature F (a probe) either looks downward or upward for XP with another instance of F (a goal). (i.e., either F c-commands XP or XP c-commands F)
 - b. The value of the goal is assigned to the probe.

I define the specific configurational conditions that apply to Agree as shown in (3), following the summary of Chomsky (2000) by Baker (2008). Note that I do not assume an activity condition, given the observation by Baker (2008) that blocking of Agree by a valued case feature on a nominal expression is parameterized and hence is not an inherent characteristics of the operation Agree. The definition in (3) is adjusted from Chomsky (2000) so that it fits to both upward Agree and downward Agree, in accordance with the definition in (2). In case the conditions in (3) are satisfied by more than one XP with F, I assume that the probe can agree with any of them.

- (3) A feature F on a head H agrees with XP, XP a maximal projection, only if

¹I can alternatively adopt the feature sharing view of Agree of Pesetsky and Torrego (2007). The choice between the valuation view and the feature sharing view is trivial for the current dissertation, as the cases that I discuss does not involve Agree between two unvalued features.

the following conditions are satisfied:

- a. **C-command condition:** there is a c-command relationship between H and XP.
- b. **Intervention condition:** there is no YP such that YP comes between XP and H and YP has another instance of F.
- c. **Phase condition:** H and XP are contained in the same phase

The relationship “comes between” addressed in (3-b) is defined in (4), which intuitively mentions that A comes between B and C only if either B or C c-commands A and, at the same time, A c-commands or dominates the other. Again the definition is adjusted so that it is compatible with both upward Agree and downward Agree. Note that this definition of intervention condition is sensitive to A-over-A interveners in addition to c-commanding interveners (Niinuma, 2003; Rackowski and Richards, 2005).

- (4) A comes between B and C, if and only if
- a. B c-commands A and, for all X such that X dominates A, X dominates C and the reverse is not true, or
 - b. C c-commands A and, for all X such that X dominates A, X dominates B and the reverse is not true

These definitions are combinations of what has been proposed in the previous studies and hence are independently motivated by morphological patterns. In this dissertation, I show that the structural relationship captured by Agree as defined by (2)–(4) plays a crucial role in argument selection for some semantic predicates.

1.2 Outline of the dissertation

In this dissertation, I mainly examine four empirical phenomena as involving semantic predicates that select their arguments via Agree. Each major chapter of the dissertation explores one of the four phenomena. The outline of the dissertation is shown below.

In Chapter 2, I develop the proposal in detail by examining Object Honorifics (OH) in Japanese, where the predicate obtains a special morphological marking when the object refers to an honored entity as shown in (5).

- (5) a. Taroo-wa Hanako-o tasuke-ta
 Taroo-TOP Hanako-ACC help-PAST
 ‘Taroo helped (non-honorific) Hanako.’
- b. Taroo-wa butyoo-o o-tasuke-si-ta.
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’

Honorific expressions in general are often analyzed as a kind of morphological agreement over honorific features on an NP, comparable to ϕ -agreement (Miyagawa, 2012; McFadden, 2020; Alok, 2020a,b). Object Honorifics in Japanese have also been given a similar analysis: previous syntactic literature has considered it to be object agreement using an honorific feature held by the object (Toribio, 1990; Hasegawa, 2017; Oseki and Tagawa, 2019; Ikawa and Yamada, 2022). Such an approach has been supported by the observation that the distribution of the object that controls object honorific marking is constrained by the Agree configuration as defined in (3) (Niinuma, 2003; Boeckx and Niinuma, 2004; Boeckx, 2006). I show, however, that the Object Honorific construction bears a relational honorific meaning that cannot be reduced to the semantics of the honorific feature on the object alone, based on the observation that the Object Honorific construction is unavailable when the subject

referent does not honor the object referent as shown in (6) (Kikuchi, 1994; Moriyama, 1996).

- (6) #syatyoo-wa butyoo-o o-tasuke-**si**-ta
 CEO-TOP manager-ACC HON.PREF-help-do-PAST
 ‘The CEO helped (OH) the manager.’

I claim that the head responsible for the Object Honorific marking has its own semantic predicate *honor*, and finds its arguments via Agree. I further show that honorific expressions in Japanese in general do not involve morphological agreement over honorific features, in contrast with honorific systems in other languages such as Magahi.

In Chapter 3, I support the proposal from Ch.2 that Agree can be involved in semantic selection by taking up another phenomenon from Japanese, the Benefactive auxiliaries *age/yar* (Yamada, 2004; Okura, 2009; Tomioka and Kim, 2017; Hasegawa, 2018).

- (7) watasi-wa Hanako-o sasotte-**age**/**yar**-ta
 1sg-TOP Hanako-ACC invite-PAST
 ‘I invited Hanako for Hanako’s benefit.’

These auxiliaries are known to add meanings that (i) an event described by the main predicate benefits the referent of the object, and (ii) the referent of the subject is more empathized with than the beneficiary (i.e. the recipient of the benefit). Crucially, it is not the case that a referent of any object NP serves as a beneficiary. It has been noted, for example, that only the indirect object, *Yamada.san* ‘Mr.Yamada’, can be interpreted to be a beneficiary in the ditransitive sentence in (8) (Hasegawa, 2017, 2018).

- (8) Hanako-ga Yamada.san-ni Satoo.san-o syookai-site-**age**-ta
 Hanako-NOM Mr.Yamda-DAT Mr.Satoo-ACC introduce-do-BEN-PAST
 ‘Hanako introduced Mr.Sato to Mr.Yamada (for Mr.Yamada’s benefit /# for Mr.Sato’s benefit).’
 (Hasegawa, 2017, 23)

I show that the distribution of the object which serves as the beneficiary can be captured if it is a goal of a probe from the benefactive auxiliaries. I thus claim that these auxiliaries are also semantic predicates that select their arguments via Agree. Note that the account here is parallel to the account of Japanese Object Honorifics in Ch.2. Interestingly, however, a detailed examination reveals that the distribution of the beneficiary is similar to, but is slightly different from, the distribution of the trigger of object honorifics (cf. Hasegawa (2018)). I claim that the difference follows naturally from the position of the honorific and benefactive morphemes, which I consider to be the probing heads. Finally, these auxiliaries *age/yar* are often compared to another benefactive auxiliary *kure*, which is considered to have a reverse empathy meaning from *age/yar*. I show, however, that *kure* does not involve Agree and hence involves a different mechanism from *age/yar* in spite of their surface similarity.

In Chapter 4, I extend the analysis beyond Japanese to the Direct / Inverse system in Japhug. A Direct / Inverse system is a cross-linguistically reported phenomenon, in which the form of the predicate, including its morphological ϕ -agreement pattern, changes depending on the relationship between the subject and the object. For example, in (9-a), the sentence appears in Direct form, where the predicate appears with a phonologically null Direct marker and agrees with the subject. On the other hand, in (9-b), the sentence appears in Inverse form, where the predicate appears with an inverse marker *wy* and agrees with the object.

- | | |
|--|---|
| <p>(9) a. Direct form / 2→3</p> <p style="padding-left: 2em;">pu- tu- mtó -t</p> <p style="padding-left: 2em;">AOR- 2- see -PST</p> <p style="padding-left: 2em;">‘You saw him/her/it.’</p> | <p>b. Inverse form / 3→2</p> <p style="padding-left: 2em;">pu- tu- wy- mto</p> <p style="padding-left: 2em;">AOR- 2- INV- see</p> <p style="padding-left: 2em;">‘He/she/it saw you.’</p> |
|--|---|

(Jacques, 2010, 129; Japhug)

Because of their sensitivity to the person features of the subject and the object and

their effect on morphological ϕ -agreement, Direct / Inverse systems have often been analyzed as purely morpho-syntactic phenomena derived from Agree over ϕ -features (Béjar and Rezac, 2009; Lochbihler, 2012; Oxford, 2019, a.o.). However, based on the data where both the subject and the object are third person DPs, I show that Direct / Inverse systems encode a semantic empathy relationship, which cannot be reduced to a morphological feature, even if one considers an additional feature such as [proximate]. Examining the Direct / Inverse system in Japhug as a case study, I claim that the idea that semantic predicates can select their argument via Agree provides a way to account for the effect of semantic empathy on the choice between the Direct / Inverse constructions as well as its consequences for morphological ϕ -agreement. The analysis in this chapter suggests that a single result of Agree can be sent to both PF and LF, which was not visible from the data in Japanese examined in Ch.2–3, which lacks overt agreement morphology for ϕ -features.

In Chapter 5, I extend the proposal to one more empirical domain, Switch Reference. I show that the current idea that semantic predicates can select their arguments via Agree can be utilized to capture a long-standing problem in the study of Switch Reference. Switch Reference is a system in which the form of the embedded complementizer changes depending on whether the embedded subject co-refers with the matrix subject (Same Subject (SS)) or not (Different Subject (DS)), as shown in (10).

(10) SR marking in Adverbial clauses (Kiowa)

- a. Ø-hé:ba=**tsē**: em-só:
 3s-enter:PF=when:SS 3sA:RO-sit.down:PF
 ‘[When she₁ came in], she_{1/*2} sat down.’
- b. Ø-hé:ba=**ē**: em-só:
 3s-enter:PF=when:DS 3sA:RO-sit.down:PF
 ‘[When she₁ came in], she_{*1/2} sat down.’

(McKenzie, 2012, 46)

Many previous studies, especially recent ones, have argued that Switch Reference in-

volves Agree between the embedded C head and the two subjects, based on structural conditions on the relationship (Arregi and Hanink, 2021; Baker and Camargo Souza, 2020; Camargo Souza, 2020; Clem, 2021). However, it is known that Switch Reference markers can be sensitive to more complex set-theoretic relationships between the referent of the embedded subject and the referent of the matrix subject than simple coreference, and this has been a problem for some previous studies. For example, the Diyari SS marker is available when the referent of the matrix subject is a subset of the referent of the embedded subject, but not when the referent of the matrix subject is a superset of the referent of the embedded subject, as shown in (11). Different languages show different behaviors with regard to these complex cases.

- (11) a. nhulu nganthi pardaka-rna warrayi, thanali thayi-**lha**
 he-ERG meat-ABS bring-PART AUX they-ERG eat-IMPL(SS)
 ‘He brought the meat for them (i.e. him and others) to eat.’
 (Austin, 1981, 316, Diyari)
- b. ngalda wapa-lha nganayi, nganhi nhungkangu
 we(du.incl)-NOM go-FUT AUX I-NOM him-LOC
 yathayatha-rnanthu
 speak-IMPL(DS)
 ‘We two will go so I can talk to him.’ (Austin, 1981, 317, Diyari)

I show that the current proposal makes it possible to capture straightforwardly this observation within an Agree-based analysis by saying that Switch Reference markers are semantic predicates with set-theoretic contents which select their arguments via Agree.

In Chapter 6, I conclude by discussing the theoretical consequences of the proposal. I mainly discuss three issues. First, I discuss the relationship that Agree has with PF and LF. As was also argued above, I discuss the implication that the current proposal has on the issue of interpretability of the result of Agree and the locus of the Agree operation in the Y-model of grammar. I claim that the results of Agree

operations examined in this dissertation are visible to both PF and LF, not just LF, although their effect on PF can be blurred by other factors such as morphological economy. Second, I discuss implications of the current proposal for the theory of selection. I claim that the kind of selection that I discuss in this dissertation has to be distinguished from selection by normal predicates like verbs. Nevertheless, I claim that the current proposal has implications for the selection by normal predicates, supporting the view of Hornstein (1999) and related works. Third, I address the issue of the direction of Agree. In this dissertation, I assume that both upward probing and downward probing are possible as defined above and utilize bi-directional Agree in each chapter. I argue that such bi-directional Agree cannot be reduced to cyclic downward Agree with regard to the phenomena that I discuss.

Chapter 2

Object Honorifics in Japanese

This chapter deals with *Object Honorifics* (OH) in Japanese and related phenomena. In Section 2.1, I establish the claim that there is a semantic predicate which selects its arguments via Agree.¹ While OH has been treated as morphological agreement over honorificity features, I examine the theoretically hitherto unexplored observation that the choice of the subject also affects the availability of the OH construction and show that the idea of selection via Agree is needed to capture this observation. In Section 2.2, I broaden the perspective to other kinds of honorific expressions in Japanese and show that my proposal can correctly capture how honorific expressions (do not) interact with each other, as well as how they contrast with honorific systems in other languages. In Section 2.3, I deal with Subject Honorifics in Korean. I show that, while Korean SH shows a pattern apparently similar to Japanese OH, I claim that the mechanism behind it differs from that behind Japanese OH.

¹A large part of Section 2.1 will appear as: Ikawa. S to appear. Agree feeds interpretation: Evidence from Japanese Object Honorifics. *Syntax*.

2.1 Object Honorifics

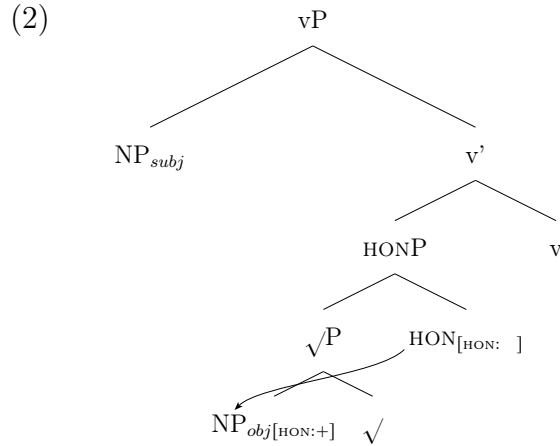
2.1.1 Introduction

Japanese has a construction called Object Honorifics (*kenzyoo-go* in Japanese), which marks the honorific status of the referent of the object argument. The morphology of OH construction involves the prefix *o* (or its allomorph *go*, conditioned by Sino-Japanese verbal roots) and the light verb *sur* following the verbal root. The contrast between the non-honorific (NH) construction and the OH construction is shown in (1). While the NH sentence in (1-a) is neutral about the social status of the arguments, the OH sentence in (1-b) is appropriate only when the object referent is someone who is honored from the point of view of the speaker. That is, the form of the predicate changes depending on the property of the object argument. Stated in this way, OH marking appears to be similar to the object ϕ -agreement observed in other languages.

- (1) a. Taroo-wa Hanako-o tasuke-ta
 Taroo-TOP Hanako-ACC help-PAST
 ‘Taroo helped (NH) Hanako.’
 b. Taroo-wa butyoo-o o-tasuke-si-ta.
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’

In fact, some previous studies consider OH to be a kind of agreement, where a probe around *v* looks down to agree with the closest animate NP in terms of honorificity (Toribio, 1990; Niinuma, 2003; Boeckx and Niinuma, 2004; Hasegawa, 2017; Oseki and Tagawa, 2019; Ikawa and Yamada, 2022). Ikawa and Yamada (2022), for example, propose that the probe resides in a head HON, which occurs right below *v* as shown in the structure in (2). For them, NPs are assigned features [HON:+] or [HON:–] by the speaker, and the probe on the HON head probes down to find the highest NP below it to agree with it over [HON:±]. The HON head, when valued

as [HON: +], gets pronounced as the OH prefix *o/go* by undergoing morphological lowering to $\sqrt{}$. When valued as [HON: –], it is realized as phonologically null.



Notably, however, the speaker honoring the object referent is not a sufficient condition for the use of OH. While often ignored by theoretical works on the OH construction, it has been observed that not only the speaker but also the referent of *the subject* has to honor the object referent for OH to be acceptable (Kikuchi, 1994; Moriyama, 1996). Thus, while (1-b) is acceptable under a natural context where the subject referent, Taroo, has a lower social status than the object referent, the manager, the use of OH in (3-a) is unacceptable even if the speaker honors the object referent, given that the referent of the subject, the CEO, has a higher status than the referent of the object, the manager, under a natural context.² The sentence instead requires the predicate to be either in the non-honorific form or in the subject honorific form, as shown in (3-b). Note that the infelicity of OH marking in (3-a) does not simply come from the lack of subject honorification, which is clear from the acceptability of non-honorific marking in (3-b).

²I use the term “infelicity” to refer to this unacceptability, given that the sentence in (3-a) is not ungrammatical as a string of words, but is simply incompatible with the world knowledge that the CEO is not in a position to honor the manager. I use # to mark infelicity in the rest of this dissertation.

- (3) a. #syatyoo-wa butyoo-o o-tasuke-si-ta
 CEO-TOP manager-ACC HON.PREF-help-do-PAST
 ‘The CEO helped (OH) the manager.’
 b. syatyoo-wa butyoo-o tasuke-ta / o-tasuke-ni-nar-ta
 CEO-TOP manager-ACC help-PAST / help.SH-PAST
 ‘The CEO helped (NH/SH) the manager.’³

The example in (4) further confirms that honor from the subject referent to the object referent is what matters here, rather than the relative social status between them: even though the criminal has a lower social status than the professor, OH marking is not acceptable in the sentence when the subject refers to a criminal and the object refers to a professor because the referent of the subject does not honor the professor in this example.⁴

- (4) #hannin-wa sensei-ni kyoohakuzuyoo-o o-okuri-si-ta
 criminal-TOP professor-DAT threatening.note-ACC HON.PREF-send-do-PAST
 ‘The criminal sent (OH) a threatening note to the professor.’

(Kikuchi, 1994, 259)

Agree between the object and the predicate over [HON:±] as indicated in (2) does not encode the relationship between the subject referent and the object referent. Thus, the data in (3-a) and (4) pose a problem to the view of OH from the previous

³The SH construction used here is a different SH construction from the *nasar* SH construction, which is discussed in Section 2.1.2.4. For the reason stated in footnote 15, the native Japanese verb *tasuke* ‘help’ is not highly compatible with the *nasar* SH.

⁴This does not mean that the use of OH requires the subject referent or the speaker to *wholeheartedly* honor the object referent: for example, the following example provided by one of the anonymous reviewers of *Syntax* is acceptable, even though the criminal (=the speaker/the subject referent) does not sincerely honor the old lady, but pretends to do so. I regard (i) to be a case of lying, and the use of OH is felicitous as the honor relationship that it indicates is compatible with the world knowledge which the speaker is pretending to be true.

- (i) *Context:* A criminal is talking to an old lady, trying to deceive her.
 watasi-ga senzitu okyakusama-ni syorui-o o-okuri-si-masi-ta
 1sg-NOM the.other.day customer-DAT document-ACC HON.PREF-send-do-POL-PAST
 ‘I sent(OH) the document to the customer (i.e. you) the other day.’

literature.

To account for these observations, I propose that the OH marker is semantically a predicate *honor*, and finds its arguments via Agree. First, in Section 2.1.2, I review the arguments from previous studies that the OH marking is triggered by an honored object selected via downward Agree (Niinuma, 2003; Boeckx and Niinuma, 2004; Ikawa and Yamada, 2022), as well as give additional support to it. Second, in Section 2.1.3, I claim that the “subject” NP that matters for OH is selected by upward Agree. Third, in Section 2.1.4, I show that the observations in (3)–(4) can be explained only if the OH marker denotes that the Speaker and the subject referent honor the object referent. I then claim that combining these three considerations leads to the conclusion that the result of Agree can feed a semantic predicate *honor*.

2.1.2 Agree chooses the “object”

2.1.2.1 Agree patterns

As the name indicates, OH marking is triggered by an honored object. However, once we consider sentences with multiple NPs around the object position, such as ditransitive sentences, it has to be determined which NP triggers OH marking on the predicate when it refers to an honored entity. Previous studies have shown evidence that the NP that triggers OH marking is chosen via downward Agree from a probing head around *v*, targeting a feature that is held by animate NPs (Niinuma, 2003; Boeckx and Niinuma, 2004; Boeckx, 2006).

The intervention effect in ditransitive sentences Niinuma (2003), Boeckx and Niinuma (2004) and Boeckx (2006) argue that OH obeys the Intervention condition in the choice of the trigger of OH marking in ditransitive sentences: OH can be triggered only by honored indirect objects (IOs), but not by honored direct objects (DOs), in double object constructions, as first observed by Harada (1976). For example, (5)

shows that the OH marking is acceptable when the IO refers to an honored entity, *Tanaka.sensei* ‘Professor Tanaka’ here, but not when the DO is an honored entity and the dative-marked argument is non-honored, such as *Mary*. That is, in the presence of an IO, a DO cannot trigger OH marking on the predicate. The same pattern can be observed with different ditransitive predicates as shown in (6), indicating that this is not a specific requirement for the lexical item *syookai* ‘introduce’.

- (5) a. Hanako-ga Tanaka.sensei-ni Mary-o **go-syookai-si**-ta.
 Hanako-NOM Tanaka.prof-DAT Mary-ACC HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Mary to Professor Tanaka.’
 b. Hanako-ga Mary-ni Tanaka.sensei-o
 Hanako-NOM Mary-DAT Tanaka.sensei-ACC
 syookai-si-ta / #**go-syookai-si**-ta
 introduce-PAST / HON.PREF-introduce-do-PAST
 ‘Hanako introduced / #introduced (OH) Professor Tanaka to Mary.’⁵
- (Boeckx and Niinuma, 2004, 456)

- (6) a. watasi-wa Tanaka.sensei-ni (syasin-de) otooto-o
 1sg-TOP Prof.Tanaka-DAT (photo-with) brother-ACC
o-mise-si-ta
 HON.PREF-show-do-PAST
 ‘I showed (OH) my younger brother to Prof.Tanaka (using a photo).’
 b. watasi-wa otooto-ni (syasin-de) Tanaka.sensei-o
 1sg-TOP brother-DAT (photo-with) Prof.Tanaka-ACC
 mise / #**o-mise-si**-ta
 show / HON.PREF-show-do-PAST
 ‘I showed / #showed (OH) Prof.Tanaka to my younger brother (using a photo).’

The example in (7) shows that, with the same predicate as (5), *syookai* ‘introduce’, but without the dative argument, the DO can trigger OH marking.

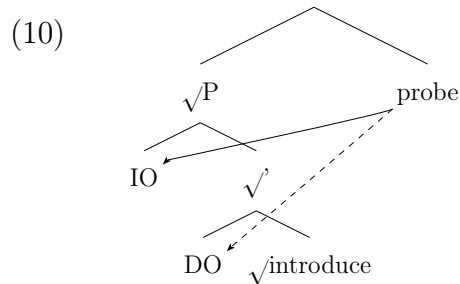
- (7) Hanako-wa (sono sinpozium-de) Tanaka.sensei-o
 Hanako-TOP (that simposium-at) Prof.Tanaka-ACC

⁵If the OH construction is used, the OH marker is only interpretable as expressing honor towards Mary, which is pragmatically infelicitous.

go-syookai-**si**-ta
 HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Prof. Tanaka (at the simposium).’

This behavior of OH is parallel to a common pattern in object ϕ -agreement (Baker, 2008, 2013). As Niinuma (2003) and Boeckx and Niinuma (2004) point out, this pattern can be considered as resulting from the intervention condition of Agree, whose definition is repeated in (8)–(9): if an IO exists in between the probe and the DO as shown in (10), the probe cannot reach the DO because of the intervening NP.

- (8) **Intervention condition:** there is no YP such that YP comes between XP and H and YP has another instance of F.
- (9) A comes between B and C, iff
- a. B c-commands A and, for all X such that X dominates A, X dominates C and the reverse is not true, or
 - b. C c-commands A and, for all X such that X dominates A, X dominates B and the reverse is not true

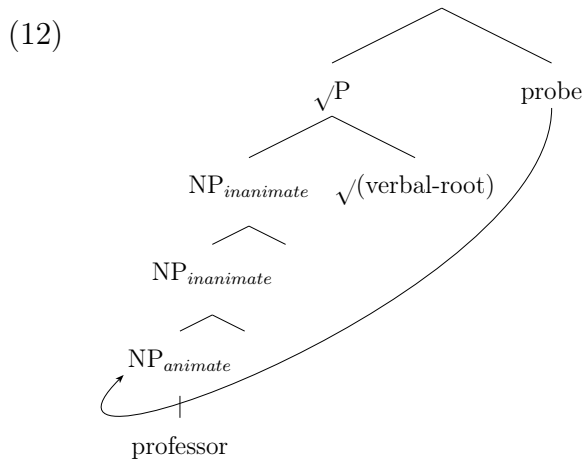


Note that, as shown in (11), the OH marking triggered by the direct object *Tanaka.sensei* ‘Prof.Tanaka’ is possible when the IO is inanimate, *kaizyoo* ‘place’, as stated in Niinuma (2003).

- (11) Watasi-wa kaizyoo-ni Tanaka.sensei-o o-ture-**si**-ta
 1sg.-TOP place-DAT Prof.Tanaka-ACC HON.PREF-take-do-PAST
 ‘I took (OH) Prof.Tanaka to the place.’ (Boeckx and Niinuma, 2004, 456)

What the acceptability of (11) suggests is that the probe is relativized to animate NPs, such that the feature F the probe looks for is only held by animate NPs. The specific nature of this feature F is discussed later in Section 2.1.4.

The intervention effect inside NPs Niinuma (2003) further observes that a kind of intervention condition is also observed when one NP contains another.⁶ Given that an inanimate NP does not intervene for the OH probe-goal relation, the Agree view predicts that the OH probe can look inside inanimate NPs, searching for an animate NP, as shown in the structure in (12).



Niinuma (2003) shows that this prediction is borne out. For example, the predicate in (13-a) can take the OH form, even though the honored NP, *sensei* ‘professor’, is not the object itself, but is a genitive NP embedded inside an inanimate NP. The example in (13-b) shows that the trigger of the OH marking can be further embedded inside the possessor of the object.

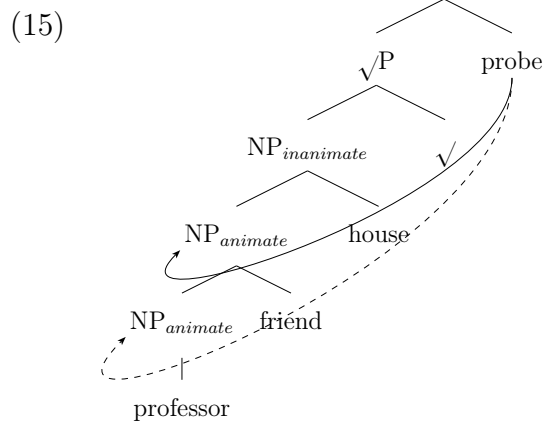
- (13) a. watasi-wa [[sensei]-no hon]-o o-yomi-si-ta
 1sg-TOP professor-GEN book-ACC HON.PREF-read-do-PAST
 ‘I read (OH) the professor’s book.’
 b. watasi-wa [[[sensei]-no ie]-no tikaku]-o
 1sg-TOP prof-GEN house-ACC surroundings-ACC

⁶Following Niinuma (2003), I adopt the view that Japanese nominal elements are NPs, not phasal DPs, as also independently supported by works such as Fukui (1986), Tomioka (2003), Boskovic (2008) and Bošković and Gajewski (2011).

o-tazune-si-ta
 HON.PREF-visit-do-PAST
 ‘I visited (OH) the professor’s house’s surroundings. (with honor toward the professor)’

Crucially, this agreement with a possessive is also blocked if there is an intervening animate possessee. For example, (14) is not interpretable as expressing honor toward the professor, but is only interpreted as expressing honor toward the professor’s neighbor. This again can be considered as an intervention effect, under the definition of intervention in (8)–(9): the structure in (15) shows that the animate NP *sensei-no rinzin* ‘the professor’s neighbor’ intervenes between *sensei* ‘professor’ and the probe by being c-commanded by the probe and dominating *sensei*, and thus the probe cannot reach the NP *sensei*.

- (14) #*watasi-wa* [[[*sensei*]-no *rinzin*]-no *ie*]-o **o-tazune-si-ta**
 1sg.-TOP professor-GEN neighbor-GEN house-ACC HON.PREF-visit-do-PAST
 ‘I visited (OH) the professor’s neighbor’s house.’



Thus, the intervention for OH is visible in both ditransitive verb phrases and inside nominal domains. As has been pointed out by Niinuma (2003), these observations suggest that the operation Agree is involved in the choice of the trigger of the OH marking.

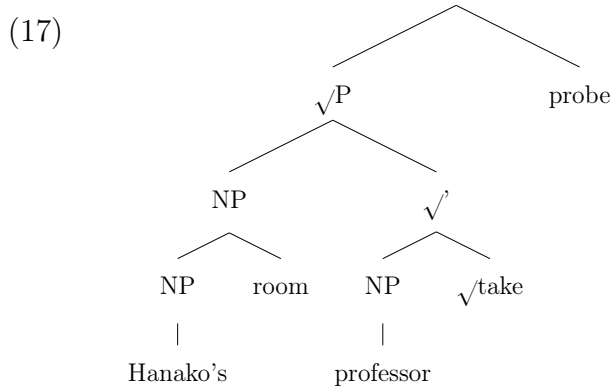
2.1.2.2 Additional support for the involvement of Agree

While I have so far reviewed the arguments from the previous studies that the choice of the trigger of OH marking involves Agree, I can further add two more pieces of evidence to strengthen this view.

First, the intervention pattern in ditransitive sentences we reviewed in Section 2.1.2.1 is correctly predicted to be absent in appropriate configurations. We saw in (5) that Agree between the OH probe and a DO is blocked by an animate IO. However, when an animate NP is in the possessor position of an IO but the IO as a whole is inanimate, then either the DO or the possessor NP in the IO can trigger OH marking. For example, in (16), OH is possible whether the honored NP *sensei* ‘professor’ is the DO or the genitive NP inside the IO. What is crucial here is that the presence of *Hanako* inside the IO does not prevent the OH marking triggered by the DO in (16-a). This is predicted from the Agree analysis: as the structure in (17) shows, the possessor inside the IO does not c-command or dominate ‘professor’. Thus, by the definition of the intervention condition in (8)–(9), *Hanako* does not intervene between the probe and the DO. As stated along with the definition of Agree, I assume that, when there are multiple potential goals for a probe, the probe can Agree with any of them. As the possessor NP inside the IO and the DO are both potential goals for a downward probe around *v*, the Agree analysis correctly predicts the acceptability of both (16-a) and (16-b).

- (16) a. Taroo-wa Hanako-no heya-ni sensei-o
 Taroo-TOP Hanako-GEN room-DAT professor-ACC
o-ture-si-ta
 HON.PREF-take-do-PAST
 ‘Taroo took the professor to Hanako’s room.’
- b. Taroo-wa sensei-no heya-ni Hanako-o
 Taroo-TOP professor-GEN room-DAT Hanako-ACC
o-ture-si-ta
 HON.PREF-take-do-PAST

‘Taroo took Hanako to the professor’s room.’



This sensitivity to the structural relations of domination and c-command also suggests that Agree is involved in the choice of which NP can trigger OH.⁷

Another source of support for the view that the choice of the NP that triggers OH marking is Agree-based comes from the fact that the OH marking is sensitive to phase boundaries. For example, the examples in (18) show that one cannot have an OH marked predicate when the NP *sensei* ‘professor’ is not in the same phase, but in an embedded clause, even if it is the closest animate NP for the matrix predicate probing downward.

- (18) a. #Taroo-wa [sensei-ga o-kirei-da-to]
 Taroo-TOP professor-NOM beautiful-COP.SH-that
o-omoi-si-ta
 HON.PREF-think-do-PAST
 ‘Taroo thought (OH) [the professor was beautiful].’
- b. #Taroo-wa [kansi-kamera-ga sensei-no sugata-o
 Taroo-TOP surveillance-camera-NOM professor-GEN figure-ACC
 toraeta-to] **o-kangae-si-ta**
 capture-that HON.PREF-think-do-PAST

⁷As suggested by Yimei Xiang (p.c.), it would be an interesting question how conjoined NPs behave with respect to the intervention effect. Especially intriguing is the case where the object NP is a conjunction of an animate NP and an inanimate NP: does the conjoined NP behave as an intervener for the relationship between the probe and the animate conjunct or for the relationship between the probe and the lower object? The theoretical prediction is not obvious, however, and varies depending on what the feature resolution strategy with respect to animate features is in Japanese. Moreover, empirically, it is often unnatural to conjoin an animate NP and inanimate NP. I thus do not go into this question here.

‘Taroo thought (OH) [the surveillance camera captured the professor].’

This follows from the phase condition of Agree as repeated in (19): under the assumption that the probe resides somewhere near the OH-marked predicate, then the dependency between the probe and the NP *sensei* ‘professor’ in (18) crosses a CP phase boundary, violating the phase condition.

(19) **Phase condition:** H and XP are contained in the same phase

Notice that the OH marking is improved in the raising-to-object construction.⁸ The example in (20) is a sentence parallel to (18-a) in this construction. The accusative case marking on *sensei* in (20) suggests that this NP is in a phase accessible from the matrix predicate, although I do not go into the details of what exactly the structure of this construction is (See Horn (2008) for extensive discussion on this construction). Thus, the improvement of OH marking in (20) in contrast with (18) suggests that the existence of a phase boundary is the factor that causes the low acceptability of the examples in (18).⁹

⁸I acknowledge that the example in (20) is not perfect. However, my informant as well as myself clearly prefers (20) compared with the example in (18-a). I conjecture that the slight degradation of (20) comes from the extremely low frequency of the OH-marking on the verb *omow* because of the unacceptability of OH marking on the canonical CP embedding as exemplified in (18-a)

⁹Niinuma (2003) and Boeckx and Niinuma (2004) point out examples where an NP apparently embedded inside what appears to be a PP triggers OH. For example, the honored NP *Tanaka sensei* ‘Prof. Tanaka’ in (i) accompanies what looks like a postposition *kara* ‘from’, but triggers OH on the predicate.

- (i) Taroo-ga Tanaka.sensei-kara hon-o o-kari-si-ta
 Taroo-NOM Tanaka.Prof-from book-ACC HON.PREF-borrow-do-PAST
 ‘Taroo borrowed the book from Prof.Tanaka’ (Boeckx and Niinuma, 2004)

This example seems to be a counter-example for the phase-condition under the common assumption that PP constitutes a phase. However, OH triggered by NPs inside PP-like phrases is only possible when the PP-like phrases are selected by predicates, as can be seen from the contrast in (ii-a)–(ii-b). The example in (ii-a) shows that the NP *Tanaka-sensei* ‘Professor Tanaka’ accompanying a P-like element *to* ‘with’ can trigger OH marking, when the phrase is selected by the predicate *au* ‘meet’. On the other hand, it cannot trigger OH marking, when the phrase *Tanaka-sensei-to* is a pure adjunct not selected by the predicate as shown in (ii-b).

- (20) ?watasi-wa [sensei-o okirei-da-to] o-omoi-si-ta
 Taroo-TOP professor-ACC beautiful-COP-that HON.PREF-think-do-PAST
 ‘Taroo thought (OH) the professor to be beautiful.’

Thus, overall, the distribution of NPs that can trigger OH marking indicates that an Agree relation exists between the probe around *v* and the honored NP in OH-marked sentences.

Before concluding this section, I briefly discuss one apparent counter-example to the intervention effect regarding a benefactive adjunct: Niinuma (2003) argues that the benefactive adjunct, *sensei-no-tame-ni* in (21) can serve as the honoree and thus is a potential goal for Agree. Note, however, that the benefactive adjunct does not trigger intervention effect as pointed out by an anonymous reviewer of *Syntax*. For example, in (22), OH is triggered by *butyoo* ‘the manager’ in spite of the presence of the benefactive adjunct *Taroo-no-tame-ni*.

- (21) boku-ga Tanaka.sensei-no-tame-ni mado-o o-ake-si-ta
 1sg-NOM Prof.Tanaka-GEN-sake-DAT window-ACC HON.PREF-open-do-PAST
 ‘I opened the window for the sake of Prof.Tanaka.’ (Niinuma, 2003, 20)
- (22) watasi-wa Taroo-no-tame-ni butyoo-o o-tasuke-si-ta
 1sg-TOP Taroo-GEN-sake-DAT manager-ACC HON.PREF-help-do-PAST
 ‘I helped (OH) the manager for the sake of Taroo.’

I account for this observation by claiming that the benefactive adjunct is not what is triggering the OH marking in (21), given the observation in fn. 9 that an adjunct PP

-
- (ii) a. Taroo-wa Tanaka-sensei-to o-ai-si-ta
 Taroo-TOP Tanaka-professor-with HON.PREF-meet-do-PAST
 ‘Taroo met (OH) Prof.Tanaka.’
- b. Taroo-wa Tanaka-sensei-to Hanako-o #o-tasuke-si-ta/tasuke-ta.
 Taroo-TOP Tanaka-PROF-with Hanako-ACC HON.PREF-help-do-PAST/help-PAST
 ‘Taroo helped (OH) Hanako with Prof.Tanaka.’

I thus consider the P-like elements that attaches to NPs triggering OH marking are case-markers that are adjoined to NPs and hence leave the NPs accessible from the probe in a higher position. See Boeckx and Niinuma (2004) and Boeckx (2006) for the adjunction analysis of P-like elements and Boeckx (2006) for evidence of a c-command relationship between the *kara*-marked NP and the accusative object.

cannot trigger OH. Instead, I follow Boeckx and Niinuma (2004) in assuming that there is a null benefactive applicative argument referring to Prof. Tanaka in (21) and it is this null applicative argument that triggers OH marking in (21).¹⁰ This view is supported by the fact that the OH marking triggered by a beneficiary can be observed even on a sentence without a benefactive adjunct marked with *no-tame-ni*, as shown in (23).

- (23) watasi-ga denwabangoo-o o-sirabe-si-masu
 lsg-NOM phone.number-ACC HON.PREF-check-do-POL-PRES
 ‘I will check the phone number (for [an honorific person]).’

(Boeckx and Niinuma, 2004, 460)

I consider this applicative argument can appear optionally and independently of the overt benefactive adjunct marked with *no-tame-ni*: in (22), as the null applicative argument is absent, the probe can access the sole object *butyoo* ‘manager’. Thus, the apparent lack of intervention effect by the benefactive adjunct does not pose a problem to the analysis that the OH marker accesses the object via Agree.

2.1.2.3 The necessity of a syntactic analysis

I have so far reviewed the arguments from the previous literature that show that an Agree-based analysis correctly captures which NP can trigger OH marking, as well as giving additional evidence for it. While a possible alternative for an Agree-based analysis is a purely semantic analysis (Watanabe et al. (2014), see also McCready (2019)), these data strongly support an Agree-based analysis against such an alternative.¹¹ A purely semantic analysis would claim that the OH marker modifies the main

¹⁰Condition B does not prevent a null applicative pronominal argument from appearing below the coreferring benefactive adjunct marked with *no-tame-ni*: given the presence of the true postposition *no-tame-ni* (cf. a P-like element in an argument PP in fn. 9), the NP *Tanaka-sensei* in the benefactive adjunct PP in (21) does not c-command the applicative argument.

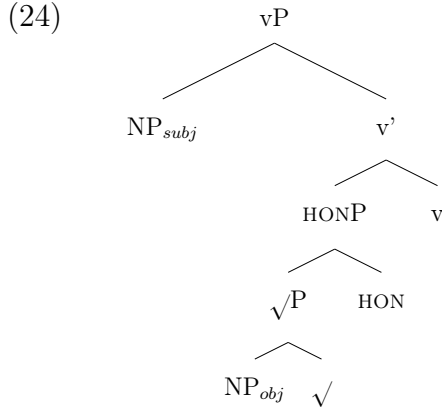
¹¹While McCready (2019) gives a semantic analysis for OH, she does not discuss how the honoree is identified and leaves open the possibility that Agree is involved in OH, citing Boeckx and Niinuma (2004).

predicate in the way that the “honoree” is semantically identified with a certain argument of the main predicate, either by the order in which it is semantically composed with the predicate (Watanabe et al., 2014) or by its thematic role. Such an account will not fully capture the observations so far. First, a purely semantic account cannot immediately handle the honorification of the possessor of the argument as shown in (13)–(14) above: the OH-marked predicates in these examples do not semantically select the possessor of the object NPs. Second, we saw that the existence of syntactically intervening animate NPs affects the possibility of honorification of the direct object. The semantic identification approach does not straightforwardly capture this pattern, while the Agree analysis naturally predicts it as we saw above.

2.1.2.4 The exact position of the probe

I have assumed that a probe for OH is located around v , but have not so far clarified where exactly the probe is located. This section aims to establish the morphological assumptions which I base my claim on in the following sections. The previous Agree analyses of OH vary on this point. Niinuma (2003) and Boeckx and Niinuma (2004) consider the probing head to be v itself, so as to make the analysis of OH as parallel to object ϕ -agreement as possible. In contrast, Ikawa and Yamada (2022) consider the honorific probe to reside in a distinct head, HON, which is right below v .¹² I adopt the view from Ikawa and Yamada (2022), and posit a head HON right below v as a locus of the honorific probe, as shown in (24). Importantly, as is discussed further in Section 2.1.4, I propose that the HON head right below v and the honorific probe on it appear only in OH constructions. In this section, I show that positing HON as a probing head that appears only in OH sentences nicely captures the morphology of OH.

¹²In this dissertation, I assume that $\sqrt{}$ introduces internal arguments and v introduces an external argument, although nothing in the proposal crucially hinges on this assumption.



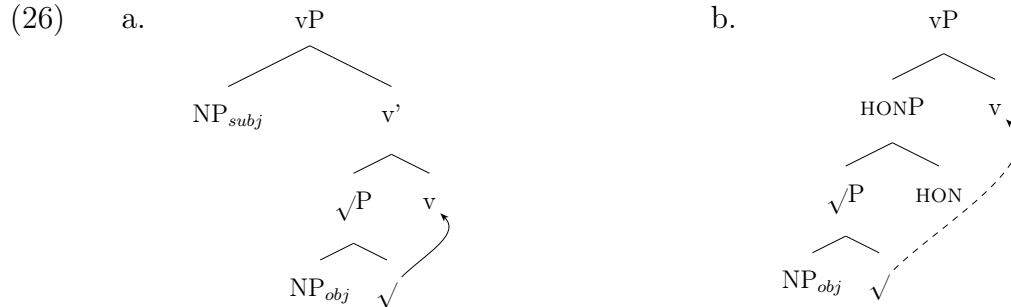
The morphological support for the HON view is two-fold. First, the presence of HON between $\sqrt{}$ and v correctly captures the appearance of a light verb in an OH sentence. A native Japanese verbal root is not accompanied by a light verb in its non-honorific form, as shown in (25-a). However, in its OH form, a native Japanese verb obligatorily occurs with a light verb as shown in (25-b).

- (25) a. Taroo-wa Hanako-o tasuke-(***si**)-ta
 Taroo-TOP Hanako-ACC help-do-PAST
 ‘Taroo helped (NH) Hanako.’
- b. Taroo-wa sensei-o o-tasuke-*(**si**)-ta
 Taroo-TOP professor-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) professor.’

This appearance of a light verb in OH can be straightforwardly explained once we posit HON right below v : the light verb *sur* can be considered as a phonological realization of the head v (Ivana and Sakai (2007), Nakajima (2010); see also Grimshaw and Mester (1988) and Miyagawa (1989) for relevant discussions), which appears only when v is not in the same complex head with $\sqrt{}$ and hence has to be pronounced by itself (Tagawa (2012); see Stroik (2001) for a similar idea). In a non-honorific form, $\sqrt{}$ head-moves to v as shown in (26-a). In an OH form, however, HON intervenes between $\sqrt{}$ and v , blocking the head-movement as shown in (26-b).¹³ Thus, v is

¹³I consider HON to be a head that cannot incorporate $\sqrt{}$ and thus blocks head-movement across itself, similarly to the Neg head that cannot incorporate \bar{V} and thus blocks the head-movement of

stranded without $\sqrt{}$ and gets realized as *sur*.



The second piece of evidence comes from the morphological form of the light verb itself. Sino-Japanese verbal roots are always accompanied by the light verb, even in their non-honorific forms as shown in (27-a).¹⁴ What is crucial here is that the form of the light verb is consistently *sur* across non-honorific and OH constructions, as shown in (27). That is, the phonological form of the head *v* is not affected by object honorification. As Ikawa and Yamada (2022) point out, this is in sharp contrast with a Subject Honorific (SH) construction, which marks honor toward the subject referent: in SH, the predicate is marked with the honorific form of the light verb *nasar*, along with the same honorific prefix *o/go*, as shown in (28).¹⁵

- (27) a. Taroo-wa Hanako-o syootai-**si**-ta
 Taroo-TOP Hanako-ACC invite-do-PAST
 ‘Taroo invited (NH) Hanako.’

V (Rivero, 1991; Rivero and Terzi, 1995).

¹⁴I assume that the head-movement of $\sqrt{}$ to *v* fails for the non-native roots, although I do not go into the detailed explanation of this generalization (See Tagawa (2012) for more discussion on this point).

¹⁵The *nasar* SH construction introduced here is one of the several SH constructions Japanese has. Note that the native Japanese verbal roots are not highly compatible with the *nasar* SH construction as exemplified in (i) and prefer other SH constructions. This observation is nicely captured under the current analysis: as is argued in the rest of this section, HON is not in between $\sqrt{}$ and *v* in SHs. Thus, nothing prevents the head-movement of $\sqrt{}$ to *v* and the light verb cannot have a phonological form by itself.

- (i) ?/??sensei-wa hon-o o-yomi-nasar-ta
 professor-TOP book-ACC HON.PREF-read-do.HON-PAST
 ‘The professor read (SH) the book.’

- b. Taroo-wa sensei-o *go-syootai-si*-ta
 Taroo-TOP professor-ACC HON.PREF-invite-do-PAST
 ‘Taroo invited (OH) the professor.’

- (28) Sensei-wa Taroo-o *go-syootai-nasar*-ta
 professor-TOP Taroo-ACC HON.PREF-invite-do.HON-PAST
 ‘The professor invited (SH) Taroo.’

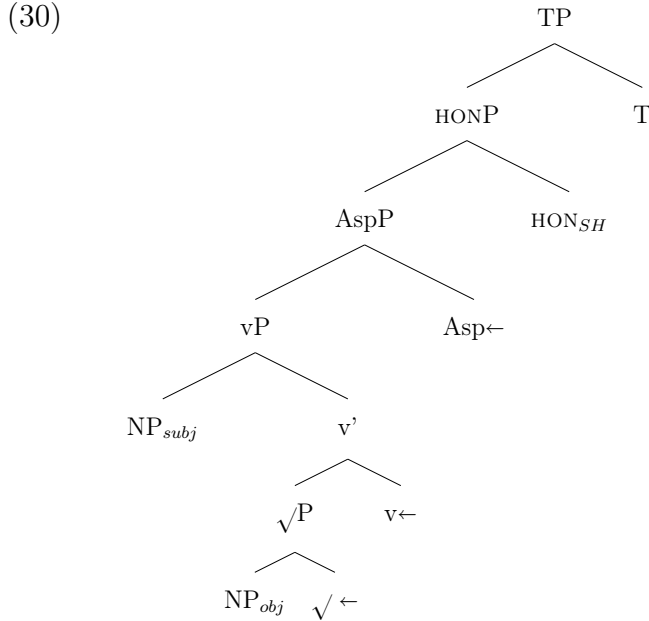
The contrast between (27-b) and (28) suggests that the honorific probe occurs in a position that can affect *v* in SH but not in OH. I take this contrast to indicate that the probe occurs higher than *v* in SH, but lower than *v* in OH, based on the following consideration. To begin with, similarly to Oseki and Tagawa (2019) and Ikawa and Yamada (2022), I assume that the honorific morphology on a head results from the structurally-conditioned post-syntactic insertion of honorific morphology on heads conditioned by a (not necessarily adjacent) c-commanding head. More specifically, I consider the probing head HON, when present, post-syntactically triggers honorific morphology on itself and the heads that it c-commands.¹⁶ This view is supported by the observation by Kishimoto (2012) and Ikawa and Yamada (2022) that the honorific morphology can (optionally) spread across multiple heads in SH: the honorific marking occurs on both $\sqrt{}$ (as the prefix *go*) and *v* (as *nasar*) as already shown in (28).¹⁷ Furthermore, honorific marking can even appear on the aspectual marker when it is present. For example, in (29), the SH are marked with the use of the honorific aspectual marker *teirassyar* instead of the default aspectual marker *teir*, in addition to the use of the honorific prefix *go* and the honorific light verb *nasar*. That is, honorific marking in SH spreads across $\sqrt{}$, *v* and Asp.

¹⁶The nature of honorific morphology insertion can be analyzed either as a sprouting of an honorific node to the relevant heads (Choi and Harley, 2019; Oseki and Tagawa, 2019; Ikawa and Yamada, 2022), or as allomorphy of the relevant heads. Either view is compatible with the current approach, and I leave detailed discussions of this point for future research.

¹⁷See Kishimoto (2012) for the further interaction between the case-marking of the subject and the spread of SH marking, although the account of this interaction is outside the scope of this dissertation.

- (29) sensei-wa Taroo-o go-syootai-nasar-teirassyar-u
 professor-TOP Taroo-ACC HON.PREF-invite-do.HON-ASP.HON-PRES
 ‘The professor has invited (SH) Taroo.’

I take this to indicate that the honorific probe for SH, which I call HON_{SH} for convenience, occurs around T in SH sentences and, after it establishes the Agree relation with the subject in narrow syntax, post-syntactically triggers honorific morphology on any of the heads it c-commands.¹⁸ As shown in the structure in (30), this analysis accounts for the spreading of honorific morphology on $\sqrt{\text{ }}$, v and Asp.¹⁹

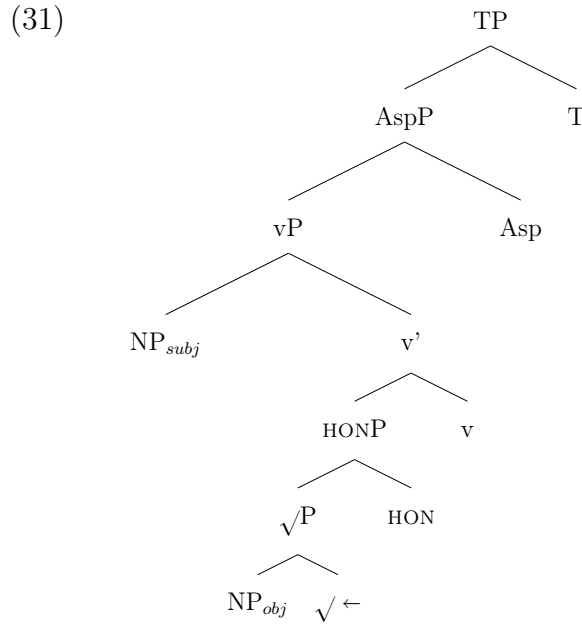


Now, given that SH and OH share the same honorific prefix *o/go*, it is natural

¹⁸This view contrasts with Ikawa and Yamada (2022), who claim that the honorific morphology is directly triggered by the c-commanding honored NP, not by the probing head HON. Given the argument by Niinuma (2003) that SH also involve downward probing, I instead assume that the SHs also involve the downward probing from HON_{SH} and the probing head is the trigger of the honorific morphology in line with Oseki and Tagawa (2019). See also Section 2.2 for a further analysis on SH.

¹⁹The post-syntactic insertion of morphology is considered to be phase-bound (Choi and Harley, 2019), which appears to be incompatible with the analysis in (30), as there is vP between the head $\sqrt{\text{ }}$ and the head HON in (30). However, it has been noted that the vP phase can sometimes fail to block a phase-bounded operation. For example, Baker (2015, 2017) argues that, in some languages vP does not intervene for the purpose of dependent case assignment, which is often considered to be an operation at spell-out (Baker, 2015) or at PF (Bobaljik, 2008). I consider (30) to be another instance of the lack of vP phase effect, especially given that the honorific morpheme insertion is similar to the dependent case assignment in that they are both operations after the narrow syntactic operations.

to assume that the same mechanism underlies the morphology of SH and OH. Thus, I assume that HON in OH, after it establishes necessary Agree relation in narrow syntax, also post-syntactically triggers honorific morphology on the head(s) that it c-commands. The difference between SH and OH simply lies in the position of the probing head HON. Under this assumption, the observation on the form of the light verb indicates that the probe in OH occurs in a lower position than v . The structure in (24) above nicely fits with this view: as shown in (31), the head \surd is the only position where the HON_{OH} can trigger honorific morphology, with the assumption that HON itself is phonologically null. Crucially, v is located above HON, avoiding the effect of the honorific morphology insertion.



Thus, I conclude that the morphology of OH indicate that the locus of the probe is below v , and hence posit the head HON as a probing head in line with Ikawa and Yamada (2022).

Note that the idea that there is a special head for OH construction below v is similar to ideas from Toribio (1990) and Hasegawa (2017). These works assume that the special head is a D head. However, I am not committed to the idea that the HON

head is a D head and the verbal root in the OH construction behaves as a nominalized verb. In fact, the nominalization view is dubious given that the OH construction does not by itself make it possible for the verbal root to bear the accusative case marker *-o* as pointed out by an anonymous reviewer of *Syntax*.²⁰ In a light verb sentence with a nominal compound derived from the same verbal root *te-dasuke* ‘hand-help’ in (32), the nominal compound can optionally get an accusative marking with a genitive marking on the object *Hanako*. However, (33) shows that accusative marking *-o* cannot appear after the verbal root *tasuke* ‘help’ in OH sentences, nor is it possible to mark the internal argument of ‘help’ with a genitive marker. While the form of a verbal root looks similar to the form of a nominalized verb in an OH sentence, I assume the form in question is simply an elsewhere form (Tagawa, 2012, a.o.).

- (32) a. Taroo-wa Hanako-o te-dasuke si-ta
 Taroo-TOP Hanako-ACC hand-help-ACC do-PAST
 ‘Taroo helped Hanako.’
- b. Taroo-wa Hanako-no te-dasuke-o si-ta
 Taroo-TOP Hanako-GEN hand-help-ACC do-PAST
 ‘Taroo helped Hanako.’
- (33) a. Taroo-wa sensei-o o-tasuke-si-ta
 Taroo-TOP professor-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the professor.’
- b. *Taroo-wa sensei-no o-tasuke-o si-ta
 Taroo-TOP professor-GEN HON.PREF-help-ACC do-PAST
 ‘Taroo helped (OH) the professor.’

Thus, while the current view agrees with Toribio (1990) and Hasegawa (2017) in assuming a special head responsible for OH marking, it deviates from these studies in assuming that no nominalization is involved in OH marking.

²⁰See also Hasegawa (2006, Sect 4.2.1) for some doubts on the nominal nature of the verbal roots in the OH construction.

2.1.2.5 Interim Summary

In this section, I have reviewed the arguments from the previous studies that the distribution of the NPs that can trigger OH marking shows the pattern that can be attributable to the operation Agree and gave additional support to it. Specifically, we saw that, assuming a downward probing head HON right below *v*, only the structurally closest animate NP to the probe within the same phase can trigger OH marking.

However, recall that the subject referent as well as the speaker has to honor the referent of the “object” (more precisely the closest animate NP) for OH to be felicitously used, as shown again in (34).

- (34) a. Taroo-wa butyoo-o o-tasuke-**si**-ta
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’
- b. #syatyoo-wa butyoo-o o-tasuke-**si**-ta
 CEO-TOP manager-ACC HON.PREF-help-do-PAST
 ‘The CEO helped (OH) the manager.’

As already mentioned in Section 2.1.1 above, the view that OH marking on a predicate is simple agreement over [HON:+] feature on the object does not capture this generalization. In Section 2.1.4, I propose that Agree feeds an argument to the semantic predicate *honor*, to accommodate both the observations in this section and the data in (34). But before going into the core proposal, the next section deals with how the “subject”, which is crucial to OH as shown in (34), is found by the OH marker.

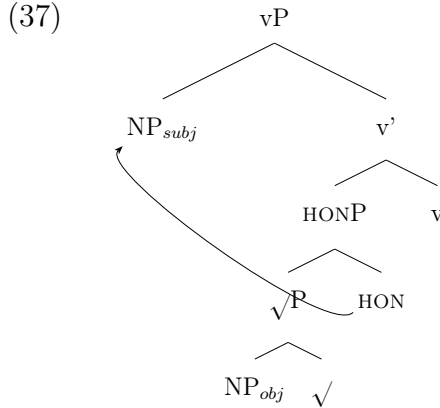
2.1.3 Choosing the “subject”

As has just been repeated in (34), OH cares about the subject, as well as the object. (35)–(36) show further examples where changing the subject affects the acceptability of OH. Note that the example with the non-agentive predicate in (36) shows that OH

cares about subjects in external argument positions regardless of their agentivity.

- (35) a. Hanako-ga senpai-o **o**-yobi-**si**-ta
 Hanako-NOM senior-ACC HON.PREF-call-do-PAST
 ‘Hanako called (OH) the senior student.’
 b. #sensei-ga senpai-o **o**-yobi-**si**-ta
 teacher-NOM senior-ACC HON.PREF-call-do-PAST
 ‘The teacher called (OH) the senior student.’
- (36) a. Taroo-wa butyoo-no kimoti-o **o**-sassi-**si**-ta
 Taroo-TOP manager-GEN feeling-ACC HON.PREF-perceive-do-PAST
 ‘Taroo perceived (OH) the manager’s feeling.’
 b. #syatyoo-wa butyoo-no kimoti-o **o**-sassi-**si**-ta
 CEO-TOP manager-GEN feeling-ACC HON.PREF-perceive-do-PAST
 ‘The CEO perceived (OH) the manager’s feeling.’

These data indicate that the head which accesses the “object” (i.e. the closest animate NP) via downward Agree has to get access to the “subject” at the same time. Now that I have shown that the object is chosen via Agree, it is reasonable to ask how the subject is chosen. Given the evidence in the previous section that the probe for the object is located in HON lower than *v*, it cannot be the case that the probing head is related to the subject by direct selection: while the external argument is introduced by the *v* head, the probe is located in HON below *v*, meaning that the HON head does not select the subject by itself. I therefore claim that the HON head for OH accesses the external argument as the subject via upward Agree, as shown in the structure in (37). The result of this upward Agree, along with the result of the downward Agree, feeds arguments into the semantics of HON, as is argued in Section 2.1.4.



The upward Agree analysis is plausible only if the subjects that matter for OH are NPs that are accessible from HON following the conditions on Agree. While it seems trivial, the external argument position is a position that is accessible from the HON head following the c-command condition, the intervention condition and the phase condition of Agree: as can be seen in (37) above, the Spec vP c-commands HON, and is within the same phase as HON defined by v, and it is the closest NP to HON in the upward direction.²¹ Thus, the upward Agree view correctly captures the importance of the external argument position in the choice of subject in OH. The rest of this section raises further data that show the choice of the “subject” obeys the conditions of Agree, although they are not as rich as the evidence for the downward Agree reviewed in Section 2.1.2.

2.1.3.1 C-command condition

The upward Agree analysis of the choice of the subject predicts that only the c-commanding NP matters to OH, following the c-command condition for Agree. I show that in fact what matter for OH are c-commanding subjects, in particular, the possessor of the subject is not accessible.

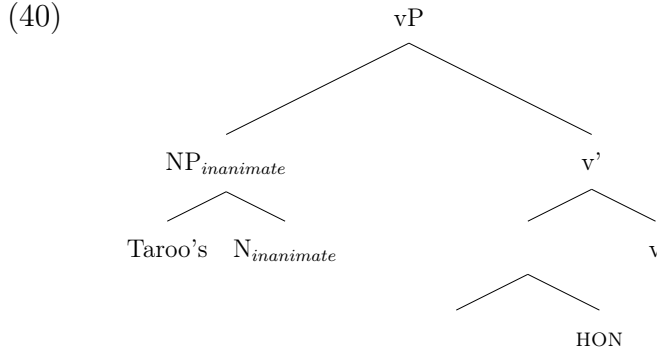
²¹I generally assume that a trace is invisible to a probe as is discussed in Ch.3. However, this does not affect the Agree relationship between HON and the subject in Spec vP assumed here: although the subject NP subsequently moves to Spec TP, I assume that HON agrees with the subject NP as soon as it is introduced in Spec vP and, thus, at the point of Agree, what is in Spec vP is the subject NP, not the trace.

First of all, for OH to be acceptable, the subject has to be animate as shown in (38). This by itself is not trivial, given that the downward probe to choose the object was also relativized to animate NPs. That is, the same condition is imposed on both the choice of the subject and the choice of the object. I take this to indicate that the choice of the subject is made by the upward probe relativized to animate NPs and (38) is not allowed as the upward Agree cannot find an appropriate goal.

- (38) #gendai-igaku-ga Tanaka-sensei-o **o**-tasuke-**si**-ta
 contemporary-medicine-NOM professor-ACC HON.PREF-help-do-PAST
 ‘Contemporary medicine helped Prof.Tanaka.’

Notably, the presence of an animate possessor NP inside an inanimate subject does not make OH possible. For example, the examples in (39) are not possible where the entire subject NP is inanimate while the referent of the possessor of the subject, *Taroo*, is animate and is in a position to honor the object referent. This means that the choice of the “subject” is in line with the c-command Condition for Agree: only the entire subject NP, but not the possessor of the subject, is in a c-command relation with the probe, as shown in (40), and thus the possessor of the subject is not visible to the head HON in OH.

- (39) a. #Taroo-no pasokon-ga (zidoo-soosin-de) sensei-ni
 Taroo-GEN computer-NOM automatic-sending-with professor-DAT
 meeru-o **o**-okuri-**si**-ta
 email-ACC HON.PREF-send-do-PAST
 ‘Taroo’s computer sent (OH) an email to the professor with the auto-
 matic delivery system.’
 b. #Taroo-no hon-ga sensei-o o-home-si-ta
 Taroo-GEN book-NOM professor-ACC HON.PREF-praise-do-PAST
 ‘Taroo’s book praised (OH) the professor.’



Notice that (39) is in contrast with the observation above that the honored possessor of an object can trigger OH as an “object”, as repeated in (41).

- (41) watasi-ga [[[sensei-no] ie-no] tikaku-o]
 1sg.-NOM prof-GEN house-GEN surroundings-ACC
 o-tazune-si-ta
 HON.PREF-visit-do-PAST
 ‘I visited (OH) the professor’s house’s surroundings.’

This difference between the choice of the “subject” and the “object” derives from the contrast between downward and upward probing: when a probe c-commands an NP, then it c-commands the possessor of the NP. But when a probe is c-commanded by an NP, then it is not c-commanded by the possessor of the NP. Thus the upward probe from HON cannot find the possessor of the subject but the downward probe from HON can find the possessor of the object.

2.1.3.2 Intervention / phase condition

The other conditions for Agree, the intervention condition and the phase condition, are also respected by the choice of the “subject”. First, the example in (42) shows that the choice of the “subject” follows the phase condition. In this example, OH marking is not allowed even though there is a c-commanding animate NP for HON, which is the matrix subject *intaan.see* ‘the intern’. This unacceptability of (42) naturally follows from the phase condition on Agree: if the “subject” is chosen by the upward

Agree from HON, the matrix subject is not accessible from the probe, because it is in a different phase from the probe.

- (42) #intaan.see-wa gendai-igaku-ga butyoo-o
intern-TOP contemporary-medicine-NOM manager-ACC
o-tasuke-si-ta-to omot-ta
HON.PREF-help-do-PAST-that think-PAST
‘The intern thought that contemporary medicine helped (OH) the manager.’

The causative construction further confirms the effect of the intervention condition on the choice of the “subject”. First of all, the judgement on OH sentences with causatives such as (43) varies across speakers, with some finding it unacceptable, other finding it degraded and some finding it totally acceptable.

- (43) %Taroo-wa Hanako-ni butyoo-o o-okuri-s-ase-ta
Taroo-TOP Hanako-DAT manager-ACC HON.PREF-send.off-do-CAUS-PAST
‘Taroo had Hanako send off (OH) the manager.’

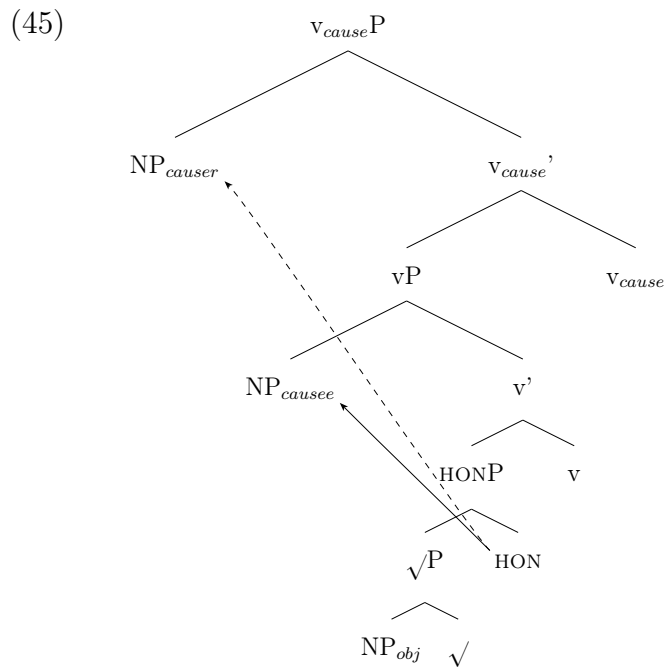
What is crucial here is that, for those who (somewhat) accept it, when an OH marked predicate is causativized, only the causee but not the causer matters for OH as shown in (44). For those who accept (43), it is possible to have OH marking on the predicate *okur* ‘send off’ when the causee, but not the causer, is in a position to honor the manager who was sent off as shown in (44-a). On the other hand, (44-b)–(44-c) show that OH marking is not possible when the causee is not in a position to honor the manager, no matter whether the causer honors the manager or not.

- (44) a. syatyoo-wa Taroo-ni butyoo-o
CEO Taroo-DAT manager-ACC
o-okuri-s-ase-ta
HON.PREF-send.off-do-CAUS-PAST
‘The CEO had Taroo send off (OH) the manager.’
b. #syatyoo-wa senmu-ni butyoo-o o-okuri-s-ase-ta
CEO-TOP vice.CEO-DAT manager-ACC HON.PREF-send.off-do-PAST

‘The CEO had the vice CEO send off (OH) the manager.’

- c. #Taroo-wa syatyoo-ni butyoo-o o-okuri-s-ase-ta
 Taroo-TOP CEO-DAT manager-ACC HON.PREF-send.off-do-PAST
 ‘Taroo had the CEO send off (OH) the manager.’

Assuming a structure in (45) for the causative construction, the causee, but not the causer, is the closest NP to HON. The upward Agree-analysis of the choice of the subject naturally captures these patterns by the intervention condition.²²²³

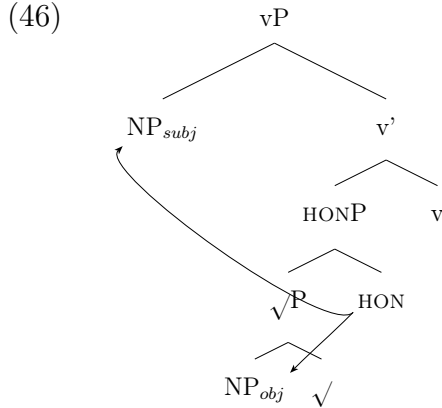


2.1.3.3 Interim summary

The observations in this section support the analysis that the “subject” that matters for OH is also chosen by upward Agree. Combining these observations from the ones in Section 2.1.2, I thus propose that the head HON probes both downward and upward, as shown in the structure in (46).

²²As is discussed in Ch.3, I assume that v_{cause} extends the vP phase and hence assume that the phase condition does not block Agree between HON and the NP_{causer} here.

²³It would be desirable to test what happens when a causee is inanimate: in such cases, the causee should not trigger the intervention effect. Unfortunately, the Japanese causative construction is generally incompatible with inanimate causees (Shibatani, 1973; Miyagawa, 1984), and the effect of the intervention condition and the effect of the phase condition are not dissociable here.



While the direction of Agree is a debatable topic (Zeijlstra, 2012; Bjorkman and Zeijlstra, 2014; Bošković, 2007; Haegeman and Lohndal, 2010; Wurmbrand, 2012; Preminger, 2013), there are works that posit both upward and downward Agree (Baker, 2008; Merchant, 2006), and some of them (Arregi and Hanink, 2018, 2021; Baker and Camargo Souza, 2020) use bidirectional Agree from the same head, similarly to the current case. I thus consider bi-directional Agree from one head to be a possible option for a human language. See Ch.6 for further discussion on the direction of Agree.

2.1.4 The semantic honor-relation

2.1.4.1 The nature of the relation between the subject and the object

Now that I have shown that the two NPs that matter for the use of OH are chosen by Agree, I turn to the question of how the relation between these NPs is encoded in the grammar of OH. While we saw above that these NPs do not necessarily correspond to what are canonically called an object or a subject, for convenience, I simply refer to the goal of the downward probe as an object and the goal of the upward probe as a subject in this section.

Recall that OH marking is not acceptable in (47-a), where the referent of the subject has a higher status than the referent of the object.

- (47) a. #syatyoo-wa butyoo-o **go**-syootai-**si**-ta
 CEO-TOP manager-ACC HON.PREF-invite-do-PAST
 ‘The CEO invited (OH) the manager.’
- b. Taroo-wa butyoo-o **go**-syootai-**si**-ta
 Taroo-TOP manager-ACC HON.PREF-invite-do-PAST
 ‘Taroo invited (OH) the manager.’

However, this example alone does not make it clear what exactly the requirement which OH imposes on the subject is. One possibility, which I argue for, is that the referent of the subject is required to honor the object referent. But there is an alternative possibility that, for OH to be possible, the subject referent is required to be less honored than the object referent by the speaker: between the NPs selected via Agree, the predicate simply marks honor toward the NP which is more honored by the speaker. However, there are two pieces of evidence that show that the former analysis is correct for OH in Japanese.

First, as already suggested in Section 2.1.1, the examples in (48)–(49) show that the latter view does not correctly characterize the requirement of OH.

- (48) #hannin-wa sensei-ni kyooohakuzyoo-o **o**-okuri-**si**-ta
 criminal-TOP professor-DAT threatening.note-ACC HON.PREF-send-do-PAST
 ‘The criminal sent (OH) a threatening note to the professor.’
 (Kikuchi, 1997; 259)
- (49) #huryoo-ga sensei-o senkoo-to **o**-yobi-**si**-teir-u
 bad.guys-NOM teacher-ACC *senkoo*-as HON.PREF-call-do-ASP-PRES
 ‘The bad guys are calling (OH) the teacher “senkoo” (a derogatory word to refer to a teacher).’

The view that the object referent simply has to be more honored by the speaker than the subject referent incorrectly predicts that the use of OH should be appropriate in these examples: it is easy to imagine a context where the criminal or the bad guy is less honored from the point of view of the speaker than the professor or the teacher. Thus, if the speaker’s honor toward the object referent is compared with the speaker’s

honor toward the subject referent, then the use of OH should be acceptable in these examples. On the other hand, the view that the subject referent has to honor the object referent correctly rules out (48) and (49): a criminal who sends threatening notes to the professor, or a bad guy who refers to the teacher with a derogatory word, seem to intentionally dishonor the professor or the teacher. Thus, the use of OH is predicted to be infelicitous in these examples.

One might think that the unacceptability of examples in (48)–(49) comes from the fact that the honoree does not have a benefactive relationship to the event described, given that some previous studies have suggested that the OH marking is possible only on predicates that benefit the honoree. For example, Hasegawa (2017) points out that OH is not possible on predicates like *nusum* ‘steal’ or *uttae* ‘sue’. However, it is not true that the use of OH requires the honoree to be a beneficiary: the examples in (50-a) suggests that OH is possible on predicates that clearly involve malefaction toward the honoree, as long as the events denoted by the predicates are compatible with a situation where the subject referent honors the honoree (*o-sawagase-sur* ‘disturb (OH)’ is another examples of such predicates).

- (50) a. watasi-wa konkai-no ken-de sensei-ni tadaina meiwaku-o
 1sg-TOP this.time-GEN event-at professor-DAT huge trouble-ACC
 o-kake-si-tesimat-ta
 HON.PREF-give-do-EVAL-PAST
 ‘I regrettably gave (OH) huge trouble to the professor in this event.’
- b. watasi-wa sensei-no sigoto-o o-zyama-site-simat-ta
 1sg-TOP professor-GEN work-ACC HON.PREF-interrupt-do-EVAL-PAST
 ‘I regrettably interrupted (OH) the professor’s work.’

These observations are accounted for by the current proposal that the subject referent has to honor the honoree: stealing or suing do not usually occur in a situation where the subject referent honors the object referent. On the other hand, unintended interrupting, troubling or disturbing can happen to the detriment of the honoree even

when the subject referent honors the object referent.

The second support for the view that the honor from the subject referent matters comes from the observation in (51): (51) shows that Subject Honorifics is available even if the object referent has a higher status than the subject referent, as long as the subject refers to an entity honored by the speaker. This means that it is not the case that the object is in competition with the subject to trigger the honorific marking on the predicate.

- (51) butyoo-ga syatyoo-o **go-syootai-nasar-ta**
 manager-NOM CEO-ACC HON.PREF-invite-do-PAST
 ‘The manager invited (SH) the CEO.’

These observations suggest that the Japanese honorific system is not comparing the subject referent and the object referent in terms of the degree of honor from the speaker to mark honor toward the most honored entity. What matters is whether the subject referent as well as the speaker honors the object referent in OH-marked sentences. I thus conclude that the honorific head adds the meaning “the subject referent (as well as the speaker) honors the object referent”.

Note that the data like (52) suggest that the honor relationship between the subject referent and the object referent that matters here is relativized to the situation in which the event described by the main predicate happens.²⁴ In (52), it is totally possible to use OH marking in the first conjunct, which describes an event where Taroo is supposed to honor the manager as a boss. But, at the same time, it is not felicitous to use OH marking in the second conjunct, which describes an event of interaction on even ground between Taroo and the manager.²⁵

²⁴Note that this relativization of the honorific relationship to the situation described by the sentence adds further support to the current view that the honorific relationship is semantically represented on HON, instead of being represented as a feature such as [\pm HON] on NPs, as suggested by previous studies (Toribio, 1990; Hasegawa, 2017; Oseki and Tagawa, 2019; Ikawa and Yamada, 2022): such features on NPs cannot express the interaction between the feature content and the main situation.

²⁵The unacceptability of OH marking in (52) does not come from the incompatibility of OH and

- (52) *Context:* While the manager is a boss of Taroo at work, they are married.

Taroo-wa kaisya-de-wa butyoo-ni otya-o
 Taroo-TOP office-at-TOP manager-with tea-ACC
 o-dasi-si-teir-u-ga, ie-de-wa butyoo-to taitooni
 HON.PREF-serve-do-ASP-but, home-at-TOP manager-with equally
 sessur-u/??o-sessi-sur-u
 interact-PRES/HON-interact-do-PRES

‘Taroo serves (OH) tea to the manager at the office, but interacts (#OH) with the manager on even ground at home.’

The honor relationship between the speaker and the referent, on the other hand, cannot be relativized to the situation that involves an event described by the main predicate, as a speaker does not have to be a participant in that situation. Thus, the honorific inference triggered by HON should roughly look like “the speaker honors the object referent in the actual world \wedge the subject referent honors the object referent in the situation which the described event is a part of”.²⁶ Following Potts and Kawahara (2004) and Potts (2007), I assume this honorific meaning to be an expressive meaning, which is separate from the at-issue meaning.

In the following sections, I show how this interpretation can be reconciled with the syntactic observations in previous sections, using the idea that Agree feeds interpretation.

the predicate *sessur* ‘interact with’, as indicated by the acceptability of (i).

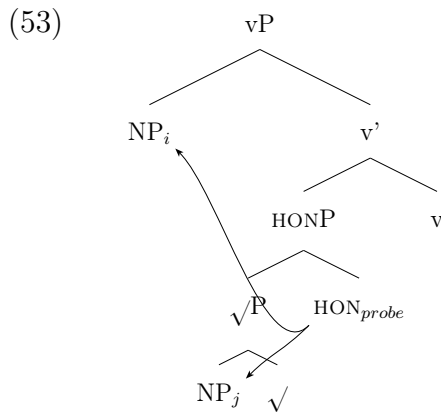
- (i) sono tenin-wa okyakusama-ni teineini o-sessi-si-ta
 that clerk-TOP customer-DAT politely HON.PREF-interact.with-do-PAST
 ‘That clerk politely interacted (OH) with the customer.’

²⁶In the rest of this chapter, I abstract away from the details of the semantic representations of the honor relationship, because nothing hinges on the exact definition of any semantic analysis of the honor relationship for my main claim here, which is that the result of Agree feeds arguments to the semantic honor relationship. See Potts and Kawahara (2004), Potts (2007), McCready (2014, 2019) and Portner et al. (2019) for detailed discussions on the semantic representation of the honor relationship.

2.1.4.2 Analyzing the honor-relation

The discussion above shows that the OH construction (i) is sensitive to the honor from the subject referent as well as from the speaker to the object referent, and (ii) involves Agree in the choice of the subject and the object. I propose that these behaviors of OH are derived by interpreting the result of the bi-directional Agree at LF.

As argued above, I propose that the head HON contains two probes, one of which searches upward and the other downward, as shown in (53).²⁷ Each probe on HON finds the structurally closest animate NP in its search domain, following the conditions on Agree.



In contrast with previous studies, I do not assume that the probe looks for honorificity encoding features, such as $[\text{HON}:\pm]$. I instead propose that the target feature is the index feature. Given that the quantified objects can trigger OH, as shown in (54), I consider the index features relevant here to be the binder indices (Heim and Kratzer, 1998, p.120 a.o.), not referential indices. That is, the value of the index feature depends on which operator binds it.²⁸ The visibility of binder indices to syntax

²⁷I distinguish having two separate probes on one head from the Multiple Agree mechanism in the sense of Hiraiwa (2001), where a single probe agrees with multiple goals. It is the former that I propose for OH.

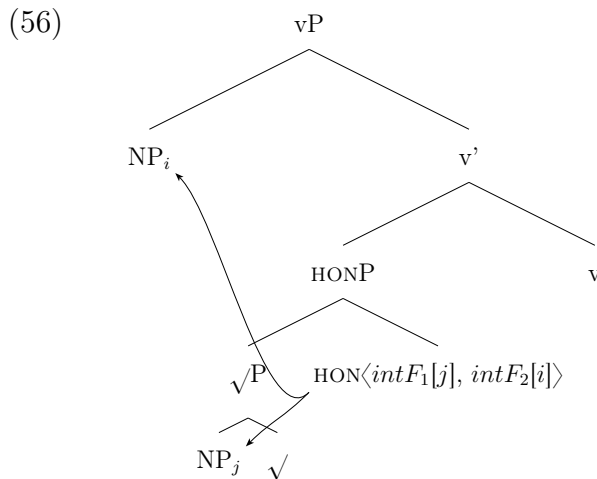
²⁸As is explained in detail in Section 2.1.4.5, I assume that every NP, including referential NPs, is QR-ed to a higher position, leaving a trace whose value corresponds to the index feature it has. This creates a structure where the honoree (or the honoror) is bound by the same abstractor as the object (or the subject).

as features is independently supported by Hicks (2009), who analyzes binding to be an Agree relationship over the binder index features (which he calls [VAR] features).²⁹

- (54) Taroo-wa subeteno-sensei-ni otya-o o-dasi-si-ta
 Taroo-TOP every-professor-DAT tea-ACC HON.PREF-serve-do-PAST
 ‘Taroo served (OH) tea to every professor.’

I propose that the probe features on HON look like (55) syntactically, which is the combination of two *unvalued* but *interpretable* index features. The feature $intF_1[]$ is valued from the downward probe and $intF_2[]$ is valued from the upward probe. Thus, the probe gets valued as shown in (56) with the indices that the object and the subject bear respectively.

- (55) $\langle intF_1[], intF_2[] \rangle$



I propose that the probe features valued as shown in (56) survive in LF and the probing head HON adds the honorific meaning roughly represented in (57) to the sentence at LF.³⁰ Here, the honorer shares its index with the upward goal and the

²⁹See also Adger and Harbour (2007), McKenzie (2012), Grosz (2015) and Arregi and Hanink (2018, 2021) for the view that index features of some sort is visible to syntax.

³⁰In the representation in (57), the speaker is directly retrieved from the context. Alternatively, it might be possible to assume that HON has a third probe and agrees with a Speaker Operator syntactically represented in the left periphery (Speas and Tenny, 2003; Miyagawa, 2012, 2017; Zu, 2018), as suggested by Raffaella Zanuttini (p.c.). Such an approach at least has to answer questions such as (i) why the vP phase does not block the Agree relationship between HON and the Speaker

honoree shares its index with the downward goal. Thus, it means that the speaker honors y and x honors y in the described situation, where x is co-bound with the goal of the upward probe and y is co-bound with the goal of the downward probe. The details of the semantic composition is discussed further in Section 2.1.4.5. What is crucial here is that the index features on HON, which are valued as a result of Agree operations in syntax, are parts of the semantic representation of HON.

- (57) Sp honors $\llbracket NP_{intF_1[]} \rrbracket$ in the actual world \wedge $\llbracket NP_{intF_2[]} \rrbracket$ honors $\llbracket NP_{intF_1[]} \rrbracket$
in the described situation

Note that under the current proposal, the HON head does not change its morphological forms depending on the valuation of the features on it: the phonological form of HON itself is consistently null and it always triggers the insertion of the honorific prefix *o/go* on the verbal root in the way discussed in Section 2.1.2.4, no matter how the probe features on HON are valued. That is, the result of Agree does not directly affect the morphology of the head, while it feeds semantics. I claim the HON head to be optional and the use of HON head, along with the morphology that it triggers, is appropriate only when the honorific meaning it adds is pragmatically felicitous. The next section shows how this analysis correctly captures the pattern of when the OH morphology can appear.

2.1.4.3 Deriving the core patterns

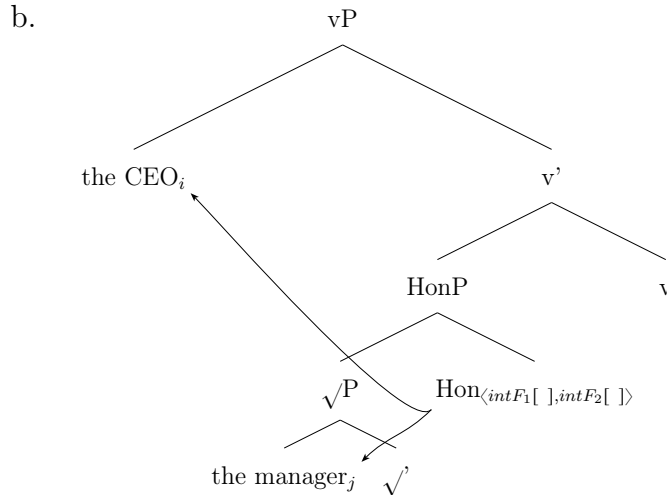
Let me go through how this analysis derives the core contrast shown again in (58), which shows that the subject referent has to honor the object referent for the use of OH.

Operator and (ii) why the subject and the Addressee Operator do not intervene for this probe. I will not explore this alternative here.

- (58) a. #syatyoo-wa butyoo-o **go-syootai-si**-ta
 CEO-TOP manager-ACC HON.PREF-invite-do-PAST
 ‘The CEO invited (OH) the manager.’
- b. Taroo-wa butyoo-o **go-syootai-si**-ta
 Taroo-TOP manager-ACC HON.PREF-invite-do-PAST
 ‘Taroo invited (OH) the manager.’

In (59-a) (= (58-a)), the probe gets valued as shown in (60-a) as a result of the Agree relationships in (59-b), leading to the interpretation at LF as shown in (60-b). As mentioned above in Section 2.1.1, the resulting sentence is not ungrammatical in the sense that it becomes acceptable if world knowledge is changed such that the manager position is the one to be honored by the CEO. However, the added meaning is simply not felicitous, as it is incompatible with the actual world knowledge that the CEO is not in a position to honor the manager in the relevant sense.

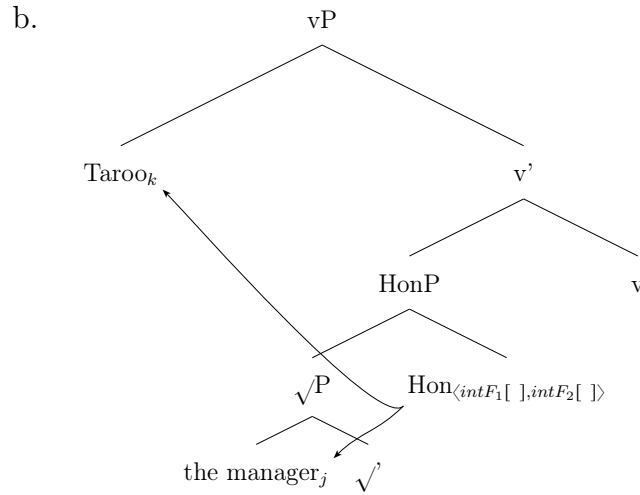
- (59) a. #syatyoo_i-wa butyoo_j-o **o-tasuke-si**-ta
 CEO-TOP manager-ACC HON.PREF-help-do-PAST
 ‘The CEO_j helped (OH) the manager_i.’



- (60) a. $\langle intF_1[j], intF_2[i] \rangle$
- b. $Sp \text{ honor } \llbracket NP_j \rrbracket \wedge \llbracket NP_i \rrbracket \text{ honor } \llbracket NP_j \rrbracket \text{ in the described situation}$
 $= Sp \text{ honors the manager and the CEO honors the manager in the described situation}$

On the other hand, in (61-a) (= (58-b)), as a result of Agree relationship in (61-b), the probe and its interpretation look like (62). This time, (62-b) can (and should) be felicitous and thus OH marking is acceptable here.

- (61) a. Taroo-wa butyoo-o o-tasuke-si-ta
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo_k helped (OH) the manager_j.’



- (62) a. $\langle intF_1[j], intF_2[k] \rangle$
 b. $Sp \text{ honor } \llbracket NP_j \rrbracket \wedge \llbracket NP_i \rrbracket \text{ honor } \llbracket NP_j \rrbracket$ in the described situation
 = Sp honors the manager and Taroo honors the manager in the described situation

A non-honorific sentence as shown in (63) simply comes in a structure without the HON head and, hence, lacks any morphology triggered by HON including the use of the prefix and the light verb. As there is no HON head, no linguistic elements add information about an honorific relationship.

- (63) Taroo-wa Hanako-o tasuke-ta
 Taroo-TOP Hanako-ACC help-PAST
 ‘Taroo helped Hanako.’

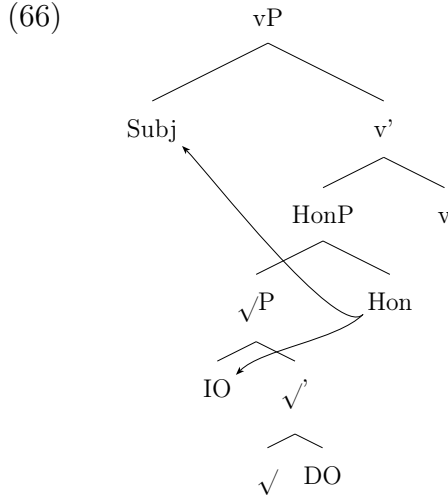
This treatment of a non-honorific sentence has an advantage in capturing the neu-

trality of the non-honorific construction. A non-honorific sentence with an object referring to an honored entity is acceptable, as exemplified by (64). This is expected under the current analysis: there is simply no lexical item that expresses any kind of honorific relationship in this sentence.

- (64) Taroo-wa butyoo-o tasuke-ta
 Taroo-TOP manager-ACC help-PAST
 ‘Taroo helped the manager.’

This analysis naturally derives the Agree patterns demonstrated in Section 2.1.2–2.1.3. The intervention effect in the choice of the object as repeated in (65), for example, is expected given that the probe find the highest object NP. That is, assuming a structure like (66), the probe agrees with the IO and the subject, not with the DO and the subject. Thus, the example in (65-b) has an interpretation that “the speaker honors Mary in the actual world \wedge Hanako honors Mary in the described situation”, which is not felicitous on the assumption that Mary is a peer of Hanako.

- (65) a. Hanako-ga Tanaka.sensei-ni Mary-o
 Hanako-NOM Tanaka.prof-DAT Mary-ACC
go-syookai-**si**-ta.
 HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Mary to Professor Tanaka.’
 b. Hanako-ga Mary-ni Tanaka.sensei-o
 Hanako-NOM Taroo-DAT Tanaka.sensei-ACC
 syookai-si-ta/#**go**-syookai-**si**-ta
 introduce-PAST/HON.PREF-introduce-do-PAST
 ‘Hanako introduced / #introduced (OH) Professor Tanaka to Mary.
 (only interpretable as expressing honor towards Mary)’
 (Boeckx and Niinuma, 2004, 456)



Similarly, the phase effect and the c-command effect in the choice of both the object and the subject shown in Section 2.1.2–2.1.3 straightforwardly follow from the current analysis.

However, this analysis alone does not derive all of the patterns we saw in Section 2.1.2–2.1.3: recall that, the probe only targets animate NPs, with inanimate NPs being transparent to the probe. We saw that this relativization affects the intervention pattern regarding possessor NPs and the absence of intervention pattern in certain configurations for objects, as well as causing the incompatibility of OH with inanimate subjects. Now the question is how to encode this relativization. I propose that person features are held only by animate NPs in Japanese and the probe here is relativized to the index feature paired with the person feature, which I call *index-person features*. Both the idea that inanimates lack a person feature and the idea that person and index features are tightly connected have been proposed in previous works. First, it has independently been noted that person features can be held only by animate NPs at least in some languages (Lochbihler et al., 2015; Adger and Harbour, 2007, a.o.). For example, Lochbihler et al. (2015) show data from Dene, which show that animate third person DPs, as well as first / second person DPs, can trigger object agreement as shown in (67-a), while inanimate third person DPs cannot as shown in (67-b). I assume here that the person features are held only by animate NPs in Japanese as

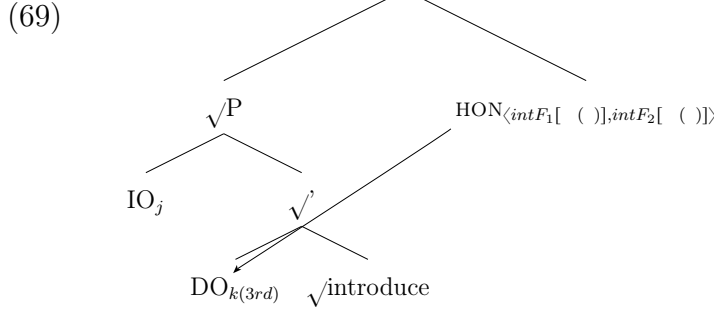
well.

- (67) a. eławeħwhr ha
 1sg.obj.3sg.kill fut
 ‘I will kill him.’
- b. tá- Ø-/∗we ts’ee- t’à
 apart- inan.obj-/3sg.obj 1pl- cut
 ‘We are cutting it up.’ (Lochbihler et al., 2015)

Furthermore, it has been proposed that index features are related to person features (Wechsler and Zlatić, 2000; Sudo, 2012; Podobryaev, 2017). Sudo (2012), for example, deals with the observation that a bound variable reading of a pronoun does not allow person feature mismatch between the binder and the bindee, and claims that this can be accounted for if the binder indices carry person features. I derive relativization of the OH probes to animate NPs by combining these two ideas: the probes are relativized to the index-person features, and they are held only by animate NPs as person features are held by only animate NPs in Japanese.³¹ For example, the downward probe in the sentence in (11), repeated in (68), can be represented as shown in (69). I tentatively represent the person-index features in the form $[ind(pers)]$, although I do not commit myself to this representation (see Sudo (2012) for a similar representation). The probing head HON has a downward probe of the form $intF_1[\quad]$, that is, an unvalued person-index feature. As the inanimate IO has only the index feature j and does not have a feature of the form that the probe is looking for, the IO is invisible to the probe. The DO, which has $[k(3rd)]$ can serve as a goal, and hence its referent is chosen as the honoree.

- (68) Watasi-wa kaizyoo-ni Tanaka.sensei-o o-ture-si-ta
 1sg.-TOP place-DAT Prof.Tanaka-ACC HON.PREF-take-do-PAST
 ‘I took (OH) Prof.Tanaka to the place.’ (Boeckx and Niinuma, 2004, 456)

³¹As pointed out by Raffaella Zanuttini (p.c.), it is possible to assume alternatively that (i) inanimate NPs also have person features in Japanese but (ii) the probes are relativized to person-index feature with the value $[+animate]$, although I will not explore this possibility in this dissertation.



2.1.4.4 Encoding the honor relationship on the probe

In the current analysis, the meaning of honor toward the object referent is represented on the HON head. This point differentiates the current analysis from the previous Agree analysis: the previous studies represent the speaker’s honor toward the object referent on the object NP itself in the form of a feature such as [HON: +], instead of representing it on the probing head (Boeckx and Niinuma, 2004; Oseki and Tagawa, 2019; Ikawa and Yamada, 2022, a.o.).³² I show that the current view, in contrast with the previous Agree-analyses, correctly predicts the behavior of OH in a structure where one NP triggers OH marking on more than one predicate. More specifically, the view that the honorificity is represented on the object NP predicts that the same NP either consistently triggers OH marking or consistently does not across different predicates that it agrees with: if it has [HON: +], then it has the power to trigger OH marking on every predicate it agrees with, while if it has [HON: −], it can trigger OH marking on none of the predicates it agrees with. On the other hand, the current view predicts a situation where the same NP can trigger OH in one place while it cannot in another place, as there can be different subjects in different clauses and the honor-relation with the subject referent is represented in the OH marking on the

³²As pointed out by Raffaella Zanuttini (p.c.), the current proposal is similar to the analysis of Korean Addressee Honorifics from Portner et al. (2019) in this respect: they do not represent the honorific status of the referent on each DP, but instead represent the relational honor semantics between two entities (Speaker and Addressee for their case) on the head that is responsible for the Addressee honorific marker with what they call *status features*. See Section 2.2.3 for further review of their approach.

- (71) *Context:* John is waiting for several people to come one by one in a certain order. Hanako said that Taroo is the first person John is waiting for. The speaker saw Taroo.

watasi-wa [[John-ga mat-teiru-to] Hanako-ga it-ta] saisyo-no
 (1sg-TOP) John-NOM wait-ASP-that Hanako-NOM say-PAST first-GEN
 hito-o mikake-ta
 person-ACC saw-PAST

‘I saw the first person Hanako said John is waiting for.’

Now, we can combine this kind of raising relative with OH. Given that the examples in (72) in the indicated contexts involve a low reading of the modifier *saisyo-no*, the relative clauses in these examples are derived by raising the NP *saisyo-no senpai* ‘the first senior’ from the relative clause internal position to the head noun position. This means that (copies of) this NP agree with both the relative clause predicate *mat* ‘wait’ and the matrix predicate *mikaker* ‘see’ since it heads the direct objects of both verbs.

- (72) *Context:* The teacher is waiting for several students to come one by one. The students are all senior to the Speaker. Hanako said that Taroo is the first senior student the teacher is waiting for. The speaker saw Taroo.

- a. #watasi-wa [[sensei-ga o-mati-si-teiru-to] Hanako-ga
 1sg-TOP teacher-NOM HON.PREF-wait-do-ASP-that Hanako-NOM
 it-ta] saisyo-no senpai-o o-mikake-si-ta
 say-PAST first-GEN senior-NOM HON.PREF-see-do-PAST
 ‘I saw (OH) The first senior that Hanako said the teacher is waiting for (OH).’
- b. watasi-wa [[sensei-ga mat-teiru-to/o-mati-ni-nar-teiru-to]
 1sg.-TOP teacher-NOM wait-ASP-that/wait.SH-ASP-that

constraints are at work in Japanese relative clauses in general, as shown in (ii), with the examples like (i) being exceptional.

- (ii) * $[_{NP} [_{CP} [_{NP} [_{CP} e_1 e_2 \text{ kite-iru}] \text{ sinsi}]\text{-ga} \text{ koron-da}] \text{ huku}]$
 wear-ASP gentleman-NOM fall-PAST clothes
 ‘the clothes_{e2} such that the gentleman e_1 who e_1 was wearing them₂ fell’ (Ishizuka, 2009)

I follow Ishizuka (2009) in assuming that the Japanese relative clauses do involve movement and the exceptional examples like (i) are the relativized form of possessor raising construction, which does not involve violation of island constraints.

Hanako-ga it-ta] saisyo-no senpai-o o-mikake-si-ta
 Hanako-NOM say-PAST first-GEN senior-ACC HON.PREF-see-do-PAST
 ‘I saw **(OH)** The first senior that Hanako said the teacher is waiting for
(NH)/**(SH)**.’

Crucially, (72-a) shows that it is not possible to have OH marking in both the relative clause and the main clause, given that the relative clause subject *sensei* ‘teacher’ does not honor the referent of the relativized object. However, (72-b) shows that it is still possible to have OH marking only on the matrix predicate. This pattern is puzzling under the view that the object NP itself is marked for honorificity with a feature [HON:+] or the equivalent: if the object NP itself bears the feature [HON:+] and the OH morphology is simple agreement with this feature, the object NP should be able to trigger OH in both clauses. On the contrary, if the object NP lacks [+HON], it should not be able to trigger OH in either clause.

However, the current analysis correctly derives this pattern. Under the current analysis, there are two possible places for HON in this example: one is on the matrix predicate *mikaker* ‘see’ and the other is on the predicate of the lowest relative clause *mat* ‘wait’, as shown in the structure in (73).

(73) I saw HON [[first senior]_i [_{t_i} Hanako said [_{t_i} the teacher is waiting.for HON
 [first senior]_i]]

The HON on the matrix predicate, as a result of Agree with the raised NP, acquires the interpretation “the speaker honors the first senior in the actual world \wedge I (=the speaker) honors the first senior in the situation which the described event is a part of”. This statement is felicitous, as the speaker is in a lower status than the senior student. On the other hand, the HON on the lowest embedded predicate will acquire the interpretation “the speaker honors the first senior in the actual world \wedge the teacher honors the first senior in the situation which the described event is a part of”, which is

not felicitous given that the teacher is not in a position to honor to any of the students. Thus, the current analysis not only successfully captures the effect of subjects in OH, but also overcomes the problem for the view that represents honorificity on NPs as features.

2.1.4.5 Deriving the interpretation

I proposed above that HON has the honorific inference that is roughly described in (74). The crucial point was that the semantic predicate *honor* is fed its argument via Agree operations in narrow syntax.

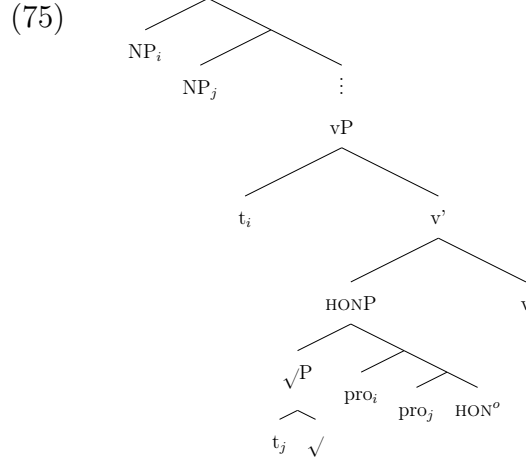
- (74) Sp honors $\llbracket \text{NP}_{intF_1} \rrbracket$ in the actual world $\wedge \llbracket \text{NP}_{intF_2} \rrbracket$ honors $\llbracket \text{NP}_{intF_1} \rrbracket$
in the described situation

The implementation of this idea further invokes a question of what exactly the semantic composition that occurs here is: the semantic predicate *honor* has to take arguments at some distance, as HON is structurally adjacent neither to the subject nor the object. Such feeding at a distance is not feasible under canonical semantic composition.

To derive the desired interpretation with canonical local semantic composition, I propose that interpretable index probing features are replaced at the CI-interface with *pro*-like elements which semantically behave as type *e* variables.³⁴ I simply represent them as *pros* here, although I leave it for a future research whether such *pro*-like element can be identified with other kinds of *pros*. The *pros* are adjoined to the HON head. Thus, the exact structure sent to LF looks like (75). I assume here that each NP, whether quantified or referential, is QR-ed to a higher position and the *pros* as well as the traces are bound by the QR-ed NPs (Heim, 1998; Heim and

³⁴As replacement of an index feature with a *pro*-like element takes place at the CI-interface, constraints that characterize narrow syntax, such as the No Tampering Condition (Chomsky, 2008), do not rule out this replacement.

Kratzer, 1998).

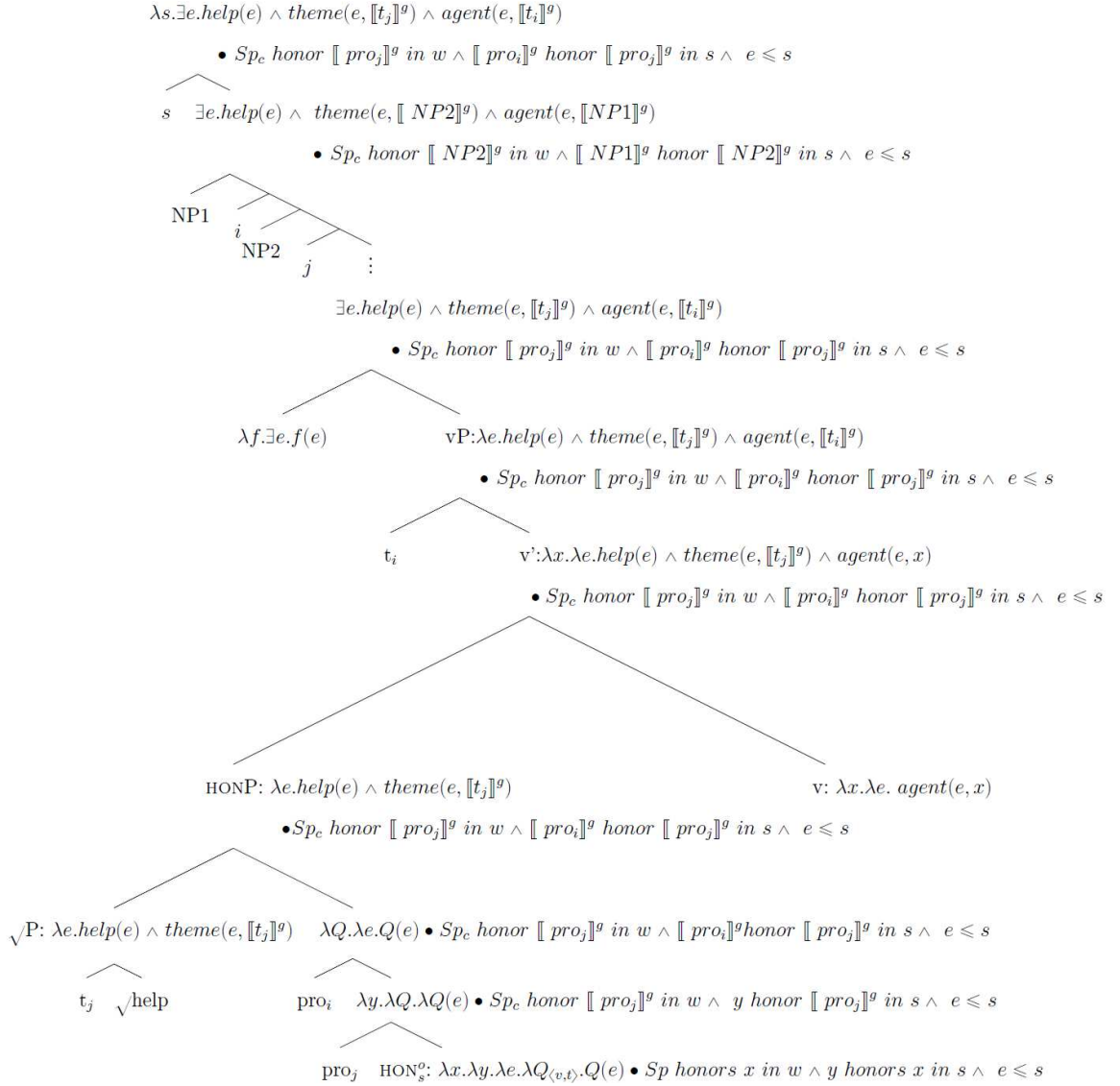


The exact denotation of the head HON is the one shown in (76). It combines with the two *pros* first. The resulting function takes an event-taking predicate and returns it along with a meaning that the speaker honors the referent of the goal of the downward probe in the actual world and the referent of the goal of the upper probe honors the referent of the goal of the downward probe in the situation which the event described by the predicate is a part of.

$$(76) \quad \llbracket \text{HON}_s^o \rrbracket^w = \lambda x. \lambda y. \lambda Q_{\langle v, t \rangle}. \lambda e \, Q(e) \bullet Sp \text{ honors } x \text{ in } w \wedge y \text{ honors } x \text{ in } s \wedge e \leq s$$

Taking a simple OH construction such as *Taroo helps (OH) the manager*, the semantic composition proceeds as shown in (77).

(77)



The Hon head first combines with the *pros* created from the valued index features. As these *pros* are coindexed with the traces in the object or the subject positions, each of them undergoes predicate abstraction together with the coindexed trace, leading to the interpretation in which the honoree and the object are the instances of the same variable while the honorer and the subject are the instances of the same variable.

2.1.5 Interim Summary

I have shown that (i) OH in Japanese uses Agree to access the “object” and, at the same time, (ii) OH cares about whether the referent of the “subject”, also chosen via Agree, honors the referent of the “object”. While many of the previous studies have argued that Japanese OH marking is a case of agreement over features such as [HON:+] on NPs based on the property in (i), I have shown that the property in (ii), which has often been ignored by theoretical studies, cannot be explained under the idea that Agree simply affects the PF form of the probe. I proposed that the result of index Agree feeds the semantic predicate, which accounts for the novel combination of syntactic and semantic characteristics in Japanese OH.

In the next section, I expand the scope of the discussion from OH to other kinds of honorifics in Japanese. I show the current proposal that honorifics in Japanese do not involve agreement over features such as [HON:+] nicely accounts for how multiple honorific systems interact with each other in Japanese.

2.2 Other kinds of honorifics in Japanese

In addition to OH, Japanese has other kinds of honorific marking, among which are Addressee Honorifics (AH), honorific pronouns and Subject Honorifics (SH) (see Yamada (2019) for detailed review of the entire honorific system in Japanese). Now that I have proposed that OH does not involve [HON:+], the next question is whether Japanese does not utilize [HON:±] feature for other kinds of honorifics, or OH is exceptional in not involving [HON:±] feature. I argue that none of these Japanese honorific systems involve [HON:±], in contrast with honorific systems in some other languages.

2.2.1 Addressee Honorifics, Subject Honorifics, and Honorific Pronouns

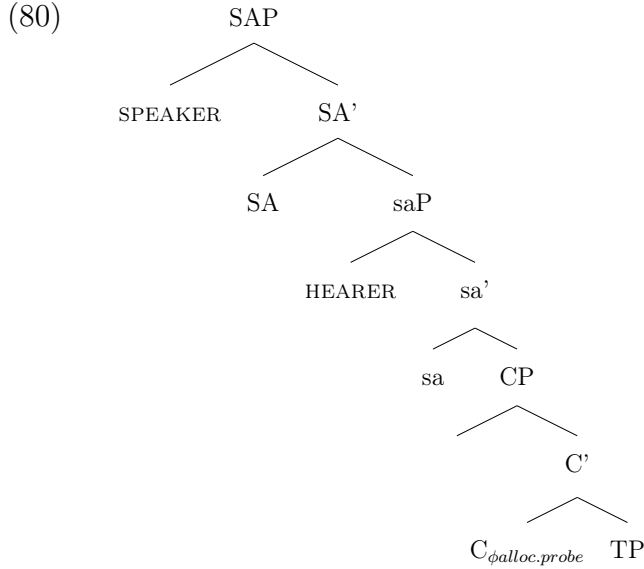
In this section, I introduce the basic behaviors of AH, SH and honorific pronouns in Japanese. I further add a brief review of what the analysis of them using [HON:±] would look like.

The Japanese AH marker takes the form *-mas* or *-des*, as exemplified in (78-a).³⁵ This marker is simply absent when the speaker is not being polite to the addressee as shown in (79-a).

- (78) a. Taroo-wa Hanako-o syootai-si-masi-ta
 Taroo-TOP Hanako-ACC invite-do-AH-PAST
 ‘Taroo invited Hanako (polite).’
- b. Taroo-wa gakusei-des-u
 Taroo-TOP student-POL-PRES
 ‘Taroo is a student (polite).’
- (79) a. Taroo-wa Hanako-o syootai-si-ta
 Taroo-TOP Hanako-ACC invite-do-PAST
 ‘Taroo invited Hanako (not polite).’
- b. Taroo-wa gakusei-da
 Taroo-TOP student-COP
 ‘Taroo is a student (not polite).’

It has been claimed that AH is the result of morphological agreement over honorific features (e.g.[HON:±]) by C with the HEARER operator in the left periphery (Miyagawa, 2012, 2017; Yamada, 2019). For example, Miyagawa (2017) postulates a structure in (80).

³⁵I do not go into the detailed morphological behaviors of these honorific markers here. See Yamada (2019) and Nishiyama (2021) for analyses on the morphology of AH.



(Miyagawa, 2017, 25)

According to Miyagawa (2017), C head-moves to the head SA and agrees with HEARER, which is now in the c-command domain of C. For Miyagawa, the honorific feature is a part of the person feature, and AH is a kind of allocutive ϕ -agreement, which other languages exhibit for other kind of ϕ -features.

SH in Japanese has several morphological variations as shown in (81), as I briefly mentioned in Section 2.1. In the rest of this section, I only discuss the SH construction in (81-a), which involves the honorific light verb *nasar*, but the same observations hold for the other types of SH.

- (81)
- a. Sensei-wa Taroo-o *go-syootai-nasar-ta*
 professor-TOP Taroo-ACC HON.PREF-invite-do.HON-PAST
 ‘The professor invited (SH) Taroo.’
 - b. Sensei-wa Taroo-o *go-syootai-ni-nar-ta*
 professor-TOP Taroo-ACC HON.PREF-invite-COP-become-PAST
 ‘The professor invited (SH) Taroo.’
 - c. Sensei-wa Taroo-o *go-syootai-s-are-ta*
 professor-TOP Taroo-ACC HON.PREF-invite-do-HON-PAST
 ‘The professor invited (SH) Taroo.’

SH has also been argued to involve agreement over [HON:±] feature (or similar feature) on the subject (Toribio, 1990; Hasegawa, 2006, 2017; Kishimoto, 2012; Oseki and Tagawa, 2019). Under such analyses, NPs including the subjects of SH sentences are considered to have [HON:±] features. Similarly to subject ϕ -agreement in other languages, the relevant probing head is considered to agree with the subject and the probing head surfaces with honorific morphology if it is valued with [HON: +], and without honorific morphology if it is valued without [HON: −].

Yet another kind of honorific expression in Japanese is honorific pronouns. Japanese is known for its rich variation in personal pronouns. For example, some of the 2nd person pronouns are listed in (82). These pronouns differ with each other in terms of formality, social status / gender of the speaker and the addressee and the relationship between them.

(82) *anata*, *omae*, *kimi*, *anta*, *temee* etc

One of the relationships that matters for the choice among these pronouns is the honorific relationship. I take up *anata* as an honorific pronoun and *kimi* as a non-honorific pronoun and examine their interaction with other honorific expressions.³⁶ At a glance, it seems possible to analyze these honorific / non-honorific distinctions as the result of a featural difference on the 2nd person pronoun: For example, [2sg, HON: +] is realized as *anata*, while [2sg, HON: −] is realized as *kimi*

In the next section, however, I argue against the views that [HON:±] features on NPs are involved in these honorific constructions.

³⁶While *anata* clearly has a polite flavor compared with other colloquially used 2nd person pronouns raised in (82), it is not often used in a speech directed to an addressee with a high social status (Ishiyama, 2008, a.o.). It is more common to use the name or the prefix of the addressee to address a hearer with a high social status. While I do not go deep into the discussion of what exactly the conditions for the use of *anata* are, such a question would be interesting to explore in terms of the discussion in Section 2.2.2 that the honorific meanings encoded in honorific expressions are not exactly the same for each kind of honorific expressions.

2.2.2 [HON:±] is not involved

I have so far reviewed the basic behaviors of AH, SH, and honorific pronouns in Japanese and what the analyses of these phenomena using [HON:±] look like. Such analyses, when combined together, make a prediction regarding the interaction among these phenomena: adopting the view that overt 2nd person pronouns are all bound by the HEARER operator and inherit the features on the operator (Baker, 2008; Alok and Baker, 2018), it is expected that SH, AH and the honorificity of the 2nd person pronouns show some correlation with each other.

In fact, this seems to be the case for the honorific systems in other languages. Magahi (Alok, 2020b) is one of those languages. Magahi has AH, SH and honorific pronouns like Japanese, and it distinguishes three levels of honorificity: non-honorific (NH), honorific (H) and high-honorific (HH). Crucially for the current purpose, Magahi does not allow non-honorific AH marking when the high honorific 2nd person pronoun is used in the sentence as shown in (83).

- (83) a. apne-ke kauphii chah-ain/*au?
 You.HH-DAT coffee want-HHA/*NHA
 ‘Do you want coffee? (asked to a teacher).’
 b. Toraa kauphii chah-au/*ain?
 You.HH-DAT coffee want-NHA/*HHA
 ‘Do you want coffee? (asked to a friend).’ (Alok, 2020b, 95)

Similarly, mismatches between SH marking and 2nd person pronoun are not allowed either as shown in (84).

- (84) a. *Tu dauR-la-thi(n)
 you.NH/H run-PRF-2HHS
 ‘You ran.’
 b. *apne dauR-l-eN
 you.HH run-PRF-2NHS
 ‘You ran.’

- c. *Apne dauR-l-a
 you.HH run-PRF-2HS
 ‘You ran.’ (Alok, p.c.)

Furthermore, Alok (2020b) observes an interaction between SH and AH when the 2nd person pronoun is in the subject position. More specifically, AH marking is totally absent when the subject is 2nd person and an SH marker is present on the predicate, a pattern that is reported in addressee ϕ -agreement beyond honorific agreement (Kinyalolo, 1991; Oyharçabal, 1993; Carstens, 2005).³⁷ Alok (2020b) argues that this is a ban on double expressions of agreement with the same feature on the same word in line with Oyharçabal (1993) and McFadden (2020). Thus, these data suggest that SH, AH and honorific pronouns all refer to the same feature [HON:±] in Magahi.

- (85) a. Tu dauR-l-eN-(*au)
 you.NH run-PRF-2NHS-*NHA
 ‘You (=a friend) ran.’
 b. Tu dauR-l-a-(*au)
 you.H run-PRF-2HS-*HA
 ‘You (=grandfather) ran.’
 c. Tu dauR-l-thi(n)-(*ain)
 you.HH run-PRF-2HHS-*HHA
 ‘You (=a teacher) ran.’ (Alok, 2020b, 92)

In contrast with languages such as Magahi, SH, AH and 2nd person honorific pronouns in Japanese generally work independently to each other, as also pointed out by Yamada (2019) and Kaur and Yamada (2021). Thus, while it is of course possible to consistently use honorific forms like (86-a) or consistently use non-honorific forms like (86-b), mismatches of various kinds are permitted as shown in (87). Furthermore, (86-a) shows that there is no restriction about the cooccurrence of SH and AH.

³⁷AH marking is possible in (83), as SH in Magahi is sensitive to the case on the subject: as the sentences in (83) have dative subjects, SH marking is absent and hence AH marking is not blocked.

- (86) a. honorific pronoun / SH / AH

anata-wa sanka-**nasai-masu-ka**
 2sg-TOP participate-SH-POL-Q
 ‘Are you going to participate?’

- b. non-honorific pronoun / no SH / no AddHon

kimi-wa sanka-sur-u-no
 2sg-TOP participate-do-PRES-Q
 ‘Are you going to participate?’

- (87) a. non-honorific pronoun / no SH / AH

kimi-wa sanka-**si-masu-ka**
 2sg-TOP participate-do-POL-Q
 ‘Are you going to participate?’

- b. honorific pronoun / SH / no AH

anata-wa sanka-**nasar-u-no**
 2sg-TOP participate-SH-PRES-Q
 ‘Are you going to participate?’

- c. honorific pronoun / no SH / AH

anata-wa sanka-**si-masu-ka**
 2sg-TOP participate-do-POL-Q
 ‘Are you going to participate?’

- d. honorific pronoun / no SH / no AH

anata-wa sanka-**sur-u-no**
 2sg-TOP participate-do-PRES-Q
 ‘Are you going to participate?’

As pointed out by Kaur and Yamada (2021), this is not expected under the [HON:±] approach to each honorific system. Thus, this observation and its contrast with Magahi suggest that Japanese honorific systems in general do not utilize [HON:±] features on NPs. On the other hand, the view that each honorific expression adds its own honorific meaning, as I proposed for OH in Section 2.1, nicely captures these

mismatches among honorificity-indicating expressions. Under this view, the honorific information carried by each honorific expression is independent of the others, at least syntactically. Thus, nothing in the syntax prevents the mismatches among these honorific expressions.

But even if these expressions are syntactically independent of each other, why are the mismatches in (87) not banned by the pragmatic requirement for consistency in terms of the attitude toward the addressee? The view that each honorific expression carries its own honorific meaning accounts for this point as well. Under this view, the honorific inference carried by each honorific expression does not have to be exactly the same: these honorific expressions are different items with different lexical meanings and those meanings do not have to exactly match.

In fact, such a difference in honorific inference is observed. For example, Yamada and Donatelli (2020) claim that SH is sensitive primarily to social hierarchy while AH is more sensitive to formality.³⁸ This is supported by their example in (88). Yamada & Donatelli observe that the sentence in (88-a), which involves SH, is not appropriate in a context where the speaker is a teacher and the addressee is a student, irrespective of the formality of the context. On the other hand, (88-b), which involves AH marking but not SH marking, is possible in the same context, as long as the situation is formal.

- (88) a. asita happyoo-o nasai-mas-u-ka
 tomorrow presentation-ACC do.SH-AH-PRS-Q
 ‘Are you having (SH) a presentation tomorrow? (AH)’
- b. asita happyoo-o si-mas-u-ka
 tomorrow presentation-ACC do-AH-PRS-Q
 ‘Are you having a presentation tomorrow? (AH)’

Furthermore, under this view, honorific expressions can differ from each other in terms of the status of the lack of honorific marking. I assume that the absence of

³⁸See also McCready (2014, 2019) regarding how the honorific meaning is calculated combining these multiple factors.

SH is simply neutral, similarly to what I assumed for the absence of OH. This is supported by the example in (89) from Namai (2000), which shows that the predicate marked with SH and one without SH marker can at the same time be predicated of subjects referring to the same entity. This is not expected if the lack of SH carries anti-honorific meaning.

- (89) A sensei to B sensei-ga otagai-ga kyoogi-sita koto-o
 A teacher and B teacher-NOM each.other-NOM discuss-did fact-ACC
 o-mitome-ni-nat-ta
 HON.PREF-admit-COP-BECOME-PAST
 ‘Teacher A and Teacher B admitted (SH) that each other discussed (non-honorific).’
 (Namai, 2000, 172)

On the other hand, the 2nd person pronoun *kimi* is not neutral in this sense, given that *anata* and *kimi* cannot be used in the same utterance referring to the same addressee.³⁹

- (90) #anata-to kimi-no inu
 2sg-and 2sg-GEN dog
 ‘You and your dog’

These differences among honorific expressions regarding their inferences create room for mismatches among honorific expressions while respecting the pragmatic consistency.

³⁹For AH, I leave it as a question whether the lack of it has non-formal/non-polite meaning or not. McCready (2019) argues that it does not have any non-formal/non-polite meaning by itself, and triggers a “non-polite” inference only pragmatically by the failure to use AH, based on the example in (i). McCready points out that, in examples like (i), it is possible to not use AH in the embedded relative clause while it is possible to use AH in the matrix clause without contradiction.

- (i) kyoo **au** hito-wa omosiroi-**desu**
 today meet person-TOP interesting-AH
 ‘The person (I) meet today is interesting’
 (McCready, 2019, 52)

However, allocutive marking, including AH, is considered to be root phenomenon by some works (Miyagawa, 2012) and it is not clear whether the lack of AH in an embedded clause has the same function as the lack of AH in the matrix clause.

This line of explanation expects that, specifically in the cases where the (non-)honorific inferences each honorific expression carries contradict with each other, mismatches are avoided for pragmatic consistency. The examples in (91) show that this is indeed the case. These sentences suggests that the combination of non-honorific pronouns and SH is degraded. This is expected if the 2nd person pronoun *kimi*, has an anti-honorific meaning and can be used only toward an entity with a socially lower status, while SH has an honorific meaning, which is used with a person with a socially higher status.

- (91) a. non-honorific pronoun / SH / no AddHon

#**kimi**-wa sankā-**nasar**-u-no
 2sg-TOP participate-SH-PRES-Q
 ‘Are you going to participate?’

- b. non-honorific pronoun / SH / AddHon

??**kimi**-wa sankā-**nasai-masu**-ka
 2sg-TOP participate-SH-POL-Q
 ‘Are you going to participate?’

I have shown that AH, SH and honorific pronouns in Japanese behave independently of each other and differ in terms of the (non-)honorific inferences they trigger. This indicates that these honorific expressions, as well as OH, are not the result of agreement over [HON:±]. The paradigm in Japanese is in contrast with Magahi, as discussed above, which involves agreement over [HON:±], as indicated by correlation among AH, SH and honorific pronouns. So there seems to be a typological difference between Magahi and Japanese with respect to honorific expressions.

Of course, these observation do not guarantee that every honorific expression in Magahi refers to [HON:±] or no honorific expression in Japanese refers to [HON:±].⁴⁰

⁴⁰In fact, the mismatch data in Japanese do not exclude the possibility that one of the three kinds of honorific expressions utilize [HON:±].

A typological question that arises here is whether a language with [HON:±] has to utilize it in every honorific expression it has, or a language can mix the strategy with [HON:±] and Japanese type honorific systems. I leave it as a question for future research.

2.2.3 Sketchy analyses for AH, SH and honorific pronouns

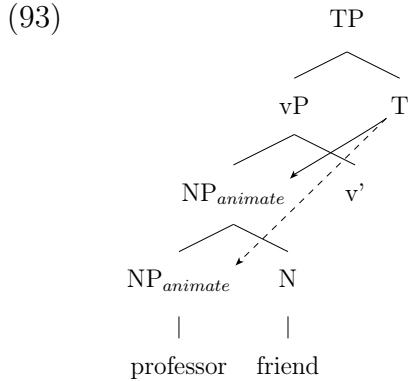
I have shown in the previous section that AH, SH and honorific pronouns in Japanese are not the result of agreement with [±HON]. If this is the case, how specifically are these honorific expressions derived? Although the full analysis of each honorific system is beyond the scope of this work, I give a sketch of an analysis for each of these honorific expressions.

I start with the analysis of SH. One immediate question is how the analysis without agreement over [HON:±] can account for the Agree pattern observed for SH. For example, Niinuma (2003) shows that SH shows the same pattern as OH with respect to possessor honorification: the possessor of the subject can trigger honorific marking on the predicate as long as the possessee NP is inanimate. However, the possessor honorification fails when there is an animate possessee.⁴¹ For example, while (92-a) is interpretable as expressing honor toward Prof.Tanaka, (92-b) is not. Similarly to what we saw for OH in Section 2.1.4.5, Niinuma argues that this is a case of intervention for the animacy-relativized probe from around T: the structure in (93) for (92-b) shows that the animate NP *sensei-no yuuzin* “the professor’s friend” intervenes between T and the NP *sensei* “the professor” and hence block the SH marking targeting the NP *sensei*.

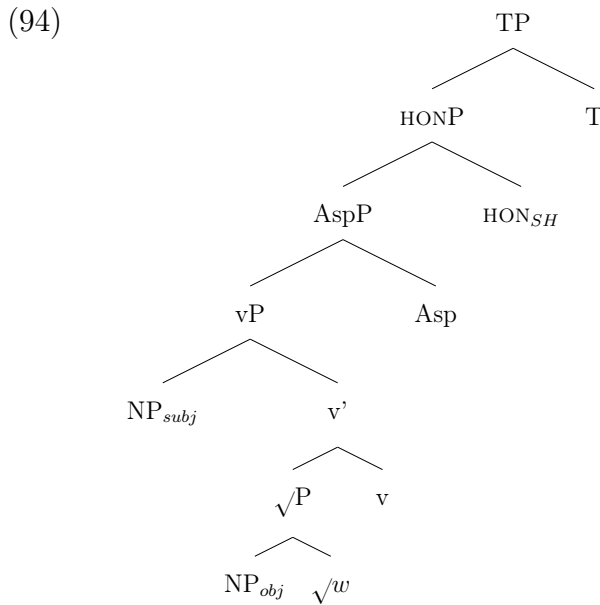
- (92) a. ?Tanaka-sensei-no nimotu-ga go-tootyaku-nasat-ta
 Tanaka-professor-GEN baggage-NOM HON.PREF-arrive-do.HON-PAST
 ‘Prof.Tanaka’s baggage has arrived.’

⁴¹Niinuma (2003) originally shows this point with an adjectival predicate, which do not cooccur with *nasar* SH.

- b. #Tanaka-sensei-no yuuzin-ga go-tootyaku-nasat-ta
 Tanaka-professor-GEN friend-NOM HON.PREF-arrive-do.HON-PAST
 ‘Prof.Tanaka’s friend has arrived.’
 (Only interpretable as expressing honor toward Prof. Tanaka’s friend)



If SH is not agreement over $[\text{HON}:\pm]$, how can one account for this structural condition on the target of honorification in SH? One can account for this pattern by straightforwardly applying the strategy I proposed for OH: there is an HON_{SH} head around T, crucially above the base position of the subject, as shown in (94). Note that this head is distinct from the head HON proposed for OH.



This head has a downward-probing unvalued but interpretable feature relativized to person-index features. Thus, it finds the person-index feature on the closest animate

NP (the subject if it is animate) and gets valued by it.⁴² The result of Agree feeds into the semantics of HON_{SH} , which roughly says that the speaker honors the referent of the goal of Agree. Then the use of SH is felicitous only when the speaker honors the referent of the goal. I do not go into the details of the morphology of SH. Please refer to the discussion in Section 2.1.2.4 above for a partial discussion of *nasar*-type SH morphology.

Moving onto AH, Portner et al.’s (2019) analysis of the Korean speech-style particles gives a clue to the analysis on AH without $[\pm HON]$ feature. They propose that the Korean speech-style particles are the realization of the features on the *c* head, a left peripheral head which only appears in main clauses. However, according to them, the features are not $[\pm HON]$ features valued by Agree with the $[\pm HON]$ feature on HEARER. Instead, the relevant features are $[\pm formal]$ features and what they call Status features, whose semantics describes the relationship between the social statuses of the speaker and the addressee. They argue that different Korean speech-style particles realize different combinations of these features along with the sentence mood on a near-by head. Crucially for current purposes, these features differ from $[\pm HON]$ in the sense that they are born on the head *c*, and not on HEARER, nor 2nd person pronouns inheriting the features from HEARER.

- (95) a. $[\text{status: } S \leq A], [\text{formal: } +], [\text{s-mood: DECL}] \rightarrow \textit{supnita}$ (formal)
 b. $[\text{status: } S \leq A], [\text{formal: } -], [\text{s-mood: DECL}] \rightarrow \textit{eyo}$ (polite)
 c. $[\text{status: } S \geq A], [\text{formal: } -], [\text{s-mood: DECL}] \rightarrow \textit{e}$ (intimate)

⁴²Note that even if the subject position does not include an animate NP, SH is not allowed to target the animate object, which is now the closest animate NP. For example, the SH marking in (i) cannot be interpreted as honoring the professor.

- (i) #Ame-ga sensei-o o-nurasi-ni-nat-ta
 rain-NOM professor-ACC HON.PREF-make.wet-COP-become-PAST
 ‘The rain made (SH) the professor wet’

I consider this to be a manifestation of the phase effect: a *vP* phase is in between HON_{SH} and the object and blocks Agree between them.

I claim that the same line of analysis can be applied to Japanese AH. The head responsible for the AH morphology *mas* is born with the semantic inference regarding formality and speaker-addressee relationship.⁴³ Tentatively assuming that the head *sa* (speech-act) is responsible for the presence or the absence of the AH marking, I can, for example, assume that the AH version of *sa*, *sa_{AH}*, is associated with the honorific inference in (96).⁴⁴ Again, this head is independent of the head HON involved in OH or the head HON_{sh} involved in SH.

- (96) the situation is formal and speaker_c honors hearer_c

Note that the AH marker *mas* itself is not a realization of the *sa* head itself, given the observations by Yamada (2019) that (i) *mas* occurs in a relatively low position, in between the verb and T as shown in (97), and (ii) the AH morphology spreads across multiple heads in certain configurations as shown in (98). I follow Yamada (2019) in assuming that the morphological AH markers *mas* and *des* are morphologically sprouted triggered by the c-commanding *sa_{ah}* head.

- (97) Taroo-wa Hanako-ni ai-masi-ta
 Taroo-TOP Hanako-DAT meet-AH-PAST
 ‘Taroo met Hanako (polite).’
- (98) Taroo-wa Hanako-ni ai-**mas**-en-**desi**-ta
 Taroo-TOP Hanako-DAT meet-AH-NEG-AH-PAST
 ‘Taroo didn’t meet Hanako (polite).’

For the honorific pronouns, it has been pointed out that Japanese personal pronouns are open class elements including a lot of connotation in addition to the presup-

⁴³It is not clear if it is necessary in Japanese to consider that there are morpho-syntactic features regarding formality and the speaker-addressee relationship, especially given that the various combinations of them do not have morphological reflexes in Japanese.

⁴⁴For the Speaker-Addressee relationship, it is not impossible to assume that the argument for the semantic honor relationship in (96) is chosen via Agree with person-index features on the SPEAKER and the HEARER operators. However, I do not commit myself to such an idea, given that it does not make different predictions from picking the speaker and the hearer from the context.

position triggered by the person features in English, (Kuroda, 1965; Noguchi, 1997; Panagiotidis, 2002, a.o.). For example, the use of a first person pronoun *uti* triggers the non-at-issue inference that the speaker is young as well as being female. Although I leave it for future research how those non-at-issue inferences are introduced by the pronouns in Japanese, the honorific inference introduced by the pronouns can be considered as a part of such non-at-issue inferences and is not the realization of [HON:±] feature on the pronoun, as was also argued by Kaur and Yamada (2021).

To summarize, I have shown that Japanese does not utilize [HON:±] in SH, AH and honorific pronouns and, hence, OH is not exceptional in this regard. I have also shown that there is a possible account for each honorific expression that does not rely on [HON:±]. Japanese honorific systems contrast with AH, SH and honorific pronouns in Magahi. This suggests that the phenomena that are characterized as honorifics are not monolithic in their mechanisms.

2.3 Comparison with Korean Subject Honorifics

In Section 2.1, I argued that the marker for Japanese OH (JOH, henceforth) is a semantic predicate that finds its arguments via Agree. This argument was based on the core observation that JOH cares about the relationship between the subject and the object. In this regard, it is worth comparing JOH with Korean Subject Honorifics (KSH). In the KSH construction, an honorific marking on the predicate appears when the subject refers to an honored entity, as shown in (99). Morphologically, the marker takes the form of the suffix *si* on the verb (See Choi and Harley (2019) for a more detailed examination of the KSH morphology.).

- (99) *Context:* The speaker is talking to his/her younger brother about their mother.

eoma-ka jigeum nora-e-lul ha-**si**-eo
 mom-NOM now song-ACC do-SH-DECL

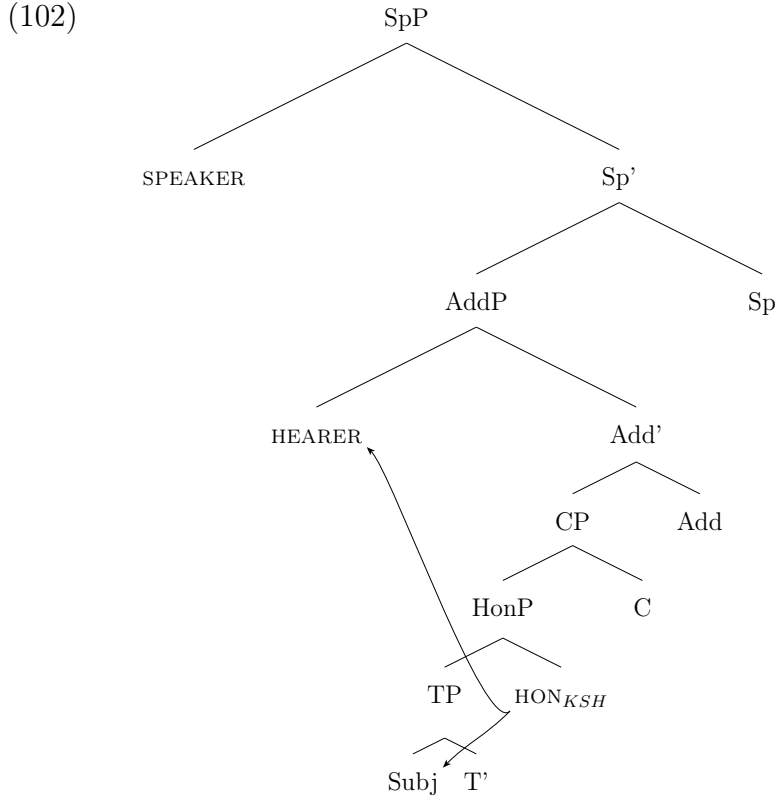
‘My mother is singing now.’

What is of interest here is that KSH is suppressed when the Addressee has a higher status than the subject (prescriptively called *apconpep*). Thus, although (99) suggests that the mother of the speaker can be the target of honorification, (100) shows that the honorification of the same subject *eoma* is not possible when the addressee is the speaker’s grandmother, who has a higher status than the subject referent. This is not a ban on the cooccurrence between the SH marker *si* and the formal speech-style particles *pnida*, as *si* and *pnida* can cooccur in (101), where the subject is the grandmother and the addressee is the mother.

- (100) eoma-ka jigeum nora-e-lul ha-(#si)-pnida
 mom-NOM now song-ACC do-ADHON
 ‘My mother is singing now.’ (Addressee = grandmother)

- (101) halmeoni-ka kigeum nora-e-lul ha-si-pnida
 grandmother-NOM now song-ACC do-SH-ADHON
 ‘My grandmother is singing now.’ (Addressee = mother)

This suppression of KSH is apparently similar to JOH in the sense that they both require the honor toward the target of honorification from some other entity than the speaker. Moreover, one can consider a syntactic analysis for KSH suppression similar to the one for JOH: if a Speech Act projection exists in the left periphery and the operator HEARER is syntactically represented as a DP in it (Speas and Tenny, 2003; Miyagawa, 2012, 2017; Zu, 2018, a.o.) as I have assumed, it seems possible to extend the analysis for JOH to KSH, by assuming a bi-directional probe from the head HON_{KSH} around T, as shown in (102) and HON_{KSH} triggers the honorific inference in (103).



(103) $Sp \text{ honor } \llbracket \text{NP}_{intF_1[]} \rrbracket \wedge \llbracket \text{NP}_{intF_2[]} \rrbracket \text{ honor } \llbracket \text{NP}_{intF_1[]} \rrbracket$

However, I argue that KSH should not be analyzed this way for three reasons.

First, the suppression of honorific expression is reported to affect not only KSH, but also other kinds of honorifics in Korean. For example, Korean has a nominal honorific suffix *-nim*, which attaches to a noun like *seonbae* ‘senior colleague’. Lim and Fukami (2004) observe that the form such as *seonbae-nim* is avoided when the addressee is a parent, while that form can appear when the addressee is a friend. This suggests that the suppression of honorific expression does not come from the infelicity of the semantics of KSH, but from a more general pragmatic avoidance of honoring someone else when talking to a highly-honored person.

Second, given the discussion in Section 2.2, if KSH is derived with a mechanism parallel to that of JOH, it is expected that KSH does not correlate with the honorific marking on DPs. However, this prediction is not borne out, according to a general-

pointed out by previous studies, I have shown that OH triggers a semantic inference that there is an honorific relationship between the subject and the honoree. The proposed analysis crucially differs from the previous Agree analysis on Japanese OH in not involving agreement over the $[\text{HON}:\pm]$ feature. In Section 2.2, I have shown that OH is not exceptional in the Japanese honorific system in terms of not involving the agreement over $[\text{HON}:\pm]$ feature. This contrasts with the behaviors of honorifics in Magahi and opened up a typological question regarding how and where a language can encode honorific meanings. In terms of an honorific system outside of Japanese, I have further shown that the analysis for Japanese OH probably should not be extended to Korean Subject Honorifics, confirming the point that honorific systems in various languages are not necessarily the same.

Appendix: compatibility with the Right-node-raising facts

In this appendix, I show how the current proposal about Japanese OH interacts with the right-node raising facts. An (2007) points out an interaction between Japanese Subject Honorifics and the Right-node-raising constructions.⁴⁶ More specifically, An shows that in a Right-node-raising (RNR) sentence as shown in (105), the SH marking on the predicate is possible when the conjunct closer to the predicate has an honorific subject, while SH marking is not possible when the farther conjunct, but not the closer conjunct, has an honorific subject. The judgements in (105) are the ones from An (2007). While the contrast might not be as clear as reported by An to other Japanese speakers, the general tendency that (105-a) is preferred to (105-b) seems valid across native speakers.

⁴⁶An (2007) mainly examines Korean and shows that Japanese and Korean share the pattern in (105).

(105) Subject Honorifics

- a. Nina-wa Ana-ni, (sosite) sensei-wa Zhanna-ni hon-o
 Nina-TOP Ana-DAT and professor-TOP Zhanna-DAT book-ACC
 o-okuri-ni-nat-ta
 HON.PREF-send-COP-become-PAST
 ‘Nina (sent a book) to Ana, and the teacher sent (SH) a book to Zhanna.’
- b. *sensei-wa Zhanna-ni, sosite Nina-wa Ana-ni hon-o
 professor-TOP Zhanna-DAT and Nina-TOP Ana-DAT book-ACC
 o-okuri-ni-nat-ta
 HON.PREF-send-COP-become-PAST
 ‘Professor (sent a book) to Zhanna, and Nina sent (SH) a book to Ana.’

(An, 2007, 120)

While An (2007) does not refer to OH, the same pattern is observable with OH.

(106) Object Honorifics

- a. (?)Taroo-wa Hanako-ni, sosite Ziroo-wa sensei-ni hon-o
 Taroo-TOP Hanako-DAT and Ziroo-TOP professor-DAT book-ACC
 go-syookai-si-ta
 introduce.OH-PAST
 ‘Taroo to Hanako, and Ziroo to Professor, introduced (OH) a book.’
- b. ??Ziroo-wa sensei-ni, sosite Taroo-wa Hanako-ni hon-o
 Ziroo-TOP professor-DAT and Taroo-TOP Hanako-DAT book-ACC
 go-syookai-si-ta
 introduce.OH-PAST
 ‘Ziroo to Professor, and Taroo to Hanako, introduced (SH) a book.’

An (2007), based on (105) and other facts, claims that RNR sentences are derived by PF Ellipsis: two full sentences are conjoined and a linearly adjacent chunk in the former conjunct can be elided under the phonological identity with the latter conjunct. Thus, the sentences in (105) are analyzed to be derived from the ones in (107) by eliding the bracketed parts. The sentence in (107-b) is not acceptable, because it involves an SH-marked predicate in the second conjunct whose subject

does not refer to an honored entity, and hence (106-b) is not acceptable as well.

(107) Subject Honorifics

- a. Nina-wa Ana-ni [hon-o okut-ta], (sosite) sensei-wa
 Nina-TOP Ana-DAT book-ACC send-PAST, and professor-TOP
 Zhanna-ni hon-o o-okuri-ni-nat-ta
 Zhanna-DAT book-ACC HON.PREF-send-COP-become-PAST
 ‘Nina sent a book to Ana, and the teacher sent (SH) a book to Zhanna.’
- b. *sensei-wa Zhanna-ni [hon-o
 professor-TOP Zhanna-DAT book-ACC
 okut-ta/o-okuri-ni-nat-ta], sosite Nina-wa
 send-PAST/HON.PREF-send-COP-become-PAST and Nina-TOP
 Ana-ni hon-o o-okuri-ni-nat-ta
 Ana-DAT book-ACC HON.PREF-send-COP-become-PAST
 ‘Professor (sent a book) to Zhanna, and Nina sent (SH) a book to Ana.’

Note that the two conjuncts are not exactly the same in (107-a), An (2007) assumes that ellipsis is possible even without the exact identity as long as the elided part is a subpart of the overt part and, hence, is recoverable from the overt element (Oku, 1998; Chung, 2006; Merchant, 2013). The deletion in (107-a) is permitted as the elided part is a version of the overt part without the honorific morphology and thus is the subpart of it.

The question here is: can the current approach to OH, when combined with this view of RNR, correctly capture the interaction between OH and RNR observed in (106)? This question is especially intriguing given that the current proposal differs from the previous Agree approaches in terms of the view on how the Agree process affects OH morphology. The answer is that it still accounts for the RNR data involving OH. Under the current approach, the linearized PF forms of the sentences in (106) before the deletion looks like (108). The sentence in (108-a), the version before ellipsis of (106-a), is correctly predicted to be okay: HON in the latter conjunct is in a position to find *Ziroo* and *sensei* and triggers a pragmatically appropriate inference that “Speaker honors the teacher in the actual world and Ziroo honors the teacher in the described situation”. The former conjunct in (108-a) does not involve HON

and hence is neutral with regard to honorific meanings. Ellipsis deriving (106-a) from (108-a) is also permitted because the bracketed part of the former conjunct is a subpart of the bracketed part in the second conjunct, differing from the latter only in terms of the lack of the HON head (and the morphology triggered by it). On the other hand, the sentence in (108-b), the version before ellipsis for (106-b), is correctly ruled out: it includes HON, which finds *Taroo* and *Hanako* by its bi-directional probing. Thus, (108-b), as well as (106-b) derived from it, is infelicitous, as it triggers inference that Taroo honors Hanako, which is not true.

- (108) a. Taroo-wa Hanako-ni [hon-o syookai-si-ta], sosite
 Taroo-TOP Hanako-DAT book-ACC introduce-do-PAST and
 Ziroo-wa sensei-ni [hon-o go-syookai-HON-si-ta]
 Ziroo-TOP teacher-DAT book-ACC introduce-HON-PAST
 ‘Taroo introduced a book to Hanako, and Ziroo introduced-HON a book
 to a teacher.’
- b. #Ziroo-wa sensei-ni [hon-o
 Ziroo-TOP teacher-DAT book-ACC
 syookai-si-ta/go-syookai-HON-si-ta], sosite Taroo-wa Hanako-ni
 introduce-PAST/introduce-HON-PAST and Taroo-TOP Hanako-DAT
 [hon-o go-syookai-HON-si-ta]
 book-ACC introduce-HON-PAST
 ‘Ziroo introduced(-HON) a book to the teacher, and Taroo introduced-
 HON a book to Hanako.’

This shows that, while the current proposal deviates from the previous Agree approach in terms of how the honorific morphology interacts with the Agree process, it still accounts for the interaction between OH and RNR.

Chapter 3

Benefactive-Empathy auxiliaries in Japanese

3.1 Introduction

In the previous chapter, I proposed that the result of Agree can feed into LF, providing arguments to some semantic predicates, based on the behavior of Japanese Object Honorifics (OH). In this chapter, I show that the same mechanism underlies the use of another kind of element in Japanese, the benefactive-empathy auxiliaries, *yar* and *age*. These auxiliaries add two kinds of information; benefactive information and information about empathy relationships. I show that these pieces of information in *yar/age* are added by semantic predicates carried by the auxiliaries which select their arguments via Agree. I further show that the same analysis does not extend to another benefactive-empathy auxiliary *kure*, which is often considered to be a correspondent of *yar/age* with the opposite empathy meaning.

3.1.1 The basic functions of the benefactive-empathy auxiliaries

In this section, I review the basics of the benefactive information and the empathy information carried by the auxiliaries *yar*, *age* and *kure*. Section 3.1.1.1 reviews the benefactive information and Section 3.1.1.2 reviews the empathy information.

3.1.1.1 Benefactive information

Starting with their benefactive information, the auxiliaries *yar/age* and *kure* indicate that the event described by the main predicate is beneficial to a certain entity (Shibatani, 1996; Yamada, 2004; Pak, 2015; Okura, 2009; Otani and Steedman, 2010; Tomioka and Kim, 2017; Hasegawa, 2018). For example, while the examples in (1-a) and (2-a) are simple descriptions of a sending event or an inviting event, the examples in (1-b) and (2-b) additionally express that the sending event or the inviting event was beneficial to Hanako. I refer to the entity who gets benefit from the event with the term *beneficiary* and argue in more detail about how the NP that serves as the beneficiary is chosen in Section 3.2.1 for *yar/age* and in Section 3.3 for *kure*.

- (1) a. Taroo-wa Hanako-ni nimotu-o okut-ta
Taroo-TOP Hanako-DAT package-ACC send-PAST
'Taroo sent a package to Hanako.'
- b. Taroo-wa Hanako-ni nimotu-o okutte-**yar/age/kure**-ta
Taroo-TOP Hanako-DAT package-ACC send-BEN-PAST
'Taroo sent a package to Hanako for Hanako's benefit'
- (2) a. Taroo-wa Hanako-o sasot-ta
Taroo-TOP Hanako-ACC invite-PAST
'Taroo invited Hanako.'
- b. Taroo-wa Hanako-o sasotte-**yar/age/kure**-ta
Taroo-TOP Hanako-ACC invite-PAST
'Taroo invited Hanako for Hanako's benefit.'

Tomioka and Kim (2017) propose the specific representation of the benefactive meaning in (3). (3) takes a predicate of an event P and makes a statement that, for an event e that is described with P , it is generally true that there exists a benefiting event e'' that results from e that benefits some entity.¹ Tomioka and Kim (2017) argue that this meaning is either a presupposition or an expressive meaning.

(3) The benefactive meaning proposed in Tomioka and Kim (2017, 251)

$$\llbracket \text{Ben}_{(i)} \rrbracket^g = \\ \lambda P_{\langle s,t \rangle}. \text{Gen}(e) [P(e)] [\exists e'' [\text{Benefit}(e'') \& \text{Exp}(g(i), e'') \& \text{Result}(e'')(e)]]$$

The generic quantification in (3) can be supported by the example in (4) from Tomioka and Kim (2017). In this case, while the event in fact did not benefit Hana, the use of the benefactive auxiliary is possible (with the interpretation that Hana is the beneficiary, as predicted by the current analysis). This indicates that *yar/age* only refers to the generic beneficiality of the modified event.²

¹There might be some objections regarding the details of the representation in (3). For example, it is not clear whether it is plausible to represent the benefiting event as a distinct event from the event described by the main predicate, especially given that there cannot be two distinct temporal adverbs each modifying different events as shown in (i).

- (i) *Taroo-wa kotosi kyonen Hanako-o sono sigoto-ni suisen-site-age-ta
 Taroo-TOP this.year last.year Hanako-ACC that job-DAT recommend-do-BEN-PAST
 ‘Taroo recommended-BEN Hanako for the position last year this year.’ (Intened reading:
 Taroo recommended Hanako last year and Hanako benefited from getting the job this year.)

However, as the main analysis of this chapter stands irrespective of these issues, I simply assume the meaning proposed by Tomioka and Kim (2017) here, and leave the detailed examination of their proposal for future research.

²These auxiliaries can sometimes appear with malefactive readings.

- (i) Taroo-wa Hanako-ni meiwaku-o kakete-yar-ta
 Taroo-TOP Hanako-DAT trouble-ACC give-BEN-PAST
 ‘Taroo gave trouble to Hanako (to annoy Hanako).’

One might think that these auxiliaries should be treated as having “affectedness” reading, and the benefaction and malefaction simply are specific examples of affectedness. However, I treat such malefactive uses separately from the benefactive uses of these auxiliaries. There is some support for this treatment. First, not all the benefactive auxiliaries can participate in malefactive construction. The auxiliary cannot be *age* in (i), for example (unless it is an extremely sarcastic expression).

- (4) Yumi-wa Hana-no kata-o monde-**age**-ta-ga, tikara-o
 Yumi-TOP Hana-GEN shoulder-ACC massage-give-PAST-but, power-ACC
 ire-sugite, motto itaku-natte-simat-ta
 put-too.much more painful-become-result-PAST
 ‘Yumi gave Hana a massage on her shoulder for Hana’s benefit, but Yumi
 applied too much pressure, and Hana’s shoulder ended up hurting more.’
 (Tomioka and Kim, 2017, 251)

One might also think that it is not the generic beneficiality of the event, but rather the benefactive intention in the referent of the subject, who is often called the *benefactor*, that licenses the use of benefactive auxiliaries. While Tomioka and Kim (2017) do not discuss this point in detail, the example in (5) suggests that the intention of the subject is not required for the use of the benefactive auxiliaries. It shows that the use of the benefactive auxiliaries is possible even when the subject does not intend to benefit the beneficiary.

- (5) *Context:* Taroo moved in to a dorm. He cleaned up a room, thinking that it is his own, but it later turned out that the room he cleaned up was Hanako’s.

Taroo-wa (soo-to-wa sira-zu) Hanako-no heya-o
 Taroo-TOP so-that-TOP know-NEG Hanako-GEN room-ACC
 soozi-site-**yar**/**age**-ta
 clean-do-BEN-PAST

‘Taroo cleaned-ben Hanako’s room for Hanako’s benefit (without knowing it).’

Thus, the benefactive meaning of these auxiliaries does not refer to the intention of the subject. In the next section, however, I show that the subject becomes relevant for the empathy information these auxiliaries add. I continue to call the subject “benefactor” although it does not participate in the benefactive meaning represented in (3).

Second, while the intentionality of the subject is irrelevant to the benefactives use of these auxiliaries as I show with (5), the malefactive use of the auxiliaries clearly involves the malefactive intention of the subject. For example, one cannot say (i), in a context where Taroo did not intend to trouble Hanako and regrets his behavior. I thus do not seek to unify these uses and only treat the benefactive use in this section.

3.1.1.2 Empathy information

In addition to these benefactive meanings, *yar/age* and *kure* are reported to have an empathy-related function (Kuno and Kaburaki, 1977; Kuno, 1978; Oshima, 2006, 2007). By the term *empathy*, I refer to the speaker's identification with a certain entity (Kuno and Kaburaki, 1977; Kuno, 1987, a.o.). It has been noted that *yar/age* requires a certain entity, most canonically the object referent, to be more empathized with than another entity, most canonically the subject referent, by the speaker.³ Thus, the use of *yar/age* in the example in (6-a) is acceptable, while (6-b) is not, as the speaker empathizes more with himself/herself than anyone else including Taroo (*Speech Act Empathy Hierarchy* (Kuno and Kaburaki, 1977)).

- (6) a. watasi-wa Taroo-o sasotte-**yar/age**-ta
 1sg-TOP Taroo-ACC invite-BEN-PAST
 'I invited Taroo for Taroo's benefit.'
- b. #Taroo-wa watasi-o sasotte-**yar/age**-ta
 Taroo-TOP 1sg-ACC invite-BEN-PAST
 'Taroo invited me for my benefit.'

Kure contrast with *yar/age* in this respect. The sentences in (7) minimally differ from (6-a) in terms of the benefactive auxiliary. Here, *kure* similarly expresses the benefit to the invited entity. However, it requires the invited entity to be *more* empathized with by the speaker than the subject is. As a result, it is compatible with the example in (7-b) rather than (7-a).

- (7) a. #watasi-wa Taroo-o sasotte-**kure**-ta
 1sg-TOP Taroo-ACC invitee-BEN-PAST
 'I invited Taroo for Taroo's benefit.'
- b. Taroo-wa watasi-o sasotte-**kure**-ta
 Taroo-TOP 1sg-ACC invite-BEN-PAST

³Oshima (2006) argues that the entity whose empathy matters can shift from the speaker to an attitude holder in an embedded clause. In this Chapter, I only deal with the occurrence of benefactive auxiliaries in the matrix clause and hence do not deal with the cases with such a shift.

‘Taroo invited me for my benefit.’

Using the definition of empathy by Kuno (1987) in (8), Oshima (2007) captures these observations with the generalization in (9).⁴

- (8) *Empathy*: Empathy is the speaker’s identification, which may vary in degree, with a person/thing that participates in the event or state that (s)he describes in a sentence.

Degree of Empathy: The degree of the speaker’s empathy with x, $E(x)$, ranges from 0 to 1, with $E(x) = 1$ signifying his/her total identification with x, and $E(x) = 0$ a total lack of identification. (Kuno, 1987, 206)

- (9) a. *-yar* (/ *-age*): $E(\text{Benefactor}) \geq E(\text{Beneficiary})$
 b. *-kure*: $E(\text{Beneficiary}) > E(\text{Benefactor})$

(Oshima, 2006, 168(with slight modification))

As the definition in (9) suggests, the object NP compared over empathy hierarchy with the subject always accords with the NP referring to the beneficiary designated by these auxiliaries. The distribution of such an NP in a *yar/age* sentence is discussed in detail in Section 3.2.1 and that in a *kure* sentence is discussed in Section 3.3.

Note that similar empathy constraints are held by the main verbs which are homophonous with the benefactive auxiliaries. Main verbs *yar*, *age* and *kure* all mean ‘give’ as exemplified in (10) and they have the empathy constraints shown in (11).

⁴Kuno (1978) argues that, when $E(\text{Benefactor})=E(\text{Beneficiary})$ holds, the auxiliary *yar* is not used and instead the form without any benefactive markers is used. However, I follow Oshima (2006, 2007) here in considering that *yar* is available in the situation where $E(\text{Benefactor})=E(\text{Beneficiary})$ holds. This view is supported by the examples in (i). Since the object refers to the subject here, they must be equal in empathy. Crucially, *yar/age* (but not *kure*) are available in this sentence.

- (i) Max-to Pat-wa otagai-o tetudatte-yar-ta
 Max-and Pat-TOP each.other-ACC help-BEN-PAST
 ‘Max and Pat helped each other for each other’s benefit.’ (Oshima, 2007, 3)

While there seems to be a clear relationship between these main verbs and the benefactive auxiliaries, I confine the discussion in this chapter to the benefactive auxiliaries and do not go into these main verbs.

- (10) Taroo-wa Hanako-ni okasi-o **age/yar/kure**-ta
 Taroo-TOP Hanako-DAT cookie-ACC give-PAST
 ‘Taroo gave cookies to Hanako.’

- (11) a. *yar* (/ *age*) (main verb): $E(\text{Actor}) \geq E(\text{Recipient})$
 b. *kure* (main verb): $E(\text{Recipient}) > E(\text{Actor})$

(Oshima, 2006, 168 (with slight modification))

Oshima (2006) gives a semantic analysis to these constraints: he considers that *yar/age* and *kure*, in both auxiliary uses and main verb uses, have presuppositional meanings that specify the empathy relationship between the benefactor / actor and the beneficiary / recipient. Oshima (2006) gives the meanings in (12) to the main verbs *yar* and *kure*, where the predicate **outrank** can be defined as shown in (13) and ER is the empathy hierarchy in the given context.⁵

- (12) Denotations of the main verb *yar/age* proposed by (Oshima, 2006, 179) (Oshima, 2006, 179)

- a. $\llbracket \text{yar} \rrbracket \mapsto \lambda z [\lambda y [\lambda x [\lambda e_1 [\lambda w_1 [\langle \text{give}(w_1, e_1, x, y, z);$
 $\neg \text{outrank}(z, x, \text{ER}(c^*)) \rangle \rangle \rangle \rangle \rangle \rangle \rrbracket \rrbracket \rrbracket \rrbracket \rrbracket$
 b. $\llbracket \text{kure} \rrbracket \mapsto \lambda z [\lambda y [\lambda x [\lambda e_1 [\lambda w_1 [\langle \text{give}(w_1, e_1, x, y, z);$
 $\text{outrank}(z, x, \text{ER}(c^*)) \rangle \rangle \rangle \rangle \rangle \rangle \rrbracket \rrbracket \rrbracket \rrbracket \rrbracket$

- (13) $\llbracket \text{outrank}(a, b, h) \rrbracket^{c,w,g}$
 $= \{1,2\}$ iff $\llbracket h \rrbracket^{c,w,g} = (\text{the partially ordered set}) \{A, \geq_{\text{emp}}\}$, $\llbracket a \rrbracket^{c,w,g} \in A$, $\llbracket b \rrbracket^{c,w,g} \in$

⁵In the notation adopted in Oshima (2006), $\{1,2\}$ means true and felicitous (=satisfying presupposition), while $\{2\}$ means false and felicitous. Thus, one can roughly consider $\{1,2\}$ to indicate True in the canonical sense, and $\{2\}$ False in the canonical sense.

$$\begin{aligned}
&A, \text{ and } \llbracket a \rrbracket^{c,w,g} \geq_{emp} \llbracket b \rrbracket^{c,w,g}; \\
&= \{2\} \text{ otherwise}
\end{aligned}
\tag{Oshima, 2006, 179}$$

Oshima does not give formalized denotations of *yar/age* in their auxiliary uses. However, as the main verbs and the benefactive auxiliaries share the basic empathy conditions, once we have a way to identify the beneficiary and the benefactor, we can extend this idea to the auxiliaries and assume that the auxiliaries *yar/age* have presuppositional meanings that the entity serving as the beneficiary does not outrank the entity serving as the benefactor on the empathy hierarchy. On the other hand, the auxiliary *kure* has a presuppositional meaning that the entity serving as the beneficiary outranks the entity serving as the benefactor.

Note that the conditions in (9) only refer to the relationship between the amount of empathy toward the benefactor and that the amount of empathy toward the beneficiary, and do not refer to the amount of empathy toward any other participants. That is, these conditions do not care about whether the benefactor in *age/yar*, for example, refers to the most empathized among all the participants of the event (cf. Nishigauchi (2014)). I discuss this distinction more in Section 3.2.1 and 3.3. There, I show that this characterization is true for *yar/age* but not for *kure*.

While we have seen the difference in the empathy meaning between *kure* and *yar/age* so far, *yar* and *age* behave in a similar way to each other regarding this empathy meaning. In fact, they behave similarly with regard to most of the points that are examined in this chapter. One notable difference between these two is that *yar* seems to restrict the beneficiary to a non-honored person. Ishiguro (1991) observes the contrast in (14), which shows that *yar* is not available when the beneficiary is *otoosan* ‘father’, who has a relatively high status in the family, while *age* is available no matter what the status of the beneficiary is.

- (14) a. Otoosan-ni hon-o yonde-**age**/#**yar**-nasai
 father-DAT book-ACC read-BEN-IMP
 ‘Read a book to your father for your father’s benefit.’
- b. Imoto-ni hon-o yonde-**age**/**yar**-nasai
 younger.sister-DAT book-ACC read-BEN-IMP
 ‘Read a book to your younger sister for your younger sister’s benefit.’

(Ishiguro, 1991, 230)

As this difference between *yar/age* is not directly relevant to the discussion in the rest of this chapter, I abstract away from this difference.

Given what we have seen about the benefactive and empathy-related functions of the Japanese benefactive auxiliaries, it seems that these auxiliaries introduce non-at-issue meanings roughly represented as in (15), although I argue later that the meaning introduced by *kure* is slightly different from (15-b). Note that, in (15), I intentionally left the identity of the semantic arguments vague with the variables X and Y. In Section 3.2, I show that the choice of X and Y in *yar/age* sentences shows a pattern that needs a syntactic account. In Section 3.3, however, shows that such a pattern does not straightforwardly extend to *kure*.

- (15) a. *yar/age*: It is generally the case that an event e results in another event where X gets benefited AND X does not outrank Y over the Empathy hierarchy in the context
- b. *kure* (to be revised): It is generally the case that an event e results in another event where X gets benefited AND X outranks Y over the Empathy hierarchy in the context

3.1.2 The position of the auxiliaries

The morphological evidence suggests that all of these auxiliaries occur in a relatively high position, at least above the Voice head. (16) shows that the benefactive aux-

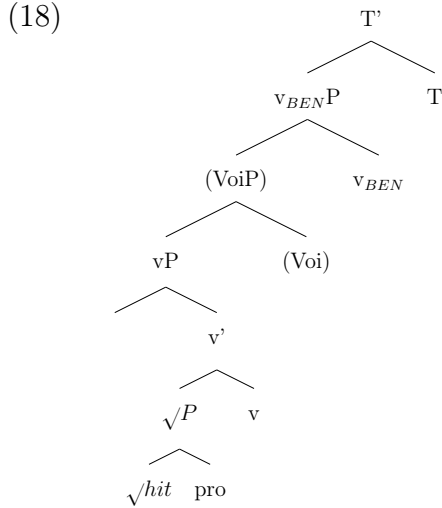
iliaries follow, but cannot precede, the passive marker. Given that Japanese is a head-final language, this indicates that the benefactive auxiliaries occur higher than the passive voice head.

- (16) a. Taroo-wa Hanako-ni nagur-arete-**yar**/**age**/**kure**-ta
 Taroo-TOP Hanako-DAT hit-PASS-BEN-PAST
 ‘Taroo was-hit-BEN by Hanako for Hanako’s benefit.’
- b. *Taroo-wa Hanako-ni nagutte-**yar**/**age**/**kure**-(r)are-ta
 Taroo-TOP Hanako-DAT hit-BEN-PASS-PAST
 ‘Taroo was-hit-BEN by Hanako for Hanako’s/Taroo’s benefit.’

At the same time, these auxiliaries constitute a distinct head from T and are located below T, as can be confirmed by the examples in (17), where the Neg head *nakat* intervenes between *yar/age* or *kure* and T.

- (17) Taroo-wa Hanako-ni nagur-arete-**yara**/**age**/**kure**-nakat-ta
 Taroo-TOP Hanako-DAT hit-PASS-BEN-NEG-PAST
 ‘Taroo was not hit by Hanako for Hanako’s benefit.’

Thus, I assume the schematic structure in (18), where the benefactive auxiliaries, represented as v_{BEN} , occur in between Voice and T. Note that, in this dissertation, I consistently assume that the Voice head is distinct from the *v* head and appears only in passives in Japanese. In active sentences, I assume that the agent is introduced in Spec vP. The introduction of this assumption is solely for consistency, and nothing in the current account crucially hinges on this view.



In contrast with the passive marker, a causative marker can either precede or follow the benefactive marker as shown in (19).⁶ This suggests that the position of v_{caus} is relatively free.⁷

- (19) a. Taroo-wa Hanako-ni Ziroo-o tasukete-**age**/**yar**-(s)ase-ta
 Taroo-TOP Hanako-DAT Ziroo-ACC help-BEN-CAUS-PAST
 ‘Taroo caused Hanako to help-BEN Ziroo for Ziroo’s benefit.’
- b. Taroo-wa Hanako-ni Ziroo-o tasuke-sasete-**age**/**yar**-ta
 Taroo-TOP Hanako-DAT Ziroo-ACC help-CAUS-BEN-PAST

⁶However, it is not possible for *kure* to precede a causative marker as shown in (i).

- (i) *Taroo-wa Hanako-ni watasi-o tasukete-kure-sase-ta
 Taroo-TOP Hanako-DAT 1sg-ACC help-BEN-CAUS-PAST
 ‘Taroo made Hanako help me for my benefit.’

I do not go into the detailed analysis about why *kure* cannot precede a causative marker, this observation is at least compatible with the idea in Section 3.3.3 that *kure* occurs higher than *age*.

⁷This view about v_{caus} is also in line with the fact that the causative marker can either precede or follow the passive marker as shown in (i).

- (i) a. Taroo-wa Hanako-ni (Ziroo-ni) nagur-are-sase-ta
 Taroo-TOP Hanako-DAT Ziroo-DAT hit-PASS-CAUS-PAST
 ‘Taroo made Hanako to get hit (by Ziroo).’
- b. Taroo-wa Hanako-ni Ziroo-o nagur-ase-rare-ta
 Taroo-TOP Hanako-DAT Ziroo-DAT hit-PASS-CAUS-PAST
 ‘Taroo was made to hit Ziroo by Hanako.’

This is potentially because v_{caus} is a lexical verb that can select different size of verbal projections as its complement, although I do not go into the detailed examination of this possibility.

‘Taroo caused-BEN Hanako to help Ziroo for Hanako’s benefit.’

Note that the view in (18) contrasts with a view from the previous literature (Okura, 2009; Hasegawa, 2018) that identifies these auxiliaries with an applicative head, more specifically, a high applicative head in the sense of Pylkkänen (2008) according to Okura (2009). A high applicative head is considered to occur below the Voice head. Thus the BEN=Appl analysis, where the auxiliaries are considered to occur below Voice, fails to capture the interaction with passives observed in (16).

There is an additional argument for the view that the benefactive auxiliaries are not the realizations of an Appl head. The BEN=Appl analysis is largely motivated by the long-discussed observation that these auxiliaries appear to sometimes introduce an additional beneficiary argument to the structure (Shibatani, 1996; Tomioka and Kim, 2017; Hasegawa, 2018, a.o.). While the beneficiary can be one of the verbal arguments as we saw in Section 3.1.1.1, an example in (20) shows that, when there is one of the benefactive auxiliaries *yar/age/kure*, an NP with a dative case marker, *kodomotati* ‘children’ here, can appear in addition to the canonical argument of the main predicate (*kukkii* ‘cookie’ here) and this additional NP gets the beneficiary interpretation. This observation apparently suggests that the benefactive auxiliaries introduce an applied argument with beneficiary interpretation.

- (20) a. Taroo-wa kukkii-o yai-ta
 1sg-TOP cookie-ACC bake-BEN-PAST
 ‘Taroo baked cookies.’
- b. Taroo-wa **kodomo-tati-ni** kukkii-o yaite-**yar/age/kure**-ta
 1sg-TOP child-PL-DAT cookie-ACC bake-BEN-PAST
 ‘Taroo baked cookies (for children) for the children’s benefit.’

However, it is not clear that these auxiliaries themselves are responsible for the introduction of these dative arguments. First, it is well known that these auxiliaries cannot always introduce the dative argument. The dative beneficiary is not allowed in

(21), for example, although the sentence includes benefactive auxiliaries. The dative beneficiary can appear only when the main verb is a creation verb, which results in a possession of a created object by the beneficiary (or one of a few exceptional non-creation verbs) (Shibatani, 1996). Otherwise, these auxiliaries select the beneficiary from the arguments of the verbs as we saw in Section 3.1.1.1.

- (21) Taroo-wa (*Hanako-ni) Ziroo-o kitaete-**age**/**yar**/**kure**-ta
 Taroo-TOP Hanako-DAT Ziroo-ACC train-BEN-PAST
 ‘Taroo trained Ziroo (*for Hanako’s benefit).’

Second, it has been reported that the dative arguments are somewhat acceptable for creation verbs even without the benefactive auxiliaries as shown in (22), although there is a variability in judgment across different speakers as well as across different verbs (Shibatani, 1978; Yamada, 2004; Okura, 2009). This suggests that the ability to license the dative NP lies not in the benefactive auxiliaries but somewhere else.⁸

⁸Okura (2009), following Machida (1996), raises the contrast in (i), which shows that *ni*-phrases in sentences without the benefactive auxiliaries has to accompany *ni* when it is clefted, while *ni*-phrases in sentences with benefactive auxiliaries do not. Following the view by Sadakane and Koizumi (1995) that case markers do not appear on clefted NPs while postpositions do, Okura (2009) concludes that *ni* in the sentences with benefactive auxiliaries are dative case marker, while that in the sentences with bare creation verbs are PP, suggesting that the *ni*-phrase in sentences with the auxiliaries and without auxiliaries are distinct elements.

- (i) a. Taroo-wa Hanako-ni supagettii-o tukut-ta
 Taroo-TOP Hanako-DAT spaghetti-ACC make-PAST
 ‘Taroo cooked spaghetti for Hanako.’
 b. Taroo-ga supagettii-o tukut-ta-no-wa Hanako-*(ni)-da
 Taroo-NOM spaghetti-ACC make-PAST-NMLZ-TOP Hanako-DAT-COP
 ‘It is for Hanako who Taroo cooked spaghetti.’
 c. Taroo-ga supagettii-o tukutte-age-ta-no-wa Hanako-da
 Taroo-NOM spaghetti-ACC make-BEN-PAST-NMLZ-TOP Hanako-COP
 ‘It is for Hanako(’s benefit) who Taroo cooked spaghetti.’

However, the example in (ii) suggests that this contrast is not so robust: once the context makes it clear that the focused *ni*-marked NP is the recipient of the created object, the focused NP can occur without *ni*, even if there is no benefactive auxiliary on the predicate.

- (ii) Hanako-ga balentain-choco-o tukut-ta-no-wa Taroo-da
 Hanako-NOM valentine-chocolate-ACC make-PAST-NMLZ-TOP Taroo-COP
 ‘It is Taroo that Hanako made Valentine’s day chocolate.’ (In Japan, it is a customary for a girl to give (homemade) chocolate to a person who she loves.)

- (22) boku-wa **kodomo-tati-ni** kukkii-o yai-ta
 1sg-TOP child-PL-DAT cookie-ACC bake-PAST
 ‘I baked cookies for the children.’ (Yamada, 2004, 92)

Third, Tomioka and Kim (2017) report that the beneficiary designated by these auxiliaries does not necessarily have to be the additional dative argument, raising the examples in (23). In the sentence in (23-b), although it involves the additional dative phrase *Hana*, Tomioka and Kim argue that the beneficiary of *age* can be interpreted as Hana’s mother, who is contextually salient, instead of Hana.⁹ If benefactive auxiliaries are applicative heads that introduce beneficiary arguments in dative cases, it is not expected that the beneficiary can be dissociated from the dative argument.

- (23) a. Yumi-wa Hana-ni sakana-o yaite-**age**-ta
 Yumi-TOP Hana-DAT fish-ACC grill-BEN-PAST
 ‘Yumi grilled-*ben* Hana the fish for Hana.’
 (Tomioka and Kim, 2017, 234)
- b. isogasii Hana-no okaasan-no tame-ni, Yumi-wa Hana-ni
 busy Hana-GEN mother-GEN sake-DAT Yumi-TOP Hana-DAT
 sakana-o yaite-**age**-ta
 fish-ACC grill-BEN-PAST
 ‘For the benefit of Hana’s mother_[beneficiary], who is busy, Yumi grilled-*ben* Hana the fish.’
 (Tomioka and Kim, 2017, 238)

Shibatani (1978) and Machida (1996) argue that the additional dative argument is in fact introduced by the main predicate. Machida (1996) further suggests that the appearance of the dative argument becomes easier in the presence of the benefactive auxiliaries, simply because the benefactive context makes it easier to assign affectedness to the dative argument, which is required for argument licensing. Given what we have seen so far, I follow this line of explanation on the additional dative argument. Based on this and the evidence from the morphological position of the

I assume that the contrast in (i) simply results from the fact that the benefactive interpretation introduced by the auxiliaries provides enough context for the recipient interpretation of the focused phrase.

⁹This type of example is discussed further in Section 3.2.4.3.

benefactive auxiliaries with regard to Voice morphemes, I do not take the position that the benefactive auxiliaries realize the (high) Appl head and, instead, assume the structure in (18) above, where the benefactive auxiliaries are the realization of v_{BEN} located above Voice.

3.2 Analysing *yar/age*

In this section, I focus on *yar/age*, leaving *kure* for Section 3.3. While we have seen that *yar/age* introduce the (non-at-issue) meaning roughly represented in (24), I show in this section that the semantic arguments X and Y are chosen via bidirectional Agree from the benefactive auxiliaries. This gives further support to the proposal made in Ch.2: the result of Agree can feed arguments to semantic predicates.

- (24) *yar/age*: It is generally the case that an event described by the main predicate results in another event where X gets benefited AND X does not outrank Y over the Empathy hierarchy in the context

3.2.1 The distribution of the understood beneficiary

In Section 3.1, I showed that Hanako is the beneficiary in both of the examples in (25-a) and (25-b). This suggests that an animate object is canonically considered to be a beneficiary in *yar/age* sentences.

- (25) a. Taroo-wa Hanako-ni nimotu-o okutte-**yar/age**-ta
 Taroo-TOP Hanako-DAT package-ACC send-BEN-PAST
 ‘Taroo sent a package to Hanako for Hanako’s benefit.’
 b. Taroo-wa Hanako-o sasotte-**yar/age**-ta
 Taroo-TOP Hanako-ACC invite-PAST
 ‘Taroo invited Hanako for Hanako’s benefit.’

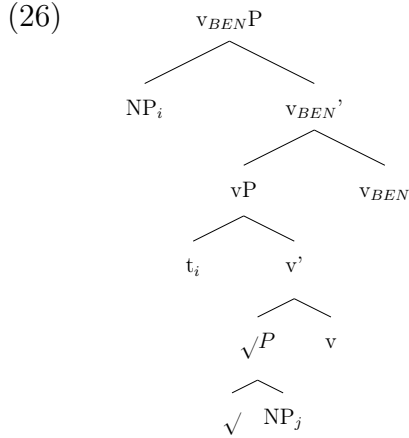
But how is the beneficiary chosen when there is more than one animate NP in the

verb phrase other than the subject? I show in this section that, for the sentences with *yar/age*, the distribution of the beneficiary shows an Agree-like pattern comparable to the distribution of the honoree in Object Honorific (OH) construction we saw in Ch. 2. More specifically, I show that (i) only the highest animate NP among the objects can serve as the beneficiary; equivalently, an intervening animate NP blocks the lower NP from serving as the beneficiary, (ii) possessor benefaction is possible if and only if the possessee is inanimate, (iii) only a c-commanding animate NP counts as an intervener, and (iv) the beneficiary has to be found within the same phase as v_{BEN} . Based on these observations, I claim that the beneficiary is chosen by downward probing from v_{BEN} . Note that this section deals only with *age/yar*, but not *kure*. As is discussed in detail in Section 3.3, *kure* behaves differently from *yar/age* in this respect.

Before going into the detailed observations, some clarification regarding the phase boundary is in order. First, recall that I claimed above that v_{BEN} is above the Voice head. This means that, under the assumption that the v head or the Voice head constitutes a phase head, a downward probe from v_{BEN} will not be able to access the objects of the main verb. I follow Harwood (2013) in assuming that some auxiliaries can extend the phase and serve as a phase head in place of v : when a benefactive auxiliary is present, it is this auxiliary that serves as the phase head, conceivably as the highest among the v -related projections, and the lower v (or Voice) becomes non-phasal.¹⁰

Second, as v_{BEN} is a phase head, the subject, which has to finally A-move to Spec T and get case there, has to first move to the phase edge, that is, Spec $v_{BEN}P$ to be accessible from the higher phase as shown in the structure in (26). While this movement canonically targets what is in the Spec vP , I assume that any NP that needs to be accessible from the higher phase can move to this position.

¹⁰The idea that phasehood is not absolute is proposed by other previous works including Gallego (2006), Takahashi (2010) and Bošković (2014).



I assume that this movement occurs before downward probing from v_{BEN} . That is, when what is in Spec vP moves to Spec $v_{BEN}P$, that movement bleeds the Agree relationship between v_{BEN} and the subject in its original position. This means that the NP found by this downward probing from v_{BEN} is the highest object, not the subject trace in Spec vP. Such bleeding of intervention by A-movement to the specifier of the probing head is known to occur in other languages as well. For example, in Icelandic, the T head cannot show plural agreement with *hestarnir* ‘the horses’ when there is an intervening experiencer. However, when the experiencer is A-moved to Spec T, plural agreement becomes possible (Holmberg and Hróarsdóttir, 2003; Rezac, 2004; Hiraiwa, 2005).

- (27)
- a. Það *virðast/virðist einhverjum manni hestarnir vera
 EXPL seem-*PL/SG some man-DAT the.horses.NOM be
 seinir
 slow.NOM
 ‘A man finds the horses slow.’ (Holmberg and Hróarsdóttir, 2003, 1000)
- b. Manninum virðast hestarnir vera seinir
 the.man.DAT seem-PL the.horses.NOM be slow.NOM
 ‘The man finds the horses slow.’ (Holmberg and Hróarsdóttir, 2003, 1000)

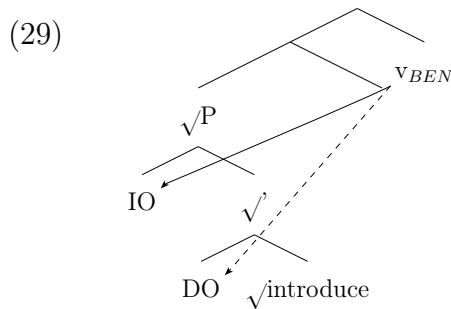
I consider the same thing to happen for the benefactives in Japanese, and thus, (the trace of) the subject in Spec vP is not visible to the downward probe from v_{BEN} .

3.2.1.1 The intervention effect

The Agree pattern with *yar/age* is, first of all, visible in the intervention effect: it is the highest object that serves as the beneficiary when there is more than one object. Hasegawa (2006, 2017, 2018) already notes this point with a ditransitive predicate, as shown in (28). The beneficiary has to be the referent of the indirect object, and cannot be the referent of the direct object in this example.

- (28) Hanako-ga Yamada.san-ni Satoo.san-o syookai-site-**age**-ta
 Hanako-NOM Mr.Yamada-DAT Mr.Satoo-ACC introduce-do-BEN-PAST
 ‘Hanako introduced Mr.Sato to Mr.Yamada (for Mr.Yamada’s benefit /#
 Mr.Sato’s benefit).’ (Hasegawa, 2017, 23)

The choice of IO as the beneficiary is reminiscent to the pattern we saw in Ch.2 in the choice of honoree in OH sentences. Recall that this pattern is expected under the view that the beneficiary is chosen by downward Agree, which is constrained by the intervention condition as repeated in (30)–(31): if an IO exists in between the probing head v_{BEN} and the DO as shown in (29), the probe cannot reach the DO because of the intervening NP.



- (30) **Intervention condition:** There is no YP such that YP comes between XP and H and YP has another instance of F.
- (31) A comes between B and C, iff
- a. B c-commands A and, for all X such that X dominates A, X dominates C and the reverse is not true, or

- b. C c-commands A and, for all X such that X dominates A, X dominates B and the reverse is not true

As was mentioned in Section 3.1, *yar/age* also adds empathy-related information and they require the subject referent to be more empathized with than the object referent. Recall the generalization from the previous literature says that the beneficiary, not the referents of any other objects, has to be more empathized with than the subject, as repeated in (32). Now that we have seen that it is always the IO that gets the beneficiary interpretation in ditransitive sentences, we can verify this point by examining whether the IO, but not the DO, is always the one compared with the subject as to the empathy hierarchy in ditransitive sentences. As argued above, Kuno and Kaburaki (1977) observe the pragmatic constraint that a speaker cannot empathize with anyone else more than with himself/herself (Speech Act Empathy Hierarchy). This means that, if it is the case that the IO is *always* the one that has to be less empathized with than the subject, the first person pronoun should not be able to appear in the IO position in *yar/age* sentences. The example in (33-a) in fact shows that the IO cannot be a first person pronoun in *yar/age* sentences. On the other hand, the example in (33-b) shows that the DO can be a first person pronoun, suggesting that the empathy toward DO is not compared with the empathy toward the subject in this structure.¹¹ This confirms the view that the entity that gets compared with the subject as to the empathy hierarchy is the same as the one interpreted as the beneficiary.

(32) *-yar*: E(Benefactor) ≥ E(Beneficiary) (Oshima, 2006, 168)

(33) a. #Taroo-wa watasi-ni kare-no yuuzin-o syookai-site-**yar/age**-ta
 Taroo-TOP 1sg-DAT 3sg-GEN friend-ACC introduce-do-BEN-PAST

¹¹One informant judged (33-b) to be slightly degraded for the reason that this sentence sounds arrogant, as the use of this sentence indicates that the speaker thinks the introduction to him/her benefits Hanako. Even this informant recognizes the difference in the acceptability between (33-a) and (33-b).

‘Taroo introduced his friend to me (for my benefit).’

- b. (?)Taroo-wa kare-no yuuzin-ni watasi-o syookai-site-**yar**/**age**-ta
 Taroo-TOP 3sg-GEN friend-DAT 1sg-ACC introduce-do-BEN-PAST
 ‘Taroo introduced me to his friend (for his friend’s benefit).’

This accordance in fact makes it easier to detect the distribution of the beneficiary: if a certain position resists being a first person pronoun in sentences with *yar/age*, that NP has to be the beneficiary. In the rest of this section, I utilize this strategy, which I call *first-person strategy*, to make observations about the distribution of the beneficiary easier to judge.

Note that the example in (33-b) also confirms that the empathy constraint is relational between the benefactor and the beneficiary. While one might alternatively think that the infelicity of (33-a) comes from the requirement that the benefactor (= the subject) has to be the entity who is most empathized with (*empathy locus*; see the discussion in Section 3.3), such a view is falsified by (33-b). (33-b) suggests that a sentence with *yar/age* can contain a non-subject NP whose referent is more empathized with than the benefactor. The empathy constraint for *yar/age* is violated only when the beneficiary is more empathized than the subject.

The pattern that the highest object serves as the beneficiary is not limited to predicates with recipient arguments. This suggests that this pattern cannot be attributed to the cross-linguistically common association between the recipient thematic role and the beneficiary thematic role (Kittilä, 2005, a.o.). First of all, ditransitive predicates with source arguments shows a similar pattern with ditransitive predicates with recipient/goal argument. The example in (34) is interpreted more readily as the benefaction toward Hanako, the referent of the IO with the source role, rather than the child, the referent of the DO.

- (34) Yosiko-wa Hanako-kara kodomo-o azukatte-**yar**/**age**-ta
 Yosiko-TOP Hanako-from child-ACC take.responsibility-BEN-PAST
 ‘Yosiko took responsibility of (≠ looked after) the child from Hanako (for

Hanako's benefit / ??for the child's benefit).'

This point can be further confirmed using the first-person strategy. As shown in (35), when the IO with the source role is a first person pronoun, *yar/age* cannot be used.¹² On the other hand, it is possible to use these auxiliaries with the same predicate when the DO is a first person pronoun.

- (35) a. #*watasi-no oya-wa watasi-kara kodomo-o*
 1sg-GEN parent-TOP 1sg-from kid-ACC
azukatte-yar/age-ta
 take.responsibility-*ben*-PAST
 'My parent took-responsibility (\div looked after) of (my) kid from me (for my benefit).'
- b. (*sono-toki*) *obaatyan-wa okaasan-kara watasi-o*
 (that-time) grandmother-TOP mother-from 1sg-ACC
azukatte-yar/age-ta
 take.responsibility-BEN-PAST
 '(At that time,) my grandmother took-responsibility (\div looked after) of me from my mother (for my mother's benefit).'

The intervention effect is also visible in the interaction with causatives. Recall that causative markers can occur either below or above the benefactive auxiliaries. When a benefactive auxiliary follows a causative marker (i.e. when it occurs above a causative marker), the beneficiary is always the causee, and cannot be the object of the base predicate. The example in (36) shows this point: suppose Taroo is Hanako's child from her former marriage. Hanako is now considering getting married with Ziroo. (36) is acceptable in a context where Ziroo wants to raise Taroo, but Taroo does not trust Ziroo yet, while it is degraded in a context where Taroo likes Ziroo

¹²The example in (35-a) is unacceptable not because one empathizes more with his/her kid rather than his/her parent: this can be confirmed by the acceptability (i).

- (i) (?)*watasi-no oya-wa (watasi-ga i-nai-aida) kodomo-ni gohan-o*
 1sg-GEN parent-TOP 1sg-NOM be-NEG-during child-DAT meal-ACC
tukutte-yar/age-tei-ta
 cook-BEN-ASP-PAST
 'My parent cooked meals for my kid's benefit while I was away.'

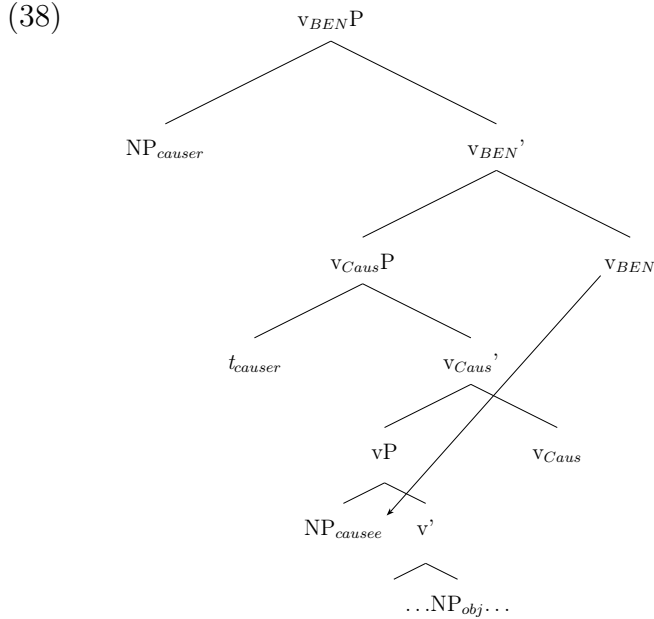
and wants Ziroo to be his father, but Ziroo does not want to raise Taroo.

- (36) Hanako-wa Ziroo-ni Taroo-o sodate-sasete-yar-ta
 Hanako-TOP Ziroo-DAT Taroo-ACC raise-CAUS-BEN-PAST
 ‘Hanako had-BEN Ziroo raise Taroo for Ziroo’s/#Taroo’s benefit.’

The first-person strategy further confirms this point. The causee cannot be a first person pronoun, while the object of the main predicate can be, showing that the beneficiary has to be the causee.

- (37) a. #Taroo-wa watasi-ni Hanako-o sodate-*sasete-yar/age*-ta
 Taroo-TOP 1sg-DAT Hanako-ACC raise-CAUS-BEN-PAST
 ‘Taroo caused-*ben* me to raise Hanako for my benefit.’
 b. ^{ok}Taroo-wa Hanako-ni watasi-o sodate-*sasete-yar/age*-ta
 Taroo-TOP Hanako-DAT 1sg-ACC raise-CAUS-BEN-PAST
 ‘Taroo caused-*ben* Hanako to raise me for Hanako’s benefit.’

This is expected by the Agree view, given that *yar/age* occurs higher than the causative head in these examples. The structure in (38) shows that the closest NP to v_{BEN} below it (except for the trace of the causer, which moves to the phase edge (Spec of v_{BEN}) for the subsequent movement as stated above) is the causee.



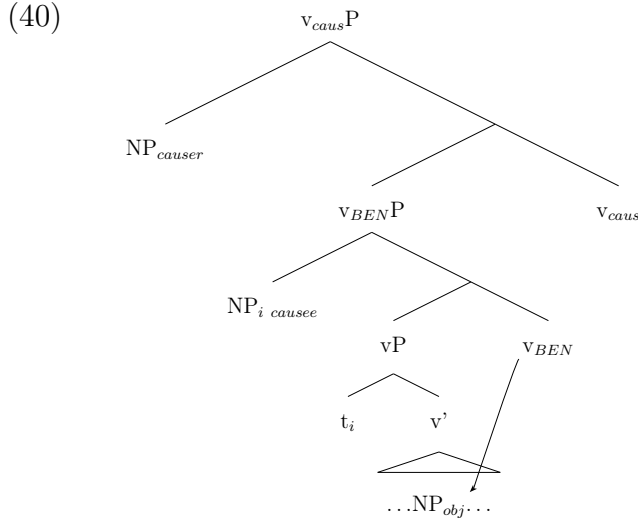
Note that the beneficiary is no longer the causee when *age* precedes the causative marker. In the example in (39), the canonical interpretation is that it is Taroo, not Ziroom, who gets benefit. This is also nicely expected under the Agree analysis: as argued above, when *age* precedes the causative marker, we can assume the structure in (40), where *age* (v_{BEN}) occurs below v_{caus} . Given that NP_{causee} has to get case from the head v_{caus} , I assume here that it moves to Spec v_{BEN} as a phase edge. As a result, the highest accessible NP for *age* is the object of the main predicate.¹³

¹³The first person strategy give a slightly variable judgements here. If the referent of the object of the main predicate is the beneficiary, it is predicted that the object of the main predicate cannot be a first person pronoun. However, putting a first person pronoun in the object position of the main predicate as shown below is not perfect but it is not entirely unacceptable either.

- (i) ?(?)Hanako-wa Ziroom-ni watasi-o sasotte-**age**-sase-ta
 Hanako-TOP Ziroom-DAT 1sg-ACC invite-BEN-CAUS-PAST
 ‘Hanako made Ziroom to invite-BEN me for my benefit.’

I consider this to be the effect of perspectival shift under causativization: as mentioned in fn.3, strictly speaking, the empathy relationship is defined with respect to the attitude holder, not with respect to the speaker (Oshima, 2006). If a shift of the attitude holder occurs under causatives, it is expected that the matrix speaker (i.e. the referent of the first person pronoun) is no longer the entity most empathized with by the attitude holder, hence the acceptability of (i). While causatives are not often discussed as introducers of attitude contexts in the literature, Mark Baker (p.c.) observes that a logophoric pronoun is possible under causatives in Ibibio, a Niger-Congo language, with some variability in judgements. This observation provides independent support to the current view.

- (39) Hanako-wa Ziroo-ni Taroo-o sasotte-**age**-sase-ta
 Hanako-TOP Ziroo-DAT Taroo-ACC invite-BEN-CAUS-PAST
 ‘Hanako made Ziroo to invite-BEN Taroo for #Ziroo’s benefit/Taroo’s benefit.’



The data so far indicate that, when there is more than one NP below v_{BEN} , it is the highest one that is interpreted as the beneficiary. I have shown that this follows from the intervention condition on Agree, once we adopt the view that the beneficiary is chosen via downward Agree from v_{BEN} . Note that, the intervention effect is limited to the cases where the higher argument is animate, as was the case with OH as we saw in Ch.2. Thus, in (41), it is possible to interpret *Hanako* as a beneficiary when the dative argument is inanimate. This is similar to what we saw for OH, where the choice of the honoree respects the intervention effect but only animate NPs serve as interveners. Similarly to what I did for the OH probe in Ch.2, I hypothesize that the probe from the benefactive auxiliaries are relativized to the animate NPs.

- (41) Taroo-wa kaizyoo-ni Hanako-o annai-site-yar/age-ta
 Taroo-TOP place-DAT Hanako-ACC guide-do-BEN-PAST
 ‘Taroo guided Hanako to the place for Hanako’s benefit.’

The idea that the probe is relativized with respect to animacy is also supported

by the fact that the *yar/age* cannot be used when there is no animate NPs below $v_{BEN}P$. For example, *yar/age* is incompatible with the sentence in (42), unless one imagines a special context where the speaker treats the paper as an animate entity.

- (42) *Hanako-wa sono ronbun-o taisetu-ni site-yar/age-ta
 Hanako-TOP that paper-ACC important-COP do-BEN-PAST
 ‘Hanako cherished-BEN the paper (for ??’s benefit).’

While I have shown that only the highest object serves as the beneficiary in *yar/age* sentences, note that some previous literature (Uda, 1994; Otani and Steedman, 2010) argues that the beneficiary can be either a DO or an IO in a ditransitive sentence using examples like (43). I agree with this judgement.

- (43) watasi-wa Ken-o Anna-ni syookai-site-yar-ta
 1sg-TOP Ken-ACC Anna-DAT introduce-do-BEN-PAST
 ‘I introduced Ken to Anna for Ken’s benefit/Anna’s benefit.’

(Otani and Steedman, 2010, 506)

This observation at a first glance seems to go against the observations so far, especially the ones in (28)–(33). Notice, however, that the example in (43) involves scrambling in that the DO precedes IO in (43), while the data in (28)–(33) do not. I argue in Section 3.2.5.2 that scrambling affects the choice of the beneficiary and that effect is in fact correctly predicted by the current approach.

3.2.1.2 Possessor

Another piece of evidence for the idea that Agree is involved in the choice of the beneficiary comes from possessor benefaction. As Hasegawa (2017, 2018) points out, the possessor of an object NP can serve as a beneficiary in *yar/age* sentences. In the example in (44-a), the possessor of an inanimate NP is serving as the beneficiary, as can be confirmed using the first person strategy: the ban on a first person pronoun

in the possessor position in (44-b) confirms that it is the possessor that is interpreted as the beneficiary in (44).

- (44) a. Hanako-wa Taroo-no kaban-o motte-**yar**/**age**-ta
 Hanako-TOP Taroo-GEN bag-ACC carry-BEN-PAST
 ‘Hanako carried Taroo’s bag for Taroo’s benefit.’ (Hasegawa, 2017, 22)
- b. #Hanako-wa watasi-no kaban-o motte-**yar**/**age**-ta
 Hanako-TOP 1sg-GEN bag-ACC carry-BEN-PAST
 ‘Hanako carried my bag for my benefit.’

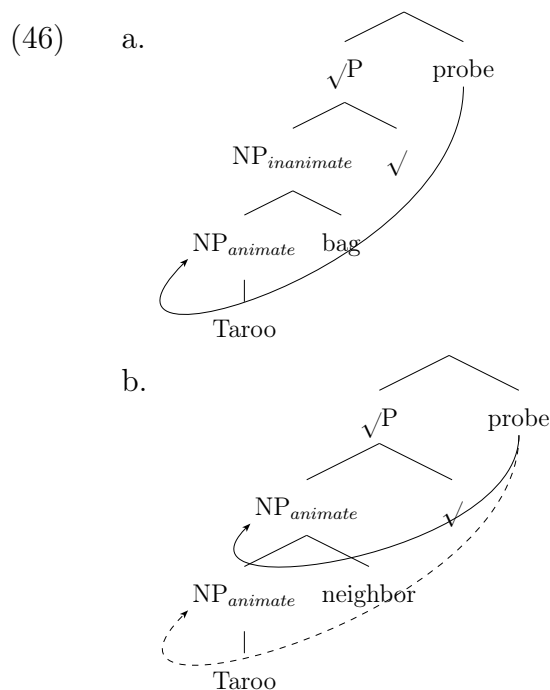
Furthermore, this sort of possessor benefaction is not possible when the possessee noun is animate. For example, in the example in (45-a), the beneficiary is the neighbor of Taroo, and not Taroo. The example in (45-b) further confirms this point by showing that the possessor can be a first person pronoun when the possessee is animate.¹⁴

- (45) a. Hanako-wa Taroo-no rinzin-o sasotte-**yar**/**age**-ta
 Hanako-TOP Taroo-GEN neighbor-ACC invite-BEN-PAST
 ‘Hanako invited Taroo’s neighbor.’
- b. Hanako-wa watasi-no rinzin-o sasotte-**yar**/**age**-ta
 Hanako-TOP 1sg-GEN neighbor-ACC invite-BEN-PAST
 ‘Hanako invited my neighbor.’

These observations are correctly captured by the view that the possessor of an NP can be the beneficiary when it is the closest animate NP to v_{BEN} : as the structure in (46) indicates, the animate possessor of an inanimate NP is the closest animate NP for the probe. On the other hand, when the head noun is animate, the entire NP projection intervenes between the possessor and the probe by the current definition

¹⁴The example in (45-b) only confirms that the possessor does not have to be the beneficiary. It would be desirable to further confirm that the beneficiary *cannot* be the possessor and *has to* be the possessee when the possessee is animate using the first-person strategy (or its analogue). The most straightforward application of the first person strategy would look like this: if the possessee has to be the beneficiary, the possessee cannot be the first person in a sentence of the form “X invited-*yar/age* Y’s Z.”. Unfortunately, this strategy is not informative here, as first person pronouns do not appear in a possessee position in general, regardless of the effect of *yar/age* (i.e. **Hanako-no watasi* ‘Hanako’s me’).

of intervention condition in (30)–(31) above.



Thus, the pattern seen in possessor benefaction also supports the Agree analysis of the choice of the beneficiary.

3.2.1.3 The relevance of c-command in the intervention effect

The relevance of c-command also provides evidence for the view that the beneficiary is chosen via Agree from v_{BEN} . As was the case for the choice of the honoree in OH sentences as we saw in Ch.2, the intervention effect is only triggered by a c-commanding animate NP. The example in (47-a) shows that, when the IO itself is animate, the IO has to be the beneficiary, and the animate NP in the DO cannot be. This can also be indicated using the first-person strategy. The IO cannot be the first person as indicated by (47-b).

- (47) a. Taroo_i-wa Hanako-ni kare_i-no yuuzin-no zousyo-o
 Taroo-TOP Hanako/1sg-DAT 3sg-GEN friend-GEN book.collection-ACC
 okutte-**yar**/age-ta
 send-BEN-PAST

‘Taroo sent-*ben* his friend’s book to Hanako for Hanako’s benefit / ??for his friend’s benefit.’

- b. #Taroo_i-wa watasi-ni kare_i-no yuuzin-no zousyo-o
 Taroo-TOP 1sg-DAT 3sg-GEN friend-GEN book.collection-ACC
 okutte-**yar**/age-ta
 send-BEN-PAST
 ‘Taroo sent-*ben* his friend’s book.collection to me (for my benefit).’

However, the example in (48) shows that, when the IO as a whole is inanimate, with the possessor being animate, the NP in the DO position can serve as the beneficiary. The availability of a first person pronoun in the IO possessor position in (48) further indicates that the IO possessor does not have to be the beneficiary.

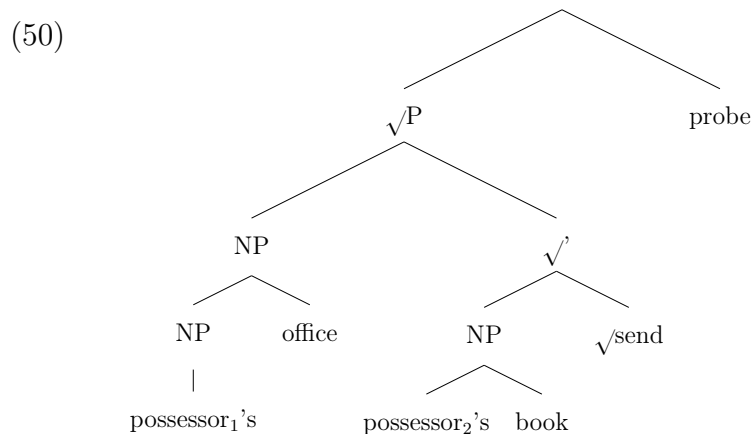
- (48) Taroo-wa Hanako/watasi-no kenkyuusitu-ni kare_i-no yuuzin-no
 Taroo-TOP 1sg-GEN office-DAT 3sg-GEN friend-GEN
 zousyo-o okutte-**yar**/age-ta
 book.collection-ACC send-BEN-PAST
 ‘Taroo sent his friend’s book collection to Hanako’s/my office for his friend’s benefit.’

Note that the possessor of the IO can be the beneficiary as well, as is shown in the example in (49). The possibility of a first person pronoun in the DO possessor position suggests that the beneficiary can be the other animate NP *kare-no yuuzin* ‘his friend’, which is the possessor of the IO.

- (49) Taroo-wa kare-no yuuzin-no kenkyuusitu-ni watasi-no hon-o
 Taroo-TOP 3sg-GEN friend-GEN office-DAT 1sg-GEN book-ACC
 okutte-**yar**/age-ta
 send-BEN-PAST
 ‘Taroo sent my book to his friend’s office for his friend’s benefit.’

This pattern is also correctly predicted by the Agree analysis, parallel to what we saw for OH in Ch.2. As the structure in (50) shows, the possessor₁ inside the IO does not c-command or dominate the possessor₂. Thus, by the definition of the

intervention condition in (30) above, possessor_1 in the IO does not intervene between the probe and the possessor_2 in the DO. Recall that my assumption here was that, when there are multiple potential goals for a probe, the probe can Agree with any of them. As the possessor_1 and the possessor_2 are both potential goals for a downward probe around v under the Agree conditions, the Agree analysis correctly captures the acceptability of both (48) and (49).



Thus, the Agree analysis correctly captures the observation that the preference of IO as a beneficiary correctly disappears in certain syntactic contexts.

3.2.1.4 The phase effect

Another Agree pattern in the choice of beneficiary is found in the phase effect. When the main predicate marked with *yar/age* is one that embeds a CP, the NP inside the embedded clause, which is separated from *yar/age* by the CP phase boundary, cannot serve as the beneficiary. This can be seen from the contrast in (51). In (51), the use of *yar/age* does not sound felicitous (at least unless there is a contextually salient entity who benefits from the thinking event: see Section 3.2.4.3 for this reading.). This is correctly predicted by the phase condition on Agree as repeated in (52). Given that the probe can only access what is in the same phase as itself, it naturally follows from

the Agree analysis.¹⁵

- (51) ??itumo petto-ga kawaii-to omotte-**yat**/**age**-tekudasai
 always pet-NOM cute-that think-BEN-IMP.POL
 ‘Please always think that your pet is cute for ??’s benefit.’

- (52) **Phase condition:** H and XP are contained in the same phase

Note that the use of *yar/age* is improved in (53), where the sentence takes the form of raising-to-object construction.

- (53) itumo petto-o kawaii-to omotte-**yat**/**age**-tekudasai
 always pet-ACC cute-that think-BEN-IMP.POL
 ‘Please always think your pet to be cute for your pet’s benefit.’

This again follows from the phase condition on Agree. By raising to the matrix object position, which is in the matrix vP phase, the embedded subject becomes accessible to v_{BEN} within the same phase.

3.2.1.5 Interim summary

I have shown that the NP that serves as the beneficiary in *age/yar* construction is a highest animate NP in the same phase below v_{BEN} . This pattern is expected if the beneficiary is chosen by the downward probe from v_{BEN} , following the intervention condition and the phase condition. In Section 3.2.3, I propose that these observations can be accounted for by extending the analysis I proposed for OH in Chapter 2.

¹⁵Recall, in this regard, that I argued in Ch.2 that Japanese PP selected by a predicate does not block Agree relationship across it. The same holds with the benefactives, as exemplified in (i).

- (i) Taroo-wa Hanako-to atte-age-ta
 Taroo-TOP Hanako-with meet-BEN-PAST
 ‘Taroo met Hanako for Hanako’s benefit.’

3.2.2 The distribution of the understood benefactor

I have shown that the NP chosen as referring to the beneficiary is always the closest animate NP to *yar/age* below them and hence can be considered to be chosen by downward Agree from *yar/age*. Recall, however, that these auxiliaries not only care about the object as the beneficiary; they also compare the amount of empathy toward the object with the amount of empathy toward another NP, canonically the subject, which I have called the *benefactor*, following previous literature. Then the next question is how the benefactor is chosen. In this section, I show evidence that the benefactor is structurally determined. I claim that it is the NP above v_{BEN} that is structurally closest to v_{BEN} , based on the structural assumptions that I have adopted so far, and it is chosen via upward Agree from v_{BEN} .

3.2.2.1 The syntactic position matters

First, I show that the syntactic position, not the thematic role, matters for the choice of the benefactor. In the canonical cases, as shown in (54), the benefactor, who is required to be more empathized with than the beneficiary, is the subject and has an agent theta-role.

- (54) a. watasi-wa Hanako-o sasotte-**yar**/**age**-ta
 1sg-TOP Hanako-ACC invite-PAST
 ‘I invited Hanako for Hanako’s benefit.’
 b. #Hanako-wa watasi-o sasotte-**yar**/**age**-ta
 Hanako-TOP 1st-ACC invite-PAST
 ‘Hanako invited me for my benefit.’

However, as mentioned above, *yar/age* can cooccur with a passive marker. An example is shown in (55). Crucially, in this example, it has to be the case that the

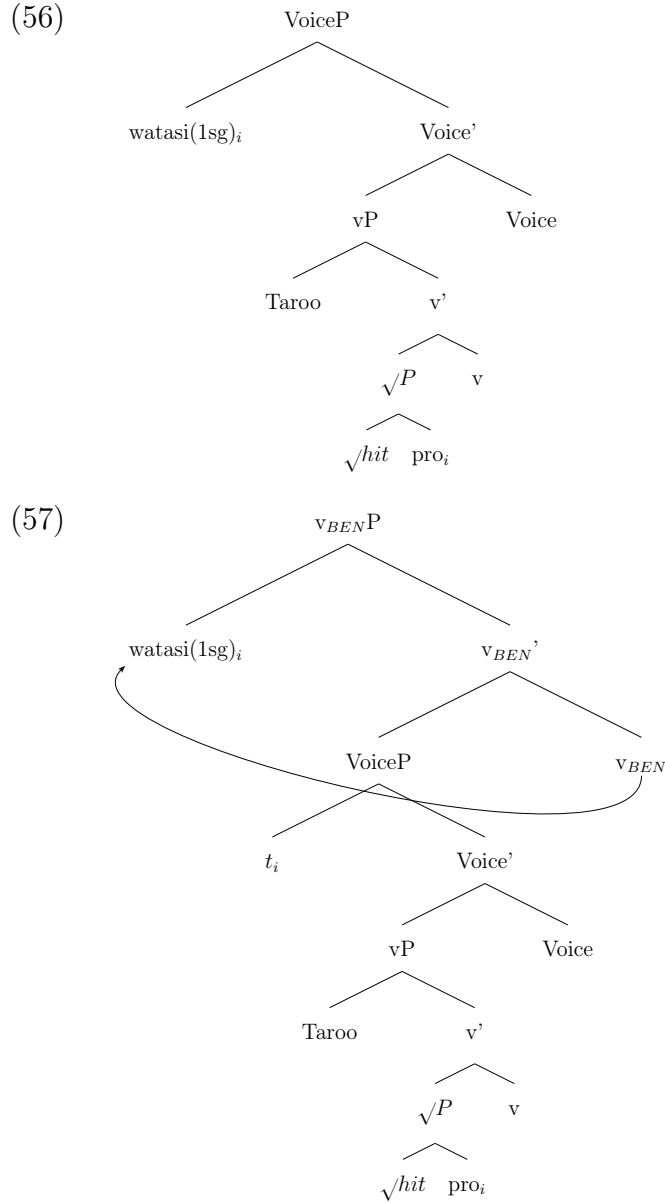
promoted patient is more empathized with than the demoted agent.¹⁶ This contrasts with what we saw in (54), where the agent has to be more empathized with than the patient. If the benefactor is chosen by the agent theta-role, it is not expected that it is the patient that needs to be more empathized with in (55).

- (55) a. watasi-wa Taroo-ni nagur-are-ta
 1sg-TOP Taroo-DAT hit-PASS-PAST
 ‘I was hit by Taroo.’
- b. watasi-wa Taroo-ni nagur-arete-**yar**/**age**-ta
 1sg-TOP Taroo-DAT hit-PASS-BEN-PAST
 ‘I was-hit-*ben* by Taroo for Taroo’s benefit.’
- c. #Taroo-wa watasi-ni nagur-arete-**yar**/**age**-ta
 Taroo-TOP 1sg-DAT hit-PASS-BEN-PAST
 ‘Taroo was-hit-*ben* by me for my benefit.’

The view that the benefactor is the NP above v_{BEN} which is structurally closest to v_{BEN} , on the other hand, correctly captures the pattern in (55). I follow Matsuoka (2001) and Kitagawa and Kuroda (1992) in assuming that a Japanese passive sentence where the demoted agent is marked with *ni*, such as (55-a), has the structure in (56), where the nominative marked NP is introduced by the Voice head and coindexed with *pro* inside the \sqrt{P} . The demoted agent is still an argument marked with a dative case *ni*, not an adjunct. When *yar/age* is merged, the subject-to-be (i.e. the patient) moves to the Spec $v_{BEN}P$, which is a phase edge, to get access to TP, as I mentioned in Section 3.2.1 around (26). The structure now looks like (57). Given the structure in (57), the only (and thus the closest) NP above *yar/age* is the passive subject and thus it is chosen as the benefactor, not the demoted agent. The choice of the demoted agent as the beneficiary is also expected under the view that the demoted agent in Japanese is a dative marked argument, not an adjunct. This pattern suggests that the benefactor, as well as the beneficiary, is chosen based on structural information,

¹⁶Alternatively, the passive subject can be considered to have an experiencer theta-role (Matsuoka, 2001). This choice does not affect the argument here that the benefactor is not always the agent.

instead of a thematic information.

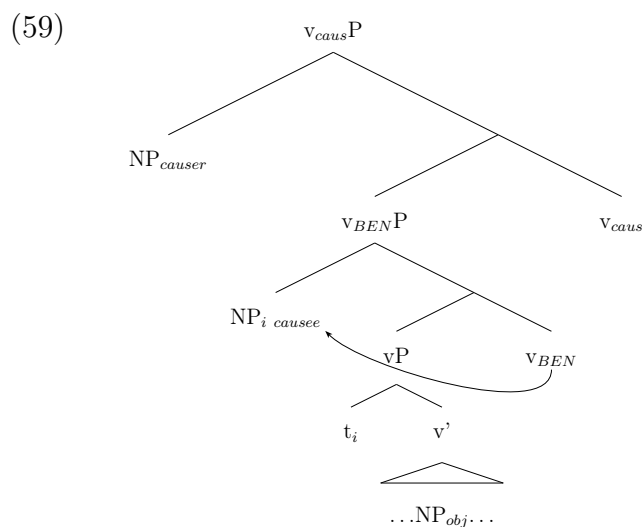


3.2.2.2 Interaction with causatives

The causative construction further supports the idea that the benefactor has to be the closest NP to v_{BEN} above it. Recall that *yar/age* can be embedded under the causative marker. We saw in Section 3.2.1.1 that, in such a sentence, the beneficiary is the object of the main predicate, as repeated in (58). I argued there that (58) has

the structure in (59), where the causee is attracted to Spec v_{BEN} , which is a phase edge, to be accessible from v_{CAUS} for dative case assignment. If the benefactor is chosen via upward Agree from *yar/age*, then the benefactor should be the causee, instead of the causer, given that it is closer to *yar/age*.

- (58) Hanako-wa Ziroo-ni Taroo-o sasotte-**age**-sase-ta
 Hanako-TOP Ziroo-DAT Taroo-ACC invite-BEN-CAUS-PAST
 ‘Hanako made Ziroo to invite-BEN Taroo for #Ziroo’s benefit / Taroo’s benefit.’



This prediction is supported by the example in (60).

- (60) Taroo-no yuuzin-wa watasi-ni Taroo-o tetsudatte-**yar/age**-(s)ase-ta
 Taroo-GEN friend-TOP 1sg-DAT Taroo-ACC help-BEN-CAUS-PAST
 ‘Taroo’s friend caused me to help Taroo for Taroo’s benefit.’

Given that the causee in (60) is a first person pronoun, it is clear that the causee is more empathized with than the beneficiary, Taroo. On the other hand, we can tell that the subject *Taroo-no yuuzin* ‘Taroo’s friend’ is less empathized by the speaker: Kuno and Kaburaki (1977) observe that the referent of the possessor is naturally empathized with more than the possessee. For example, when the speaker uses the expression “John” and “John’s wife”, then the speaker by definition empathizes more

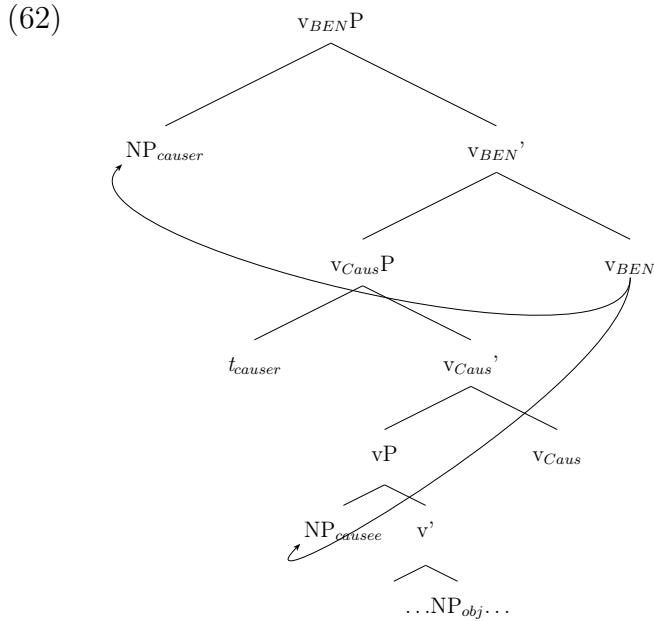
with John, rather than John's wife. Given that *age* requires the benefactor to be more empathized than the beneficiary, the availability of *age* in (60) indicates that the benefactor here is the causee, instead of the causer as predicted by the Agree analysis.¹⁷

Note that this forms a nice contrast with the cases where the benefactive auxiliaries follow the causative marker: the example in (61) shows that the exact counterpart of (60) is not possible when the morpheme order between the causative marker and the benefactive auxiliary is reversed.

- (61) #Taroo-no yuuzin-wa watasi-ni Taroo-o tetudaw-asete-**yar**/**age**-ta
 Taroo-GEN friend-TOP 1sg-dat Taroo-ACC help-CAUS-BEN-PAST
 'Taroo's friend made-BEN me help Taroo.'

I posited above the structure repeated in (62) for the cases where the benefactive auxiliaries follow the causative marker. If this is the case, the upward probe from v_{BEN} should find the causer as the benefactor and the downward probe from v_{BEN} should find the causee as the beneficiary in this case. Thus the prediction is that the causer has to be more empathized than the causee. Hence, the unacceptability of (61), where the causer (Taroo's friend) is less empathized than the causee (the speaker) can be straightforwardly explained. The examples in (63) confirm that, once the correct empathy relationship is achieved between the causer and causee, the sentence becomes acceptable. The fact that there is no difference in the acceptability between (63-a) and (63-b) suggests that the empathy relationship between the causee and the object of the main predicate does not matter here, unlike what we have seen in (60).

¹⁷But see fn.13 for a potential interaction with perspectival shift. If the argument in fn.13 is correct, the acceptability of (60) might not provide a strong support to the current argument.



- (63)
- a. watasi-wa Taroo-ni Taroo-no yuuzin-o tetudaw-asete-**age**/**yar**-ta
 1sg-TOP Taroo-DAT Taroo-GEN friend-ACC help-CAUS-BEN-PAST
 ‘I let-BEN Taroo help Taroo’s friend for Taroo’s benefit.’
 - b. watasi-wa Taroo-no yuuzin-ni Tarooo tetudaw-asete-**age**/**yar**-ta
 1sg-TOP Taroo-GEN friend-DAT Taroo-ACC help-CAUS-BEN-PAST
 ‘I let-BEN Taroo’s friend help Taroo for Taroo’s friend’s benefit.’

I have shown that the benefactor is structurally determined and the view that it is chosen via upward Agree from v_{BEN} correctly predicts the choice of the benefactor in various contexts. Combined with the result from Section 3.2.1, this shows that v_{BEN} has two probes, one of which goes downward and the other of which goes upward. In the next section, I analyze the data, extending the idea from Ch.2 that the results of this bidirectional probing are sent to LF to provide arguments to semantic predicates.

3.2.3 The core analysis

3.2.3.1 Proposal

I argued in Section 3.1, following previous studies, that *yar* and *age* introduce a presuppositional meaning as roughly represented in (64). I have now also shown that

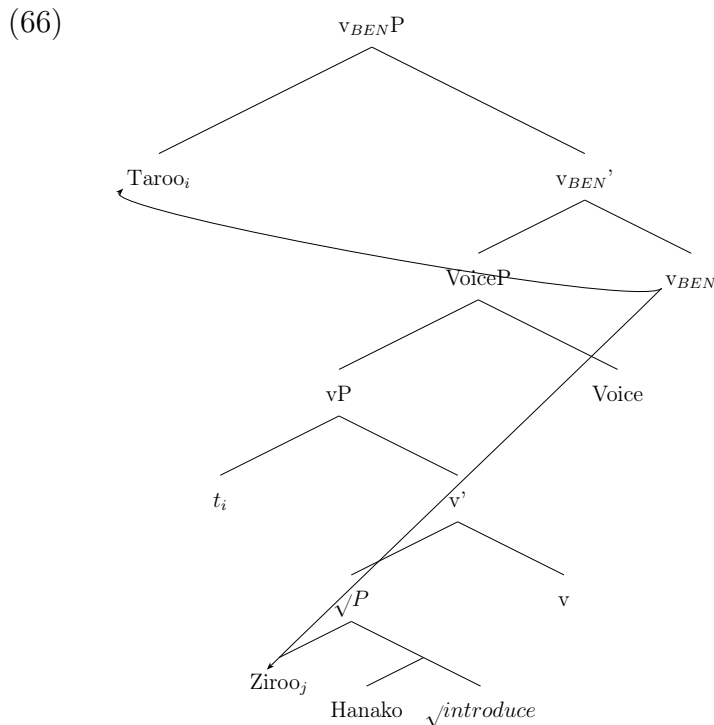
the Agree view correctly predicts which NPs serve as the beneficiary (X) and the benefactor (Y) in *yar/age* sentences.

- (64) *yar/age*: It is generally the case that an event described by the main predicate results in another event where X gets benefited AND X does not outrank Y over the Empathy hierarchy in the context

In this section, I propose a mechanism for how the NPs chosen via Agree can serve as X or Y in the meaning represented in (64).

First of all, given the observation from Section 3.2.1–3.2.2, I propose that *yar/age* contains two probes, one of which searches upward and the other downward, similarly to what I proposed for OH in Ch.2. Each probe on the head v_{BEN} finds the structurally closest animate NP in its search domain, following the conditions for Agree. For example, the structure of ditransitive sentences with these auxiliaries as exemplified in (65) looks like (66). Recall that the assumption here is that *Taroo*, a subject-to-be, moves to the Spec $v_{BEN}P$, which is a phase edge, to get access to TP before v_{BEN} probes.

- (65) Taroo_i-wa Ziroo_j-ni Hanako_k-o syookai-site-**yar/age**-ta
 Taroo-TOP Ziroo-DAT Hanako-ACC introduce-do-BEN-PAST
 ‘Taroo introduced Hanako to Ziroo for Ziroo’s benefit.’



As I did for OH in Ch.2, I propose that these probes are unvalued but interpretable features that get valued by the index features on the goals (see Ch.2 for the detailed assumptions regarding index features). The downward and upward probes get valued as shown in (67-b) with the indices that the closest NP in the downward direction and the closest NP in the upward direction have. More specifically, given that the probe is relativized to animate NPs, I propose that the probes look for person-index features of the form $[ind(pers)]$, which are the combinations of person features and index features: as I mentioned in Ch.2, I assume that only animate NPs have person features, at least in Japanese. This successfully allows only animate NPs to serve as goals for the benefactive probes. Thus, the pair of probe features on *yar/age* looks like (67-a). As a result of Agree indicated in (66) for example, the probes are valued as shown in (67-b). Similarly to the proposal in Ch.2, I propose that the interpretable probes that are valued by the index features feed LF, providing semantic arguments for the empathetic-benefactive meaning contributed by *yar/age*.

- (67) a. $\langle intF_1[ind_ (pers_)], intF_2[ind_ (pers_)] \rangle$
 b. $\langle intF_1[j(3)], intF_2[i(3)] \rangle$

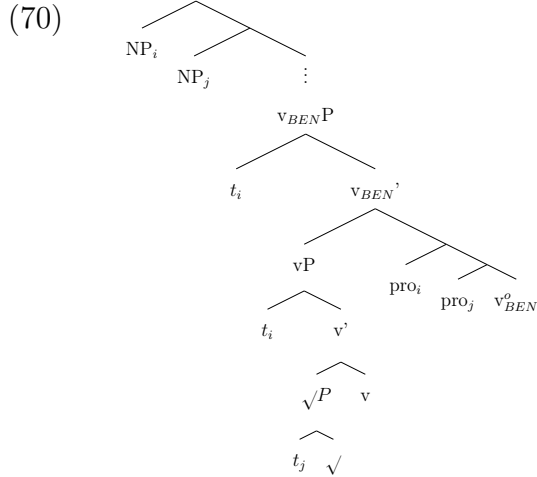
Now recall that I roughly described the presuppositional meaning of *yar/age* as shown in (68).

- (68) *yar/age*: It is generally the case that an event described by the main predicate results in another event where X gets benefited AND X does not outrank Y over the Empathy hierarchy in the context

What the discussion so far has shown is that X in this representation corresponds to the goal of the downward probe from v_{BEN} (i.e. the NP whose index feature values $intF_1[\]$), while Y in this representation corresponds to the goal of the upward probe (i.e. the NP whose index feature values $intF_2[\]$). Thus, I revise the presuppositional meaning of *yar/age* as shown in (69).

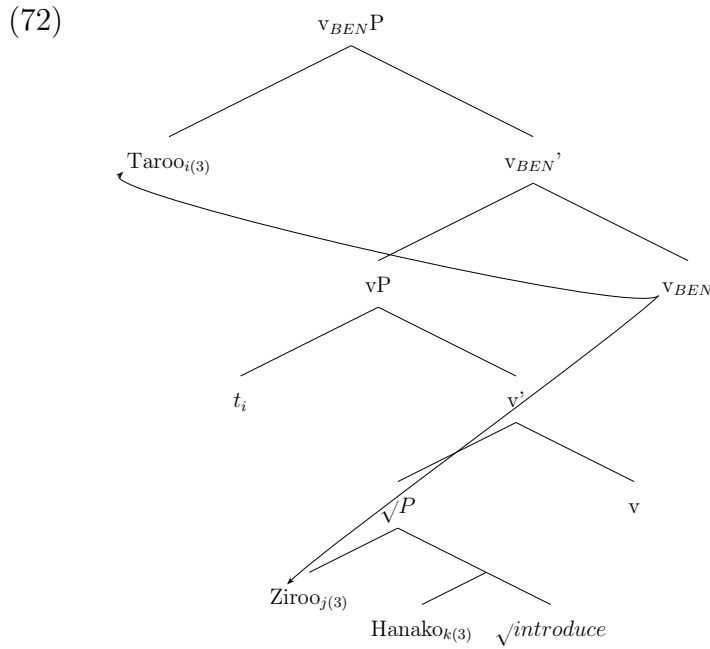
- (69) *yar/age*: It is generally the case that an event described by the main predicate results in another event where $\llbracket NP_{intF_1[\]} \rrbracket$ gets benefited AND $\llbracket NP_{intF_1[\]} \rrbracket$ does not outrank $\llbracket NP_{intF_2[\]} \rrbracket$ over the Empathy hierarchy in the context.

That is, the semantic predicates associated with v_{BEN} select the goals of probes as arguments. Then how can v_{BEN} semantically compose with the goals of probes, despite its structural distance from them? For the semantic composition, as I proposed in Ch.2, Section 1.4.5, I assume that the valued index probes are converted to *pro*-like elements that are co-indexed with their goals and get projected on v_{BEN} as shown in (70). These *pros* are in positions from which they can undergo semantic composition with v_{BEN} . The NPs that are agreed with by these probes undergo QR to higher position and the *pro*-like elements are bound by them together with the co-indexed traces.



Let me go over the derivation of the specific example in (65), repeated in (71). Recall that this sentence has the structure in (72) and, based on the intervention condition, the probes get valued as shown in (73).

- (71) Taroo_i-wa Ziroo_j-ni Hanako_k-o syookai-site-**yar**/age-ta
 Taroo-TOP Ziroo-DAT Hanako-ACC introduce-do-BEN-PAST
 ‘Taroo introduced Hanako to Ziroo for Ziroo’s benefit.’



- (73) $\langle intF_1[j(3)], intF_2[i(3)] \rangle$

The index features on the probes in (73) survive until LF and feed the semantic

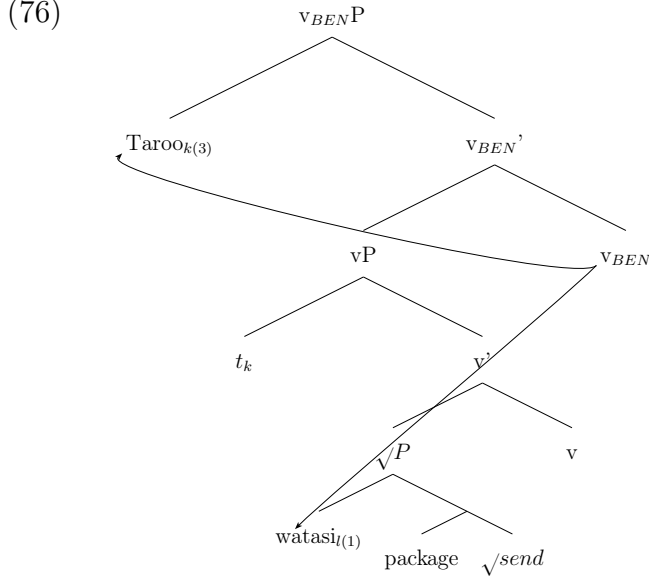
arguments to v_{BEN} . As a result, v_{BEN} will have a presuppositional meaning roughly described in (74). Thus, the sentence in (71) has the (most-likely presuppositional) meaning roughly represented in (74) and, hence, becomes infelicitous in a context where (74) is not true. This means that the sentence in (71) is acceptable only when Ziroom is the beneficiary in the described event and Taroo is more empathized with than (or equally empathized with as) Ziroom. The interpretation where Hanako is the beneficiary is not available as Hanako is not in a position for v_{BEN} to enter into Agree with it and hence cannot be a semantic argument for the benefactive auxiliaries.

- (74) It is generally the case that an event described by the main predicate results in another event where $\llbracket \text{NP}_{intF_1[j]} \rrbracket$ gets benefited AND $\llbracket \text{NP}_{intF_1[j]} \rrbracket$ does not outrank $\llbracket \text{NP}_{intF_2[i]} \rrbracket$ over the Empathy hierarchy in the context.
 = It is generally the case that an event described by the main predicate results in another event where **Ziroom** gets benefited AND **Ziroom** does not outrank **Taroo** over the Empathy hierarchy in the context.

Recall that failure to obey the empathy constraint on *yar/age* makes the sentence unacceptable as repeated in (75). This example is not acceptable as the beneficiary is the speaker, who is more empathized with than the referent of the subject, Taroo. The current account also correctly derives the infelicity of this example.

- (75) #Taroo_k-wa watasi_l-ni nimotu-o okutte-**yar/age**-ta
 Taroo-TOP 1sg-DAT package-ACC send-BEN-PAST
 ‘Taroo sent the package to me for my benefit.’

The sentence in (75) has the structure in (76), and the probes on *yar/age* will be valued as (77). This results in the empathy presuppositional meaning which is roughly represented in the underlined part of (78). Thus, the empathy-related meaning *yar/age* adds to the sentence in (75) is infelicitous and hence is not accepted.



(77) $\langle intF_1[l(3)], intF_2[k(3)] \rangle$

- (78) It is generally the case that an event described by the main predicate results in another event where $[[NP_{intF_1[l]}]]$ gets benefited AND $[[NP_{intF_1[l]}]]$ does not outrank $[[NP_{intF_2[k]}]]$ over the Empathy hierarchy in the context.
- = It is generally the case that an event described by the main predicate results in another event where **Sp** gets benefited AND **Sp** does not outrank **Taroo** over the Empathy hierarchy in the context.

Thus, the proposed mechanism correctly derives the benefactive information and the empathy information added by *yar/age*, while correctly capturing the syntactic pattern of the choice of the beneficiary and the participants in the empathy comparison.

3.2.4 A Purely Morpho-syntactic Alternative?

I have proposed that *yar* and *age* are semantic predicates that select their arguments via Agree, based on the syntactic distribution of the beneficiary and the benefactor. However, one might wonder if it is necessary to say that *yar/age* are semantic

predicates. For example, can we reduce the benefactive / empathy semantics to the semantics of a morpho-syntactic feature on the object such as [BEN:±] or [EMP:±] (alternatively [proximate] / [obviative]) and say that *age/yar* (and *kure*) are mere allomorphs reflecting the result of Agree with the goal NP over these morpho-syntactic features? Although I have shown that a purely morpho-syntactic approach to Object Honorifics using [HON:±] does not work, I have not yet shown that such an approach does not work for benefactive auxiliaries. In this section, I show that a purely morpho-syntactic approach is not enough to capture the behavior of *yar/age* either.

3.2.4.1 A morpho-syntactic approach to the benefactive function

A morpho-syntactic approach to the benefactive function of *yar/age* (and *kure*) would look like this: each DP is equipped with either a [BEN:+] feature or a [BEN:−] feature. A probing head above Voice is born with an unvalued feature [BEN:]. It probes down to find the highest object and get valued by the ben feature on that object. The probing head is realized as *yar/age* (or *kure*) if the feature on it is valued as [BEN: +], while it is realized as phonologically null if the feature on it is valued as [BEN: −].

It is relatively straightforward to see that such an approach fails to capture the benefactive meaning of *yar/age*. Attributing the beneficiary status to a feature on NPs cause two problems. First, unlike the meaning carried by *phi*-features on NPs, the beneficiary interpretation does not describe the intrinsic nature of the referent of the NP. Instead, the beneficiary status of an NP is like a semantic role in the sense that it is definable only with respect to the benefactive event resulting from events described by the predicate accompanying *yar/age*. This means that, if I were to attribute the benefactive meaning to the feature [BEN:±], the semantics of the feature [BEN:±] has to have a variable for the event description as shown in (79), for example, and there needs to be an additional mechanism that lets the event description variable *P* be

identified / co-bound with the event description introduced by the predicate that is accompanied by *yar/age*.¹⁸

$$(79) \quad \lambda x.Gen(e).[P(e)][\exists e''[Benefit(e'')\&Exp(x, e'')\&Result(e'')(e)]]$$

Introducing such a mechanism is itself non-trivial extension of the feature system. Moreover, such a strategy is implausible in that it will result in an unrestricted number of features that carry “additional” semantic-roles assigned to an NP independently of the meaning of the predicate that selects it.

Second, the feature approach causes problem with a raising relative example. Recall from Ch.2 that certain relative clauses are considered to have raising structures. The relative clause in (80) in the specified context is one of such cases: the head noun *saisyo-no gakusei* ‘first student’ moves from inside the relative clause to the head noun position in the matrix clause as shown in (81).

- (80) *Context:* Several students visited the campus and Ziroo was guiding them one by one. Hanako said that Yosiko was the first one who Ziroo guided. At the same time, it happened that Taroo insulted Yosiko.

Taroo-wa	[[Ziroo-ga	<i>t</i>	annai-site- age -ta-to]
Taroo-TOP		Ziroo-NOM	
Hanako-ga	itte-i-ta]	saisyo-no	gakusei-o
guide-do-BEN-PAST-that	Hanako-NOM	say-ASP-PAST	first-GEN
nonosit-(#te-age)-ta			
student-ACC		insult-PAST	

“Taroo insulted(*#-ben*) the first student [Hanako was saying [Ziroo guided-*ben t*]].”

- (81) Taroo insulted [[first student]_{*i*} [_{*t_i*} Hanako said [_{*t_i*} Ziroo guided BEN [first student]_{*i*}]]]

Under a purely morpho-syntactic approach, the benefactive information is repre-

¹⁸The semantic characterization of the benefactive event in (79) follows that in Tomioka and Kim (2017) as described in (3) above.

sented on NPs as features [BEN:±] and *yar/age* is mere agreement morphology with [BEN:±]. As the raised NP *saisyō-no gakusei* ‘first student’ also has to have either [BEN:+] or [BEN:–], it is predicted that the raised NP will consistently trigger *yar/age* in both the embedded clause and the matrix clause or consistently ban *yar/age* in both clauses, but will not mix them up. But the example in (80) shows that this prediction is not borne out. The sentence describes a situation in which Yosiko (i.e. the referent of the head noun of the relative clause) gets benefited from the guiding event described in the relative clause, but gets troubled by the insulting event described in the matrix clause. In this context, (80) shows that it is entirely possible to use *age* on the relative clause predicate, while the matrix predicate does not have to accompany *age*. In fact, it sounds infelicitous to use *age* on the matrix predicate here.

For these reasons, a purely morpho-syntactic alternative to the benefactive function of *yar/age* does not work.

3.2.4.2 A morpho-syntactic approach to the empathy-related function

A purely morpho-syntactic approach to the empathy meaning looks much more promising at first glance, especially given the similarity between Japanese benefactives and Direct/Inverse systems in languages such as Algonquian languages, as pointed out by Oshima (2007). In a Direct/Inverse system, a marker called a *theme sign* as well as agreement on the predicate called *core agreement slot* is often considered to alternate depending on the relationship between the subject and the object over a person hierarchy, which can vary slightly across languages. In Nishnaabemwin, for example, the person hierarchy looks like (82). As exemplified in (83-a) and (84-a), if the subject is higher than the object over the person hierarchy, a default (or so-called *direct*) marker *aa* appears and the predicate shows prefixal agreement with the subject. On the other hand, as shown in (83-b) and (84-b), if the object is higher than the subject, an Inverse marker *ig* appears and the predicate shows prefixal agreement

with the object.

(82) Person hierarchy in Nishnaabemwin: $2 > 1 > 3$

- | | | | | |
|------|----|-----------------------|----|-----------------------|
| (83) | a. | $1 \rightarrow 3 = 1$ | b. | $3 \rightarrow 1 = 1$ |
| | | N- <i>see</i> -aa | | N- <i>see</i> -ig |
| | | 1-see-3.DFLT | | 1-see-3.INV |
| | | ‘I see him.’ | | ‘He sees me.’ |

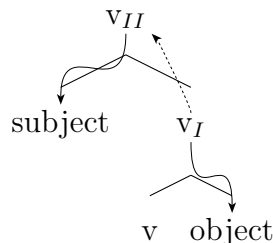
(Béjar and Rezac, 2009, 53)

- | | | | | |
|------|----|-----------------------|----|-----------------------|
| (84) | a. | $2 \rightarrow 3 = 2$ | b. | $3 \rightarrow 2 = 2$ |
| | | G- <i>see</i> -aa | | G- <i>see</i> -ig |
| | | 2-see-3.DFLT | | 2-see-3.INV |
| | | ‘You see him.’ | | ‘He sees you.’ |

(Béjar and Rezac, 2009, 53)

Béjar and Rezac (2009) give a purely syntactic account to this paradigm by proposing Cyclic Agree over person features: according to them, the person features in Nishnaabemwin are organized in a hierarchical way following the person hierarchy in (82) and the feature higher on the hierarchy better values the probe. The probing feature first probes downward and gets valued by the object. However, if the probing feature is not fully valued, it additionally looks upward cyclically to agree with the subject. If the subject better values the probe, the probe projects to v_{II} and agrees with the subject as shown in (85). This projected probe on v_{II} gets realized as the Direct theme sign. On the other hand, when the object satisfies the probe better than the subject, the probe does not get projected and, instead, an additional distinct probe appears on v_{II} to license the person feature on the subject. This added probe is realized as an Inverse theme sign.

(85)



Interestingly, especially in the cases where both the subject and the object are third person DPs, the empathy relationship is known to affect the choice between Direct and Inverse forms in Algonquian languages: if the subject is more empathized with, the Direct form with subject agreement appears, while the Inverse form with object agreement appears if the object is more empathized with. This effect of empathy has also often been reduced to syntactic person features by previous studies (Lochbihler, 2012; Oxford, 2019). These studies posit [proximate] as a kind of a person feature assigned to the 3rd person most empathized with in a certain domain and they extend the person hierarchy as shown in (86). Thus, if the object is a 3rd person without [proximate] and the subject is a 3rd person with [proximate], the sentence shows the Direct pattern, while if the object has [proximate] instead of the subject, the sentence shows the Inverse pattern.

(86) extended person hierarchy: 2>1>[proximate]> the other 3rd person

One might think that this kind of a purely morpho-syntactic approach can be extended to *yar/age* and *kure* as well. For example, one can think of a system where a Cyclic Agree of the kind proposed by Béjar and Rezac (2009) is active over the person hierarchy in (87). The auxiliaries *age/yar* and *kure* are syntactically/semantically the same element but its morphology is decided based on the nature of v_{II} by the lexical insertion rules in (88). Analogously to the system by Béjar and Rezac (2009), if the subject is higher on the person hierarchy and better satisfies the probe than the object, v_{II} contains a projected probe and hence v_{BEN} is realized as *yar/age*. On the

other hand, if the object is higher on the person hierarchy, the v_{II} contains an added probe and hence v_{BEN} is realized as *kure*.

(87) A potential person hierarchy in Japanese

1>2>[proximate]> the other 3rd person

(88) a. $v_{BEN} \rightarrow age$ (or *yar*) / $v_{II}[\textit{projected probe}]$ ____

b. $v_{BEN} \rightarrow kure$ / $v_{II}[\textit{added probe}]$ ____

This account is purely morpho-syntactic in the sense that the empathy effect of *age/yar* and *kure* is attributed to the assignment of the feature [proximate] and the morpho-syntactic conditions on the realization of v_{BEN} , but not to their semantics. However, such an account is not plausible as an explanation of Japanese benefactive auxiliaries. First, (89) shows that the canonical person feature is not a decisive factor in Japanese benefactives (except the distinction between 1st person and the others, which is derived by the pragmatic requirement that the speaker cannot empathize with someone else more than himself/herself). (89) shows that both *age* and *kure* are available either in the combination of the 2nd person subject and the 3rd person object, or in the combination of a 3rd person subject and the 2nd person object. This suggests that the availability of *age* and *kure* is decided independently of the person features of the subject or the object.

(89) a. Taroo-wa anata-o kinikakete-**age**/**kure**te-i-ta
Taroo-TOP 2sg-ACC care.about-BEN-ASP-PAST
'Taroo was caring about you for your benefit.'

b. anata-wa Taroo-o kinikakete-**age**te/**kure**te-i-ta
2sg-TOP Taroo-ACC care.about-BEN-ASP-PAST
'You were caring about Taroo for Taroo's benefit.'

One might still try to defend the person feature analysis by arguing that the Japanese person hierarchy in fact takes the form in (90) and 3rd person [proximate] and 2nd

person equally value the probe in Japanese such that either of them can agree with the probe, resulting in the optionality of *age* and *kure* in both (89-a) and (89-b).

(90) A revised potential person hierarchy in Japanese?

1>2, [proximate]> the other 3rd person

However, (89) is not the pattern predicted under such an analysis. Under Cyclic Agree, the subject will not agree with the probe unless it values the probe better than the object. That is, if the subject and the object equally value the probe, the probe would be expected to always agree with the object. Thus, the idea that 2nd person and 3rd person features equally value the probe would predict that *kure*, but not *age*, has to appear in (89), contrary to the fact.

Second, I can further confirm the insufficiency of the feature account by once again using the raising relative test. Under the purely morpho-syntactic approach, the choice of *age* and *kure* in the cases where both the subject and the object are 3rd person NPs depends on the presence of a [proximate] feature on one of them (Lochbihler, 2012; Oxford, 2019). Following the argument in Bhatt (2002), the relative clause in (91) can be considered to have a raising structure as shown in (92). Thus, in (91), the NP *saisyō-no gakusei* ‘first student’ originates in the trace position inside the relative clause and gets raised to its surface position. This NP is in a position to affect the form of the benefactive auxiliaries in both the embedded clause and the matrix clause. In (91), both auxiliaries can take the form *age*. Under the person feature approach to these auxiliaries, *age* inside the relative clause indicates that the raised NP *saisyō-no gakusei* is higher than the object inside the relative clause (*sinnyūusei* ‘incoming students’) over the person hierarchy. Given that both the raised NP and the object inside the relative clause are 3rd person NPs, the raised NP has to have a [proximate] feature by hypothesis. However, the use of *age* in the matrix clause indicates that the matrix subject has to be higher than the raised NP over the person

hierarchy. This is not possible if the raised NP has a [proximate] feature. Thus, the person feature based account cannot predict the acceptability of (91).

- (91) *Context:* Incoming students visited the campus. The students of Prof. Tanaka spontaneously guided them, taking turns. Hanako said that the one who started to guide the incoming students first was Ziroo. Hearing that, Prof. Tanaka praised Ziroo.

Tanaka-sensei-wa [[*t* sinnyuusei-o annai-site-**age**-ta-to]
 Tanaka-professor-TOP incoming.students-ACC guide-do-BEN-PAST-that
 Hanako-ga itte-i-ta] saisyo-no gakusei-o homete-**age**-ta
 Hanako-NOM say-ASP-PAST first-GEN student-ACC praise-BEN-PAST

“Prof. Tanaka praised-*ben* the first student [Hanako was saying [*t* guided-*ben* the incoming students]].”

- (92) Prof. Tanaka praised BEN [[first student]_{*i*} [*t_i* Hanako said [*t_i* [first student]_{*i*} guided BEN incoming students]]

This observation suggests that the empathy condition of *age* is evaluated not by the syntactic feature [proximate] on the moved NP but by the semantic empathy comparison introduced by each occurrence of *age*, as shown in (93). As the statements in (93) do not contradict with each other, (91) is acceptable.

- (93) a. Embedded *age*: The incoming student does not outrank the first student (Ziroo) on the empathy hierarchy in the context
 b. Matrix *age*: The first student (Ziroo) does not outrank Prof. Tanaka on the empathy hierarchy.

Thus, although the choice of the benefactor and beneficiary is sensitive to the syntactic structure, a purely morpho-syntactic approach to these functions of *yar/age* does not seem possible. Instead, the benefactive meaning and empathy-related meaning of *yar/age* have to be attributed to the meaning of these auxiliaries, as I proposed in Section 3.2.3.

3.2.4.3 A pragmatic effect

The discussion so far has shown that the structure matters for the choice of the beneficiary. For example, in the sentence in (94), although it is entirely natural to imagine that the event expressed by the sentence is beneficial to Hanako, we have seen that it is Ziroo who is interpreted to be the beneficiary.

- (94) Taroo-wa Ziroo-ni Hanako-o syookai-site-**yar**/**age**-ta
 Taroo-TOP Ziroo-DAT Hanako-ACC introduce-do-BEN-PAST
 ‘Taroo introduced Hanako to Ziroo for Ziroo’s benefit.’ (Hasegawa, 2017, 23)

Such a pattern cannot be explained under the view that the beneficiary is pragmatically identified with a contextually salient entity, which is proposed by Tomioka and Kim (2017).

In support of their pragmatic view, however, Tomioka and Kim (2017) raise the example in (95), which was also discussed in (23) above. In (95-a), the dative argument serves as the beneficiary. However, Tomioka and Kim (2017) observe that, if the context makes salient that the event is beneficial to someone else, as shown in (95-b), that entity, Hana’s mother in this case, can be interpreted as the beneficiary designated by *age*. This observation can be confirmed using the first-person strategy: a first person pronoun in the dative position improves when there is a contextually salient beneficiary, which indicates that the dative position does not have to serve as a beneficiary in the presence of the contextually salient benefited entity.¹⁹ If the choice of the beneficiary is made via Agree, as the examples so far indicate, how can

¹⁹The empathy effect is instead imposed on the pragmatically salient beneficiary in such cases. For example, (i) shows that it is not possible to use *age* with the reading that the beneficiary is the pragmatically salient entity, when the pragmatically salient entity is the speaker.

- (i) isogasii watasi-no-tameni tyoonan-wa zinan-ni sakana-o yaite-#**age**-ta
 busy mother-for-GEN-sake brother-TOP 1sg-DAT fish-ACC grill-BEN-PAST
 ‘For the sake of me, who is busy, my eldest son grilled-*ben* my second son fish for our my benefit.’
 (Only interpretable as “for the second son’s benefit”)

this pragmatic effect be explained?

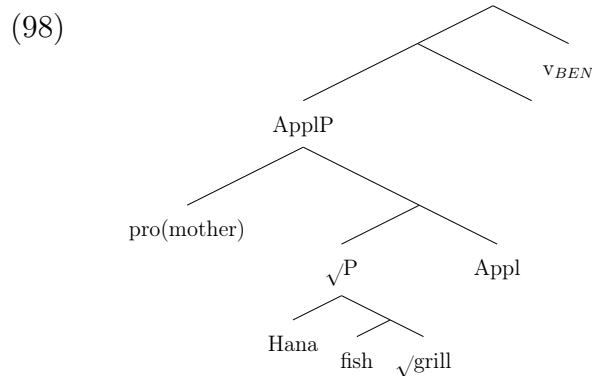
- (95) a. Yumi-wa Hana-ni sakana-o yaite-**age**-ta
 Yumi-TOP Hana-DAT fish-ACC grill-BEN-PAST
 ‘Yumi grilled-*ben* Hana the fish for Hana’s benefit’
 (Tomioka and Kim, 2017, 234)
- b. isogasii Hana-no okaasan-no tame-ni, Yumi-wa Hana-ni
 busy Hana-GEN mother-GEN sake-DAT Yumi-TOP Hana-DAT
 sakana-o yaite-**age**-ta
 fish-ACC grill-BEN-PAST
 ‘For the benefit of Hana’s mother_[beneficiary], who is busy, Yumi grilled-*ben* Hana the fish’
 (Tomioka and Kim, 2017, 238)
- (96) (?)isogasii okaasan-no-tameni ani-wa watasi-ni sakana-o
 busy mother-for-GEN-sake brother-TOP 1sg-DAT fish-ACC
 yaite-**age**-ta
 grill-BEN-PAST
 ‘For the sake of my mother, who is busy, my brother grilled-*ben* me fish for our mother’s benefit.’

Recall that such an effect from the contextually salient benefited entity is not limited to the sentences with *yar/age*, but is also visible in OH as we saw in Ch.2 Section 1.2.2 (Harada, 1976; Boeckx and Niinuma, 2004). The example in (97) from Boeckx and Niinuma (2004) shows that when there is a context that indicates that the event of checking the phone number benefits some honored person, it is possible to use OH with the interpretation that the contextually salient entity (i.e. someone who needs the phone number) is the honoree.

- (97) watasi-ga denwabangoo-o o-sirabe-si-masu
 1sg-NOM phone.number-ACC HON.PREF-check-do-POL-PRES
 ‘I will check the phone number (for [an honorific person]).’
 (Boeckx and Niinuma, 2004, 460)

As we reviewed in Ch.2 Section 1.2.2, Boeckx and Niinuma (2004) account for such examples by claiming that the contextually salient benefited argument is syntactically

represented as a *pro*, possibly as a null applicative argument. I assume that the same applicative *pro*, introduced independently of the benefactive auxiliaries, can optionally exist in the structure of the example in (95-b), as represented in (98). When the applicative *pro* exists, the closest argument to *yar/age* is the *pro*, and thus the beneficiary is interpreted as being that contextually salient benefited entity.²⁰ As this applicative *pro* is introduced as an affected/benefited entity in relation to the event because of the semantics of the Appl head (Cuervo, 2003; Pylkkänen, 2008), they appear only when the pragmatic context allows it to be interpreted as affected/benefited by the event. Thus, pragmatics can *indirectly* affect the choice of the beneficiary by making the sentence compatible with ApplP that introduces *pro*, which is found by the downward probe from v_{BEN} . But I do not consider this to indicate that the beneficiary is chosen based on the pragmatic saliency.



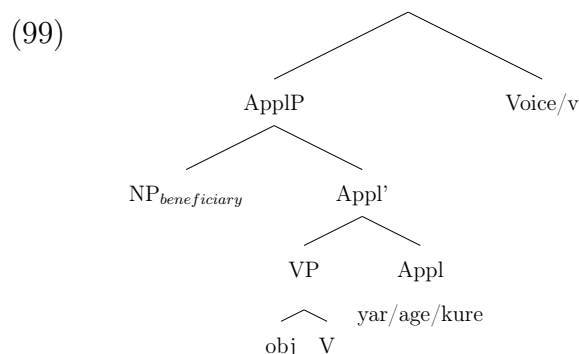
²⁰A natural question to ask is why this applicative argument has to be null. For example, it is not possible to overtly realize this NP as non-adjunct as indicated by (i).

- (i) *watasi-ga sensei/anata denwabangoo-o o-sirabe-si-mas-u
 1sg-NOM professor/2sg phone.number-ACC HON.PREF-check-do-POL-PRES
 ‘I will check (OH) the phone number for the professor/you.’

I conjecture that this ban on overt applicative NP comes from the case restriction: for example, one can consider the Spec ApplP is a null case position, which only allows *pro* to occur.

3.2.4.4 Movement analysis

Before concluding this analysis section, I briefly note that an analysis similar to the current proposal in spirit is proposed by Hasegawa (2006, 2017, 2018) and Okura (2009). As was reviewed in Section 3.1.2 above, these works take the view that the benefactive auxiliaries are the overt realization of the (high) Appl head. As shown in the structure in (99), they claim that the Appl head can introduce a new beneficiary NP in its specifier position, based on an example like (100), where the dative argument *kodomo-tati* appears in addition to the canonical argument of the main predicate. An Appl head (i.e. the benefactive auxiliaries) is considered to assign the beneficiary theta-role to what is in its specifier. Note that, for these authors, the Appl head itself is realized by the benefactive auxiliaries as shown in (99), unlike the analysis I proposed in (98), where the Appl head is independent of the benefactive auxiliaries.



- (100) Taroo-wa **kodomo-tati-ni** kukkii-o yaite-**yar/age/kure**-ta
 1sg-TOP child-PL-DAT cookie-ACC bake-BEN-PAST
 ‘Taroo baked cookies for the children’s benefit.’

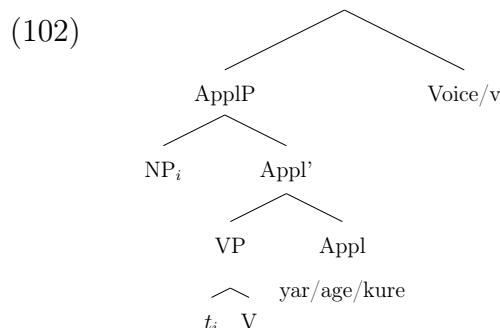
In most of the examples we have seen so far, however, the benefactive auxiliaries do not introduce a new NP. For example, in (101), no valency increase can be observed when *age/yar* is added.

- (101) a. Taroo-wa Hanako-o sasot-ta
 Taroo-TOP Hanako-ACC invite-PAST

‘Taroo invited Hanako.’

- b. Taroo-wa Hanako-o sasotte-age-ta
 Taroo-TOP Hanako-ACC invite-BEN-PAST
 ‘Taroo invited-BEN Hanako for Hanako’s benefit.’

For the cases like (101), Hasegawa and Okura claim that, when the Appl head does not introduce a new NP in its specifier, one of the NPs already introduced by the main verb covertly moves to the Spec ApplP to get an additional beneficiary theta-role, under the assumption that an NP can be moved into a theta-position (Hornstein, 1999, 2003). The structure they assume looks like (102). Crucially, Hasegawa (2018) notes that it is the highest object that moves to Spec ApplP, because of the general minimality condition on movement, explaining the observation that only the highest object serves as the beneficiary.²¹



The current approach is not necessarily incompatible with the idea that the Agreed NP subsequently moves to a higher position.²² However, I do not immediately identify the movement approach with the current approach for the following two considerations. Firstly, the movement analysis crucially hinges on the assumption that the benefactive auxiliaries realize the Appl head, which I do not adopt for the reasons stated in Section 3.1.2. In contrast, the current approach does not rely on this assumption.

²¹She leaves the account of the empathy meaning of *age* to pragmatics.

²²In fact, I argued above that the agreed with NP has to be QR-ed to a position that can bind the index on the probe.

Secondly, the current approach crucially differs from the movement approach in attributing the distribution of the beneficiary to the intervention effect on Agree, instead of the minimality requirement on movement. Now the questions are (i) whether the locality of movement is exactly the same as the locality of Agree and (ii) if it is not, which locality better captures the distribution of the beneficiary. Answering these questions requires clarification about the detailed mechanisms of movement assumed by the Movement approach and, thus, I do not attempt to give conclusive answers to these questions. I end the discussion here by pointing out that the minimality requirement is not absolute for the type of movement which is likely to be involved in the analysis by the Movement approach. The movement assumed by Hasegawa (2006, 2017, 2018) and Okura (2009) is a movement into SpecApplP, which is a theta-position for them. That is, they assume a rather non-canonical movement into a theta position. Such a movement is proposed in Movement Theory of Control by Hornstein (1999) and subsequent works, which consider obligatory control such as (103-a) to be an A-movement of a theta marked NP to another theta-position, as shown in (104).²³

- (103) a. John told Mary_i PRO_i to leave.
 b. #John_i told Mary PRO_i to leave.
- (104) John told Mary_i [_{TP} t_i to [_{VP} t_i leave]]

What is crucial here is that, for the analysis by Hornstein (1999), the minimality requirement exists but is not absolute. Hornstein (1999) claims that the prevalence of object control like (103-a) compared with subject control like (106) can be attributed to the minimality of movement: if one tries to derive the subject control reading for (103-a) under Movement Theory of Control, *John* has to move over *Mary*, as shown in (105).

²³Hasegawa (2006) explicitly cites Hornstein (1999) in her footnote regarding this movement.

(105) $\# \text{John}_i \text{ told Mary}_j [\text{TP } t_i \text{ to } [_{vP} t_i \text{ leave}]]$

However, subject control predicates do exist, in spite of their rarity, as shown in (106).

(106) John promised Mary to leave.

This suggests that the violation of minimality in movement into a theta-position is possible, although it is marked. If so, the movement approach might not be enough to capture the pattern in the choice of the beneficiary as was observed in 3.2.1. I further discuss the difference between the Hornstein's proposal and the current proposal in general in Ch.6.

3.2.5 On the relationship with OH

As we have seen in Section 3.2.1, the distribution of which NP is interpreted as beneficiary is similar to that of which NP is interpreted as honoree NP in OH. For example, (107) shows that, in ditransitive sentences, it is the IO that serves as the honoree, not the DO as has been argued by Harada (1976), Niinuma (2003) and Boeckx and Niinuma (2004). In fact, all the other pieces of evidence I raised for Agree analysis in Section 3.2.1, the intervention effect inside NPs, c-command effects and phase effects, are visible in OH as well.

- (107) a. Hanako-ga Tanaka.sensei-ni Mary-o
 Hanako-NOM Tanaka.prof-DAT Mary-ACC
go-syookai-si-ta.
 HON.PREF-introduce-do-PAST
 'Hanako introduced (OH) Mary to Professor Tanaka.'
- b. Hanako-ga Mary-ni Tanaka.sensei-o
 Hanako-NOM Taro-DAT Tanaka.sensei-ACC
 syookai-si-ta/**#go-syookai-si-ta**
 introduce-PAST/HON.PREF-introduce-do-PAST
 'Hanako introduced / #introruced (OH) Professor Tanaka to Mary.'

(Boeckx and Niinuma, 2004, 456)

Based on these data as well as the data that indicate that the felicitous use of OH requires the semantic honor relationship between the subject and the honoree, I proposed in Ch.2 that the head responsible for OH serves as a semantic predicate *honor* that selects its argument via Agree, which is a parallel analysis to what I proposed for benefactive auxiliaries in the current chapter. Thus, for the current analysis, benefactives and OH are independent phenomena and the similarity of the distribution of the beneficiary and the honoree comes from the fact that they both involve downward Agree.

On the other hand, Hasegawa (2006, 2017), based on the similarity in (107), proposes that OH is in fact contingent on the benefactive construction. I show in this section that the OH construction and the benefactive construction are independent of each other, although the application of the same Agree mechanism brings about the similarity in the distribution of NPs that serve as beneficiaries / honorees.

Hasegawa (2006, 2017) analyzes the benefactive construction using the movement approach as stated in Section 3.2.4.4 above. Thus, she assumes that the NP that gets the beneficiary interpretation ends up in Spec ApplP. She makes the following two generalizations and claims that the OH construction always involves a phonologically null version of this ApplP based on them: (i) OH marking is possible only when the described event is beneficial to the honored entity and (ii) the distribution of the beneficiary and the distribution of the honoree is the same. According to her, OH is in fact agreement over the feature [SSS] (her version of [HON:+] feature) between the honorific marker and what is in Spec ApplP. I show in this section that these generalizations are not correct, and hence conclude that OH is not dependent on the benefactive construction.

3.2.5.1 OH marking with a non-benefactive event

Starting with the observation that OH marking requires a benefactive event, I already argued in Chapter 2 that this observation does not always hold. The examples in (108) show that the event does not have to give benefit to the honoree in OH sentences, as long as the subject referent honors the honoree in the situation in which the event happens.

- (108) a. watasi-wa konkai-no ken-de sensei-ni tadaina meiwaku-o
 1sg-TOP this.time-GEN event-at professor-DAT huge trouble-ACC
o-kake-site-simat-ta
 HON.PREF-give-do-EVAL-PAST
 ‘I regrettably gave (OH) huge trouble to the professor in this event.’
- b. sensei-ni taihen-na sigoto-o go-irai-site-simat-ta
 professor-DAT hard-COP job-ACC HON.PREF-ask-do-EVAL-PAST
 ‘I regrettably requested (OH) a hard job to the professor.’

These data suggest that derivation of OH does not necessarily involve a benefactive construction. The general tendency that OH is more likely to occur in the description of benefactive events simply comes from the requirement of the honor from the subject referent to the honoree: when the referent of the subject honors the honoree, the subject referent is less likely to be a part of the event that is malefactive to the honoree.

3.2.5.2 Difference in beneficiary and honoree distribution in scrambled sentences

The data in Section 3.2.1 show that the choice of the beneficiary in benefactive constructions shows a very similar pattern to the choice of the honoree in OH. I accounted for the similarity by arguing that each of these constructions utilizes downward Agree to pick the NP. However, under the current assumption that the probing head for the benefactives and that for OH are located in distinct positions, such an analysis still

leaves room for the possibility that benefactive auxiliaries and OH choose distinct NPs as the beneficiary and the honoree in certain configurations. On the other hand, the analysis that OH is dependent on the benefactive construction (or vice versa) predicts that the honoree always has to be the beneficiary. I show that the honoree and the beneficiary in fact show different distributions in certain syntactic contexts.

Recall that I showed in Section 3.2.1 above that scrambling affects the choice of the beneficiary. More specifically, while the beneficiary has to be the referent of the IO in a ditransitive sentence with the canonical order as shown in (109-a), when the DO is scrambled to the left of the IO as shown in (109-b), there emerges an interpretation that the referent of the DO is the beneficiary.

- (109) a. watasi-wa Mary-ni John-o syookai-site-**yar**/**age**-ta
 1sg-TOP Mary-DAT John-ACC introduce-do-BEN-PAST
 ‘I introduced John to Mary for #John’s / Mary’s benefit.’
- b. watasi-wa John-o Mary-ni syookai-site-**yar**/**age**-ta
 1sg-TOP John-ACC Mary-DAT introduce-do-BEN-PAST
 ‘I introduced John to Mary for John’s / Mary’s benefit.’

In contrast, Boeckx and Niinuma (2004) report that scrambling does not affect the choice of honoree in OH. The sentences in (110) exemplify this point. While both sentences in (110) have scrambled structures, only (110-a), where the dative argument refers to an honored entity, is acceptable.

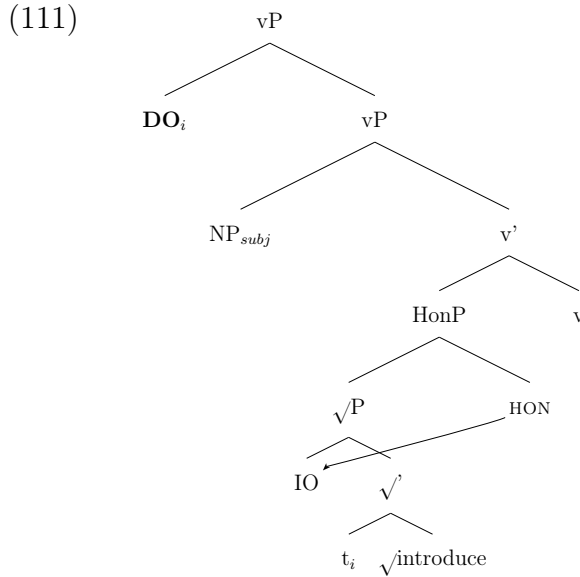
- (110) a. Hanako-ga Mary-o Tanaka.sensei-ni
 Hanako-NOM Mary-ACC Tanaka.prof-DAT
 go-syookai-si-ta
 HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Mary to Prof.Tanaka.’
- b. #Hanako-ga Tanaka.sensei-o Mary-ni
 Hanako-NOM Prof.Tanaka-ACC Mary-DAT
 go-syookai-si-ta
 HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Prof.Tanaka to Mary.’

(Boeckx and Niinuma, 2004, 457)

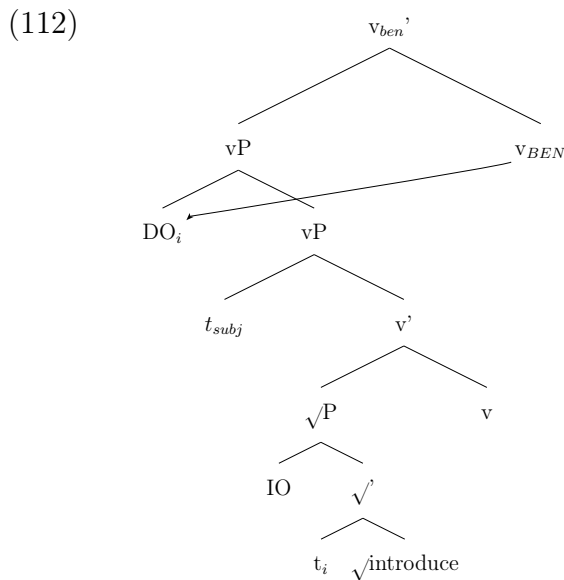
That is, there is a dissociation between the choice of the honoree and the choice of the beneficiary here. This cannot be accounted for under the idea that the OH is dependent on the benefactive construction in the way proposed by Hasegawa (2006, 2017).

On the other hand, the current approach can nicely capture this contrast between OH and the benefactive auxiliaries. Boeckx and Niinuma (2004) account for the data in (110) by arguing that the scrambled object moves to a position above *v*. As *v* is the probing head for them, the scrambling of the DO to a higher position than *v* does not make the DO accessible to the downward probe from *v*. Although I have an assumption slightly different from Boeckx and Niinuma's regarding the position of the probe of OH, the idea that the landing site of the scrambled object is above *v* correctly predicts the lack of effect from the scrambling in OH as long as the probing head in OH is located below *v*P. In fact, I have argued in Ch.2, Section 1.2.4 that HON, the probing head in OH in my account, is located below *v* based on the following two observations: (i) the presence of an OH probe blocks head-movement from $\sqrt{}$ to *v*, suggesting that it is located in between $\sqrt{}$ and *v*, and (ii) although the presence of HON seems to affect the morphology of the head c-commanded by it, the morphology of *v* does not get affected by the presence of HON in OH. Thus, even under the current assumption, the downward probe from HON still finds the IO in a scrambled sentence as shown in the structure in (111).²⁴

²⁴Note that the scrambled object does not affect the upward Agree from HON either, whose goal I claimed to serve as the honorer for OH. The NP in Spec *v*P still remains there at the point when HON probes upward, and hence is the closest NP to HON above it.



Now suppose that the landing site of the scrambled object is above v but below v_{BEN} .²⁵ Under this assumption, the downward probe from v_{BEN} should be able to find the scrambled DO as shown in (112).²⁶



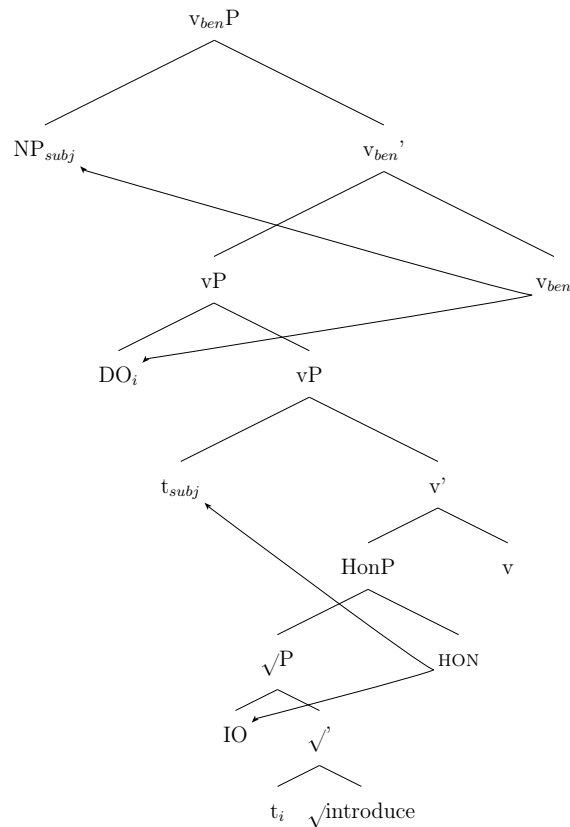
²⁵This is a plausible assumption given the analysis by Nemoto (1993) that short scrambling is a A-movement to Spec AgrOP, whose function is reduced to v under the more recent theory (Chomsky, 2000, 2001).

²⁶A question remains as to why the interpretation that the beneficiary is the referent of the dative object is still possible in a scrambled sentence as shown in (109-b) above. While I do not go into a detailed analysis, one possibility is to assume that v_{BEN} is another potential adjunction site for the scrambled NP. If so, the accusative object ends up in a higher position than v_{BEN} and the downward probe from v_{BEN} will not find the accusative NP.

Thus, the contrast between OH and the benefactive auxiliaries regarding their interactions with scrambling supports the current approach against the approach by Hasegawa (2006, 2017) where OH is considered to be dependent on the (null) occurrence of the benefactive auxiliaries.

Furthermore, the current analysis predicts that OH and benefactives can cooccur in a scrambled sentence and designate different NPs as the beneficiary and the honoree under the structure like (113). This prediction is borne out. In (114), while the beneficiary is the scrambled accusative object *Hanako*, the honoree is the dative object *Tanaka.sensei*. Note that NP_{subj} in Spec vP can be correctly chosen as the honorer by HON in (113): NP_{subj} is there at the point that Hon probes upward (i.e. as soon as NP_{subj} is merged in Spec vP), although it subsequently moves to Spec v_{BEN} when v_{BEN} is merged to the structure.

(113)



- (114) Taroo-wa Hanako-o Tanaka.sensei-ni
 Taroo-TOP Hanako-ACC Tanaka.prof-DAT
 go-syookai-site-**yar**/**age**-ta
 HON.PREF-introduce-do-BEN-PAST
 ‘Taroo introduced (OH) Hanako to Prof.Tanaka for the benefit of Hanako.’

Thus, it is not the case that the honoree in HON and the beneficiary in the sentences with *yar/age* always correlate with each other. On the analysis that OH is dependent on the phonologically null benefactive construction, this lack of total correlation is not expected. However, the current analysis nicely captures the contrast between the benefactive auxiliaries and OH constructions, while capturing their similarities.

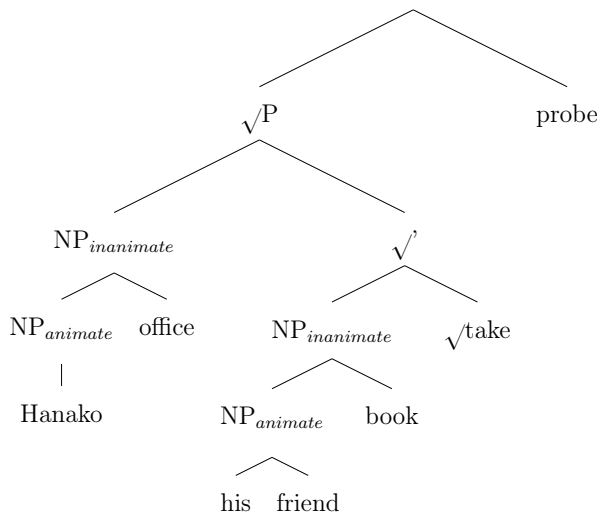
3.2.5.3 Difference in beneficiary / honoree distribution with two potential goals

Another situation in which the beneficiary and the honoree can be dissociated is when there are two potential goals that satisfy the conditions on Agree as defined in Ch.1. I have shown that, given that the OH probe and the benefactive probe only target animate NPs, such a situation happens in ditransitive sentences where the goal NP itself is inanimate while the possessee of the goal NP and the theme NP (or the possessor of the theme NP) are both animate. For example, we saw in Section 3.2.1.3 that the sentence in (115) has the structure in (116) and either the possessor of the DO or the possessor of the IO is accessible from the probe: the IO possessor and the DO possessor do not c-command each other and thus, by the definition of intervention condition, neither intervenes between the probe and the other. In fact, in (115), either of them can be the beneficiary. We observed a similar pattern with OH in Ch.2 Section 1.2.2.

- (115) Taroo_i-wa Hanako-no kenkyuusitu-ni kare_i-no yuuzin-no
 Taroo-TOP 1sg-GEN office-DAT 3sg-GEN friend-GEN
 zousyo-o okutte-**yar**/**age**-ta
 book.collection-ACC send-BEN-PAST

‘Taroo sent his friend’s book collection to Hanako’s office for his friend’s benefit / for Hanako’s benefit.’

(116)



Now, if the benefactive auxiliaries and HON probe independently of each other, the straightforward prediction is that they can take different goals in this situation. This prediction is borne out by (117): the examples in (117) are acceptable even when it is Hanako, not the honored professor, who gets the benefit.

- (117) a. ?Taroo-wa Hanako-no heya-ni sensei-no nimotu-o
 Taroo-TOP Hanako-GEN room-DAT professor-GEN baggage-ACC
 o-okuri-site-*yar/age*-ta
 HON.PREF-send-do-BEN-PAST
 ‘Taroo send (OH) Professor’s baggage to Hanako’s room for Hanako’s benefit.’
- b. ?Taroo-wa sensei-no heya-ni Hanako-no nimotu-o
 Taroo-TOP professor-GEN room-DAT Hanako-GEN baggage-ACC
 o-okuri-site-*yar/age*-ta
 HON.PREF-take-do-BEN-PAST
 ‘Taroo took (OH) Hanako’s baggage to Professor’s room for Hanako’s benefit.’

This again shows that the beneficiary and honoree do not have to be the same entity, supporting the current analysis over the idea that OH is dependent on (null) benefactive auxiliaries.

The discussions in this section have shown that, although the distributions of the

honoree and the beneficiary are similar, they are not always congruent. The current approach, which gives parallel accounts to these phenomena using Agree over index features, can correctly capture this independence and similarity at the same time.

3.2.6 Interim Summary

In Section 3.2, I have focused on the benefactive auxiliaries *yar/age* and have shown that these auxiliaries are semantic predicates that find their arguments via Agree, similarly to what I have proposed for HON in OH in Ch.2. This further supports the idea that the result of Agree can feed semantic predicates. In the next section, I show how *kure*, another benefactive auxiliary which is often studied in a parallel way with *yar/age*, can be analyzed. I show that, in spite of its apparent similarity with *yar/age*, *kure* involves a different mechanism in its choice of the beneficiary and the participants of the empathy comparison.

3.3 Analyzing *kure*

While I have shown that *yar/age* show a syntactic pattern in the choice of beneficiary, *kure* shows a somewhat different pattern. In this section, I describe the pattern of the beneficiary choice in *kure* sentences and discuss that *kure* sentences involve a different mechanism from what I proposed for *yar/age* sentences, in spite of their apparent similarity.

3.3.1 Beneficiary is always the empathy locus

As I discussed in Section 3.1, *kure* requires the beneficiary to be more empathized with by the speaker than the benefactor, as characterized by the constraint in (118), the reverse of what we saw for *yar/age*. The data exemplifying this point are repeated in (119). In this regard, *kure* appears to be the exact opposite of *yar/age*. Note

- (121) Suzuki-san-wa Hanako-ni watasi-o syookai-site-**kure**-ta
 Suzuki-Mr.-TOP Hanako-DAT 1sg-ACC introduce-do-BEN-PAST
 ‘Mr.Suzuki introduced me to Hanako for my /#Hanako’s benefit.’

These observations suggest that the mechanism by which *kure* chooses its beneficiary is not the same as the way by which *yar* and *age* select their beneficiary. What (120)–(121) suggest is that the beneficiary of *kure* has to be the *empathy locus* in the sentence. By the term *empathy locus*, I refer to the person from whose perspective the event is described in the clause. I consider this to be either (i) the participant of the event that receives the highest degree of empathy from the speaker (Oshima, 2006, 168) or (ii) the speaker himself/herself. I consider the latter option to be always possible even when the speaker is not a participant of the event, given that the speaker can always describe an event from his / her own perspective. What (120)–(121) show is that, as long as one of the object NPs refers to the empathy locus, it serves as the beneficiary no matter what its syntactic position relative to the other object NP is. In (120) and (121), the empathy locus is the first person pronoun *watasi*, given that the speaker is known to empathize more with himself/herself than anyone else (Kuno and Kaburaki, 1977) and hence the beneficiary has to be the speaker, instead of Hanako. The examples in (122)–(123) further confirm that the empathy locus is what determines the pattern. In (122), the NP whose referent serves as the beneficiary has to be the pronoun *zibun* in the relative clause, which is considered to refer to the empathy locus (Oshima, 2004, 2006). In (123), it is the speaker’s brother, who is naturally considered to be closer to the speaker, and hence is easier to be empathized with, than someone who the speaker refers formally to as *Suzuki-san* ‘Mr. Suzuki’.

- (122) a. Taroo-wa [zibun-ni Ziroo-o syookai-site-**kure**-ta] hito-to
 Taroo-TOP self-DAT Ziroo-ACC introduce-do-BEN-PAST person-with
 at-ta
 meet-PAST
 ‘Taroo_i met the person who introduced-BEN Ziroo to self_i for his_i own/#Ziroo’s benefit.’

- b. Taroo-wa [Ziroo-ni zibun-o syookai-site-**kure**-ta] hito-to
 Taroo-TOP Ziroo-DAT self-ACC introduce-do-BEN-PAST person-with
 at-ta
 meet-PAST
 ‘Taroo_i met the person who introduced-BEN self_i to Ziroo for his_i own/#Ziroo’s
 benefit.’
- (123) a. Suzuki-san-wa uti-no ototoo-ni Tanaka-san-o
 Suzuki-Mr.-TOP household-GEN brother-DAT Tanaka-Mr-ACC
 syookai-site-**kure**-ta
 introduce-do-BEN-PAST
 ‘Mr.Suzuki introduced Mr.Tanaka to my brother for my brother’s/#Mr.Tanaka’s
 benefit.’
- b. Suzuki-san-wa Tanaka-san-ni uti-no ototoo-o
 Suzuki-Mr.-TOP Tanaka-Mr-DAT household-GEN brother-ACC
 syookai-site-**kure**-ta
 introduce-do-BEN-PAST
 ‘Mr.Suzuki introduced my brother to Mr.Tanaka for my brother’s/#Mr.Tanaka’s
 benefit.’

At this point of the discussion, another line of research deserves attention. In the trend of syntactically representing Speech Act information (Speas and Tenny, 2003, a.o.), some literature has claimed that there is a syntactic operator in the form of a phonologically null DP/NP that represent the empathy locus. One of the phenomena that has motivated the presence of such an empathy operator is the existence of exempt anaphors, that is, anaphors that do not seem to be syntactically bound by a local antecedent but somehow get licensed against Binding Condition A (Nishigauchi, 2014; Charnavel, 2020; Sundaresan, 2018). Such exempt anaphors have been observed cross-linguistically. For example, Charnavel (2020) studies French and argues that an anaphor *ses propres* in (124) can refer to *Ninon*, in spite of the fact that the DP *Ninon* is not in a position to syntactically bind the anaphor. Charnavel (2020) accounts for such exempt anaphors by arguing that the binding of such exempt anaphors is mediated by an empathy-related operator at least in some contexts: a null operator representing the empathy locus is in a position to locally bind the

anaphor. The operator corefers with *Ninon* while binding the anaphor, yielding a surface structure in which the anaphor apparently seems to be bound by the DP *Ninon* violating Binding Condition A.

- (124) Christel_i mérite que le futur métier de Ninon_k corresponde à la fois à ses_k propres aspirations et à celles de sa*_{i/k} chère famille.
 ‘Christel_i deserves Ninon_k’s future job corresponding to both her_k own aspirations and those of her*_{i/k} dear family.

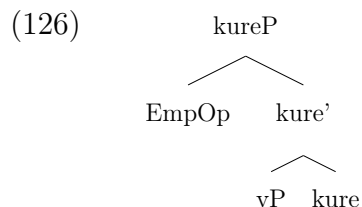
Crucially for the current purpose, Nishigauchi (2014) claims that *kure* introduces an empathy-related operator, based on the observation regarding the anaphor *zibun*. The anaphor *zibun* in Japanese is one of those anaphors that shows exempt behaviors including long-distance binding. Nishigauchi observes that the use of *kure* makes the long-distance binding possible in a structural context where long-distance binding is not allowed otherwise as shown in (125). He accounts for this observation by claiming that a pro (what I call a syntactic operator here) introduced by *kure* is a mediator of the long-distance binding.

- (125) a. *kyouzyu-ga zibun-o inyoo-si-ta-koto-ga Takasi-o
 professor-NOM self-ACC cite-do-PAST-fact-NOM Takasi-ACC
 yuumei-ni si-ta
 famous-COP do-PAST
 ‘The fact that the professor cited self_i made Takasi_i famous.’
 b. kyouzyu-ga zibun-o inyoo-site-kure-ta-koto-ga Takasi-o
 professor-NOM self-ACC cite-do-BEN-PAST-fact-NOM Takasi-ACC
 yuumei-ni si-ta
 famous-COP do-PAST
 ‘The fact that the professor cited-BEN self_i made Takasi_i famous.’

(Nishigauchi, 2014, 189:(80)-(81))

Given this background and the distribution of the beneficiary, I propose that *kure* is a head that introduces a syntactic operator (which I call *EmpOp*) as shown in the

structure in (126), and this operator both defines the empathy locus of its complement domain and serves the beneficiary of the event described by the complement of *kure*. Thus, the benefactive meaning of *kure* looks like (127). That is, unlike *yar/age*, *kure* merges with and hence locally selects a beneficiary.



- (127) *kure*: It is generally the case that an event e results in another event where X=EmpOp gets benefited

Let us take (120) and (121), repeated in (128), as examples. As shown in (126) above, *kure* introduces an EmpOp. Under this account, the unavailable reading, where Hanako is the beneficiary, would be achieved if EmpOp introduced by *kure* could refer to Hanako. Then the question is whether EmpOp can refer to Hanako here. If EmpOp refers to Hanako, by the nature of EmpOp, the empathy locus in the complement domain of *kure* is defined to be Hanako. However, as the speaker himself/herself is a participant of the event in these examples, under the pragmatic condition that the speaker cannot empathize with anyone else more than himself/herself (*Speech Act Empathy Hierarchy* (Kuno and Kaburaki, 1977)), Hanako cannot felicitously be the most empathized entity among the participants of the event, and hence cannot felicitously be the empathy locus. Thus, EmpOp cannot felicitously refer to Hanako and hence the beneficiary cannot be Hanako in these examples. In fact, given the Speech Act Empathy hierarchy and by the definition of empathy locus, the only entity who can pragmatically plausibly serve as the empathy locus here is the speaker. Thus, the only possible interpretation here is that the speaker is the beneficiary.

- (128) a. Suzuki-san-wa watasi-ni Hanako-o syookai-site-**kure**-ta
 Suzuki-Mr.-TOP 1sg-DAT Hanako-ACC introduce-do-BEN-PAST
 ‘Mr.Suzuki introduced Hanako to me for my/#Hanako’s benefit.’
- b. Suzuki-san-wa Hanako-ni watasi-o syookai-site-**kure**-ta
 Suzuki-Mr.-TOP Hanako-DAT 1sg-ACC introduce-do-BEN-PAST
 ‘Mr.Suzuki introduced me to Hanako for my/#Hanako’s benefit.’

Note that, under this account, *kure* refers to EmpOp as its beneficiary but not to the object of the matrix clause. This means that it predicts that the beneficiary in *kure* sentences does not have to be one of the objects, as long as the beneficiary is someone who can serve as the empathy locus. I consider this prediction to be borne out by the example in (129-a). In (129-a), although no animate NP exists around the object position, it is possible to use *kure* with the interpretation that the cherishing event was beneficial to the speaker, even without a specific context which suggests that the cherishing event is beneficial to the speaker. Under the assumption that the speaker can always be the empathy locus even if he/she is not a participant of the event, the current account correctly predicts the availability of *kure* in (129-a). Note that this nicely contrasts with what we observed with *yar/age* in Section 3.2.1.1 above: *yar/age* were not available without any animate object.

- (129) a. Hanako-wa sono ronbun-o taisei-ni site-kure-ta
 Hanako-TOP that paper-ACC important-COP do-BEN-PAST
 ‘Hanako cherished-BEN the paper for my benefit.’
- b. *Hanako-wa sono ronbun-o taisei-ni site-age-ta
 Hanako-TOP that paper-ACC important-COP do-BEN-PAST
 ‘Hanako cherished-BEN the paper (for ??’s benefit).’

The empathy constraint on the use of *kure* as repeated in (130) almost automatically derives from the idea that the beneficiary of a *kure* sentence is the empathy locus. By definition, the empathy locus is more empathized with than any other participants in the event, and hence more than the benefactor. Thus, although I

mentioned in Section 3.1 above that the presuppositional meaning introduced by *kure* is (131), the empathy related part of this definition, which is underlined in (131) is no longer necessary. I assume the only presuppositional meaning introduced by *kure* is the benefactive meaning proposed in (127) above.

(130) *-kure*: E(Beneficiary)>E(Benefactor) (Oshima, 2006, 168)

(131) *kure*: It is generally the case that an event e results in another event where X gets benefited AND X outranks Y over the Empathy hierarchy in the context

3.3.2 Anti-subject restriction

While the EmpOp analysis has succeeded in accounting for most of the distribution of the beneficiary in *kure* sentences, there is one more related constraint to be explained: the syntactic subject cannot be the beneficiary in *kure* sentences, even if the subject seems to be pragmatically qualified to be the empathy locus. For example, one cannot use (132) with the interpretation that the subject referent (=the speaker) is the beneficiary, although the speaker is the entity most empathized with among the participants in the inviting event described in (132).

(132) #watasi-wa Hanako-o sasotte-kure-ta
 1sg-TOP Hanako-ACC invite-BEN-PAST
 ‘I invited-BEN Hanako **for my benefit**.’²⁷

On a similar note, one cannot use *kure* in intransitive sentences, even if the subject is clearly the empathy locus as suggested by (133-a). Note that this does not come from a pragmatic unnaturalness of running for the benefit of oneself: as long as *kure* is not used, running for the sake of oneself is a totally natural situation to describe as indicated by (133-b).

²⁷This example is also bad with the reading where Hanako is the beneficiary, as is correctly predicted by the discussion so far.

- (133) a. #watasi-wa hasitte-kure-ta
 1sg-TOP run-BEN-PAST
 ‘I ran for my benefit.’
- b. watasi-wa zibun-no-tame-ni hasit-ta
 1sg-TOP self-GEN-sake-DAT run-PAST
 ‘I ran for the sake of myself.’

Relevant to this point is the fact that one cannot use *kure* in a reflexive sentence with the interpretation that the referent of the reflexivized object is the beneficiary.

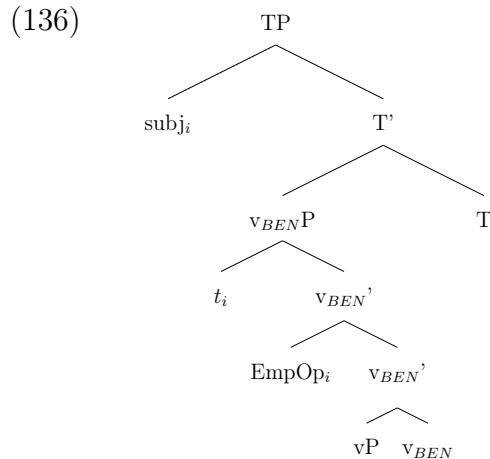
- (134) #watasi-wa zibun-o homete-**kure**-ta
 1sg-TOP self-ACC praise-BEN-PAST
 ‘I praised myself for my benefit.’

The examples in (135) further show that what matters here is the syntactic subject, not the agent NP: even if the event described by the main predicate is beneficial to the speaker, if the speaker is a derived subject with a non-agent theta-role, *kure* is not allowed as shown in (135-a). On the other hand, (135-b) shows that if the speaker is a non-subject agent, *kure* is possible.

- (135) a. #watasi-wa (sensei-ni) suisen-s-arete-kure-ta
 1sg-TOP prof-DAT nominate-do-PASS-BEN-PAST
 ‘I was nominated (by the professor) for my benefit.’
- b. Taroo-wa watasi-ni nagur-arete-kure-ta
 Taroo-TOP 1sg-DAT hit-PASS-BEN-PAST
 ‘Taroo was hit by me for my benefit.’

Although the current proposal no longer relies on the condition proposed by Oshima (2006) repeated in (130) above, this restriction on coreference between the subject and the beneficiary in *kure*, which I call *Anti-subject restriction*, in fact follows from the current analysis that the beneficiary in a *kure* sentence is the referent of EmpOp introduced by *kure* in its Spec. The structure in (136) shows that, when the

subject and EmpOp are coreferential, EmpOp is locally bound by what is in SpecTP.²⁸ If EmpOp is like a pronoun, as has been proposed by works such as Nishigauchi (2014) or Charnavel (2020), this violates Binding Condition B. Thus, the EmpOp introduced by *kure* cannot be coreferent with the syntactic subject, and hence the subject cannot be the beneficiary.



Note that, while the existence of Anti-subject restriction indicates that *kure* refers to the subject similarly to *yar/age*, this account of the Anti-subject restriction does not involve Agree, unlike the analysis I proposed for the choice of the benefactor in *yar/age* sentences. This treatment of Anti-subject restriction is further supported by the possibility of inanimate subjects in *kure* sentences, as exemplified by (137).

- (137) tenki-ga (watasi-no) mikata-o site-kure-ta
 weather-NOM 1sg-GEN suppor-tACC do-BEN-PAST
 ‘The weather supported-*ben* me for my benefit.’

Recall that the index probes in the *yar/age* construction as well as the index probes in the OH construction were all relativized to animate NPs. I accounted for this relativization by claiming that those probes target person-index features that are held only by animate NPs in Japanese. If *kure* does not require the subject to be

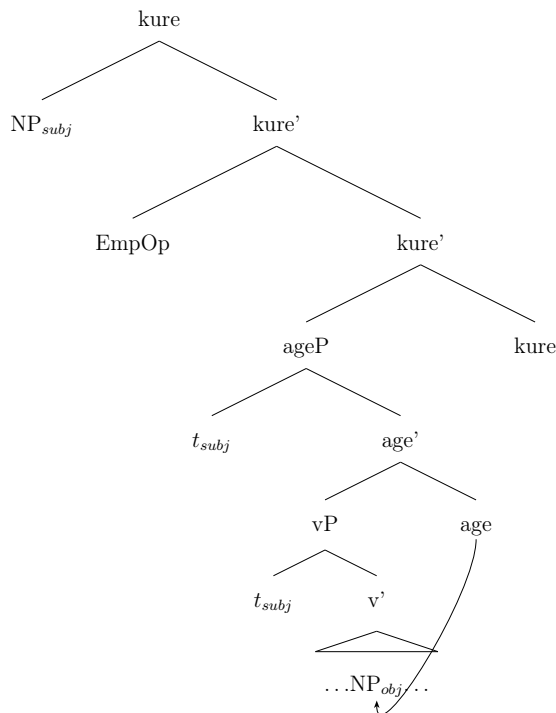
²⁸As I have assumed that v_{BEN} is a phase head, the structure in (136) assumes that the subject stops at the Spec of $v_{BEN}P$.

animate, it is plausible to assume that the way *kure* accesses the subject is different from Agree. The current account of Anti-subject effect plausibly derives the effect without resorting to Agree.

3.3.3 Interaction with *yar/age*

The current analysis of *kure* makes an interesting prediction regarding the interaction of *age/yar* and *kure*. First of all, recall that *age/yar* and *kure* have apparently opposite empathy requirements: *age/yar* require the benefactor to be more empathized than the beneficiary while *kure* requires the beneficiary to be more empathized with than any other participants including the benefactor. This means that, if *yar/age* and *kure* both designate the same entity as the beneficiary, they should not be able to co-occur. However, under the current analysis, as *kure* chooses EmpOp as the beneficiary and *yar/age* chooses the highest NP below it as the beneficiary, they should be able to co-occur given a certain structure. For example, if *yar/age* and *kure* occur in the structure as indicated in (138), they do not choose the same entity as the beneficiary: *kure* chooses EmpOp and *age* chooses the (highest) object. Hence with this structure, they should be able to co-occur without contradicting each other.

(138)



This prediction is borne out as shown in (139)–(140). These examples show that they can co-occur in the order in which *age* is followed by *kure*. Here, the subject is more empathized with than the highest object, so the use of *age* is felicitous with the reading that the highest object is the beneficiary. At the same time, the speaker, who is more empathized with than the subject (and any other arguments), can be the referent of *EmpOp* and hence can be designated by *kure* as its beneficiary.

- (139) Hanako-wa (watasi-no kawari-ni) Ziroo-o annai-site-agete-kure-ta
 Hanako-TOP 1sg-GEN instead-COP Ziroo-ACC guide-do-BEN-BEN-PAST
 ‘Hanako guided Ziroo instead of me for Ziroo’s benefit and for my benefit.’

- (140) *Context:* The speaker is a lawyer who is looking for a client and Taroo’s friend was looking for a lawyer. Taroo introduced the speaker to Taroo’s friend, which was beneficial both to Taroo’s friend and to the speaker.

?Taroo-wa kare-no yuuzin-ni watasi-o syookai-site-**agete-kure**-ta
 Taroo-TOP 3sg-GEN friend-DAT 1sg-ACC introduce-do-BEN-BEN-PAST

‘Taroo introduced me to his friend for his friend’s benefit and for my benefit.’

Interestingly, such co-occurrence becomes impossible when the order is reversed and *age* follows *kure* as shown in (141)–(142).

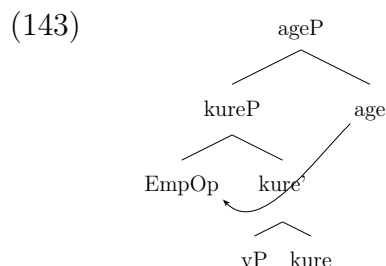
- (141) *Hanako-wa (watasi-no kawari-ni) Ziroo-o annai-site-**kurete-age**-ta
 Hanako-TOP 1sg-GEN instead-COP Ziroo-ACC guide-do-BEN-BEN-PAST
 ‘Hanako guided Ziroo instead of me for Ziroo’s benefit and for my benefit.’

- (142) *In the same context as (140)*

*Taroo-wa kare-no yuuzin-ni watasi-o syookai-site-**kurete-age**-ta
 Taroo-TOP 3sg-GEN friend-DAT 1sg-ACC introduce-do-BEN-BEN-PAST

‘Taroo introduced me to his friend for my benefit and for his friend’s benefit.’

This is correctly predicted by the current analysis: when *age* follows *kure* in (141)–(142), the structure of (141)–(142) should be the one in (143).

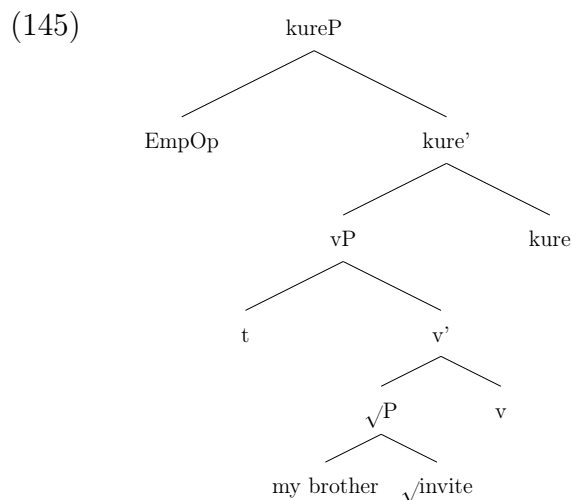


Here, as *age* occurs above EmpOp introduced by *kure*, the downward probe from *age* will find EmpOp. This, however, goes against the the empathy meaning of *age*. By its definition, EmpOp refers to the most empathized participant of the event. However, *age* in this position requires the benefactor to be more empathized than EmpOp, which is now the beneficiary designated by *age*. This leads to the contradictory empathy hierarchy and hence makes the sentence unacceptable.

3.3.4 EmpOp and Condition C

There is one issue to be addressed regarding the EmpOp analysis of the kind of example in (144), where the beneficiary is represented as an R-expression (*uti-no ootoo* ‘my brother’ here) in an argument position. In (144), following the current analysis, there has to be a null EmpOp coreferring with *uti-no ootoo* ‘my brother’ in the specifier of the *kure* projection as shown in the structure in (145).

- (144) Suzuki-san-wa uti-no ootoo-o sasotte-**kure**-ta
 Suzuki-Mr.-TOP household-GEN brother-ACC invite-BEN-PAST
 ‘Mr.Suzuki introduced my brother for my brother’s benefit.’



This structure triggers a question: if EmpOp is a syntactic operator (null NP) that can bind an anaphor *zibun* as argued above, why does the presence of EmpOp not trigger a Condition C violation by binding the coreferring R-expression *uti-no ootoo*? I answer the question by claiming that the EmpOp can have either A-status or A'-status but not both at the same time.²⁹ An A'-position is known to not create a binding relation as a binder. For example, (146) shows that an NP that underwent an A'-movement (*which girls*) cannot syntactically bind the anaphor *each other* from

²⁹See also Mahajan (1990) and following works for the idea that a landing site of a certain kind of scrambling can be A or A' (but not both at the same time.)

its landing site.³⁰

- (146) *Which girls_i did each other_i's sisters trust? (Safir, 2019, 308)

Thus, when EmpOp has an A'-status, it does not trigger Condition C violation, making (144) possible, although it cannot bind *zibun*. On the other hand, when it has an A-status, it can be a binder for *zibun*, although it triggers Condition C.

This account predicts that when coreferent *zibun* and an R-expression both occur insider the domain of *kure*, the sentence should be bad: *zibun* requires *kure* to have an A-status, while the presence of the R-expression requires *kure* to have an A'-status. This prediction is borne out by (147). The situation (147-a) is intended to describe is one where Hanako made a gift for her professor and gave it to him. The professor forgot that he got it from Hanako and handed it to Hanako as a gift for her, which made Hanako famous in the department as a pitiful figure. Crucially, the subject of the relative clause cannot be an R-expression *Hanako*, but has to be *zibun* instead. Putting an R-expression non-coreferent with Hanako, such as *Taroo*, in the same position is also possible as shown by (147-b).

- (147) a. [sensei-ga [??Hanako/^{ok}zibun-ga tukutta] purezento-o zibun-ni
 professor-NOM Hanako/self-NOM made gift-ACC self-DAT
 watasite-**kure**-ta-koto]-ga Hanako-o yuumei-ni si-ta
 give-BEN-PAST-fact-NOM Hanako-ACC famous-COP do-PAST
 '[The fact that the professor hand-BEN the gift [*Hanako_i/self_i made]
 to self_i] made Hanako_i famous.'

³⁰The example in (i) further shows that this is the case with Condition C. Under the assumption that Long-distance scrambling is A'-movement (Mahajan, 1990; Saito, 1992; Nemoto, 1993), the scrambled NP *Taroo* is in an A'-position. Crucially, this scrambled *Taroo* does not trigger Condition C violation by c-commanding another R-expression *Taroo* in the NP *Taroo-no okaasan* 'Taroo's mother.'

- (i) Taroo_i-o [Taroo-no okaasan-wa [Mary-ga t_i aisite-ir-u-to] omot-ta]
 Taroo-ACC Taroo-GEN mother-TOP Mary-NOM t love-ASP-PRES-that think-PAST
 'Taroo_i, Taroo's mother thought Mary loves t_i'

However, the acceptability of (i) could derive from the reconstruction effect and, thus, the example in (i) provides less strong evidence that the A'-position does not feed binding relationship as a binder.

- b. [sensei-ga [^{ok}Taroo-ga tukutta] purezento-o zibun-ni
 professor-NOM Taroo-NOM made gift-ACC self-DAT
 watasite-**kure**-ta-koto]-ga Hanako-o yuumei-ni si-ta
 give-BEN-PAST-fact-NOM Hanako-ACC famous-COP do-PAST
 ‘[The fact that the professor hand-BEN the gift [Taroo made] to self_i]
 made Hanako_i famous.’

To see the point more clearly, see a rough description of the structure of the complement of *kure* in this example shown in (148). (I omit the detailed layer of projections inside the vP and traces, which are irrelevant to the current point.)

- (148) [_{vBENP} EmpOp_i [*kure* [_{vP} hand [the present *Hanako_i/^{ok}zibun_i made] to
 zibun_i]]]]

The structure in (148) shows that *zibun* in the IO position of the verb *hand* has to be bound by EmpOp, as there is no other local antecedent for it. This requires EmpOp to have an A-status. However, there is another coreferent NP inside the relative clause headed by *present*. As this NP is now c-commanded by the EmpOp with an A-status, it cannot show up as an R-expression because of Condition C. This observation is compatible with the current analysis that the lack of Condition C derives from the optional A'-status of EmpOp and the presence of *zibun* to be bound by EmpOp forces the operator to have an A-status.

Note that this claim does not contradict the account of anti-subject restriction. I claimed above that EmpOp introduced by *kure* cannot be coreferent with the subject because such coreference will violate Condition B. One might think that, if EmpOp can avoid Condition C violation with an optional A'-status, it should also be able to avoid Condition B violation and hence should be able to corefer with the subject. However, I have argued here that a *binder* in an A'-positions does not feed a binding relation and hence can circumvent Condition C. I still assume that a *bindee* in an A'-position can feed a binding relation. This distinction is empirically supported.

For example, (149) shows that an anaphor (i.e. a binder) that A'-moves to the local position with *John* can get locally bound by it. This is in contrast with the example in (146) above, which shows that the movement of a binder does not feed a new binding relationship.³¹

(149) John_i wondered which picture of himself_{i/k} Bill_k saw. (Chomsky, 1993, 37)

I have to admit that (149) is not a strongest kind of support, especially given the view that nouns such as *picture* licenses a logophoric exempt anaphor in its complement position. However, at least some native speakers of English finds the contrast between (149) and the non-moved example in (150). This contrast suggests that the anaphor in (149) is licensed by the movement, not by the presence of the picture noun, indicating that a bindee can participate in binding from an A'-position.

(150) ??John_i thinks Bill_k saw a picture of himself_i. (Chomsky, 1993, 37)

Thus, I assume that EmpOp as a bindee is subject to Condition B, even when it has an A' status.

3.3.5 Interim Summary

In this section, I have shown that *kure*'s behavior differs from that of *yar/age* in crucial respects. It does not show an Agree pattern in terms of the choice of the beneficiary. It instead always chooses the empathy locus as the beneficiary. I proposed an analysis in which *kure* introduces EmpOp and identifies it with the beneficiary, in

³¹A more direct way to test whether a bindee in an A'-position feeds Condition B violation would be to look at the A'-movement of a pronoun as shown in (i). Unfortunately, such an example would always leave possibility for reconstruction, masking Condition B violation effect at the landing site, even if it exists.

(i) John_i wondered which picture of him_i Bill saw.

This is similar to the pattern in Japanese, which I analyzed as an intervention effect, although Hindi and Japanese differ in terms of which argument is higher.

- (152) a. Main-ne Mary-ko Bill-se parichay kara diya
 I-ERG Mary-ACC Bill-from introduction do.INF give.PRF
 ‘I introduced Bill to Mary.’
^{ok}Mary gets benefit / # Bill gets benefit
- b. Main-ne Mary-ko Bill-ka kitaab de diya
 I-ERG Mary-ACC Bill-of book give give.PRF
 ‘I sent Mary, Bill’s book’
^{ok}Mary gets benefit / # Bill gets benefit

Furthermore, Hindi is also similar to Japanese in terms of the intervention effect inside NPs. In Hindi, an animate possessor can be chosen as the affectee when the head noun is inanimate as shown in (153). However, the animate possessor cannot be the affectee when the head noun is animate as shown in (154).

- (153) Main-ne Mary-ka photo saja-diya
 I-ERG Mary-of photo organize-give.ASP
 ‘I organized Mary’s photos.’
^{ok}(?) Mary gets benefit / ^{ok} photo gets affected (two distinct interpretations)
- (154) Main-ne Mary-ke dost-ko niyota diya
 I-ERG Mary-of friend-ACC invitation give.PRF
 ‘I invited Mary’s friend.’
^{ok}Mary’s friend gets benefit / # Mary gets benefit

These patterns suggest a possibility that the affectee of *di* is also chosen by downward Agree from *di*, similarly to Japanese. This is noteworthy in terms of the relationship between the benefactive meaning and empathy meaning in Japanese. While these meanings are simply conjoined in the analysis in Section 3.2.3, it would be worth asking whether these meanings are inherently connected to each other especially in the system of semantic selection via Agree or happen to be conjoined in these lexical items without any inherent connection. If Hindi shows semantic selection via Agree only with benefactive interpretation without empathy condition, it supports the view

that these meanings are not inherently related but just happen to coexist in Japanese. In Chapter 4, I further show that, conversely to Hindi, an empathy element without a benefactive meaning can involve selection via Agree, using the Inverse construction in Japhug.

Of course, further examination is needed to strengthen this conclusion for Hindi. For example, it needs to be examined how case interacts with the choice of the affectee. While (152-a) seems to show that the intervention effect is at work in ditransitive sentences, it could alternatively be the case that the case marker on *Bill*, *se* ‘from,’ prevents it from serving as the affectee. Also interesting is the difference between Hindi and Japanese: while Japanese generally does not allow an inanimate object to serve as the beneficiary, Hindi seems to have that option in (153). I leave these points for future research.

3.5 Chapter Summary

In this section, I have shown that Japanese benefactive auxiliaries *yar/age* show a bi-directional Agree pattern in terms of the choice of the beneficiary and the entities compared with regard to the amount of empathy from the speaker. While the Agree pattern refers to the syntactic structure, I have shown that the benefactive meaning and the empathy-related meaning cannot be entirely reduced to syntactic features and Agree over them. I accounted for these patterns in Section 3.2.3 by extending the mechanism I proposed for OH in Chapter 2, where the result of Agree feeds arguments to semantic predicates. On the other hand, I showed that *kure*, which is often treated as a counterpart of *yar/age*, involves a different mechanism in deriving its benefactive and empathy-related meaning. I further suggested that a pattern similar to *age/yar* exists in Hindi light verb construction with *di*, indicating the possibility that the analysis for *age/yar* is extendable to Hindi as well.

Chapter 4

Direct/Inverse constructions in Japhug

4.1 Introduction

4.1.1 Direct / Inverse Construction

In this chapter, I extend the analysis from Ch.2–3 to Direct / Inverse systems, which I briefly touched on in Ch.3. A Direct / Inverse system is a predicate marking system seen in various languages from different language families (Algonquian languages (Dahlstrom, 1986; Rhodes, 1990; Valentine, 2001; Bruening, 2001; Oxford, 2019, a.o.), Kutenai (Dryer, 1996; Zúñiga, 2006), Tanoan languages (Zúñiga, 2006), Mapudungun (Baker, 2003), Sino-Tibetan languages (Ebert, 1991; Jacques, 2010; LaPolla et al., 2010; Gong, 2014), Dargwa (Sumbatova, 2018; Ganekov, 2016)). The Direct construction and the Inverse construction differ from each other in (i) Direct / Inverse marking on the predicate, called *the theme sign* in the studies of Algonquian languages, and (ii) the controller of the agreement in so-called *core agreement slot*. See, for example, the contrast in (1) from Nishnaabemwin (Valentine, 2001). The example in (1-a) is in the Direct form: the verb has a direct theme sign *aa* and the core verbal agreement

(*n*) is triggered by what thematically looks like a subject (henceforth *the thematic subject*), which is 1st person. On the other hand, (1-b) takes the inverse form, where the verb is marked with the inverse theme sign *igw* and the verbal agreement (*n*) is triggered by what thematically looks like an object (henceforth, *the thematic object*), which is again 1st person.

- (1) a. n- waabm -aa
 1- see -DIR
 ‘I see him/her. (1→3)’
 b. n- waabm -igw
 1- see -INV
 ‘S/he sees me. (3→1)’ (Valentine, 2001, 271, Nishnaabemwin)

The choice between the Direct construction and the Inverse construction is considered to be made based on the relationship between the subject and the object regarding several factors including the person hierarchy (Béjar and Rezac, 2009), animacy (Dahlstrom, 1986; Hale, 1973) and topicality (Dahlstrom, 1986; Baker, 2003), which some previous works have claimed to be captured in a unified way with the notion of *empathy* (Oshima, 2007; Jacques and Antonov, 2014). That is, the Direct construction is used when the subject is more empathized with by the speaker than the object, and the Inverse construction is used when the object is more empathized with by the speaker than the subject. The ϕ -agreement pattern can be rephrased as follows: the verb shows agreement with the argument whose referent is more empathized with. The Direct form is used in (1-a) and the Inverse form is used in (1-b), because the first person referent (=the speaker himself / herself) is easier to empathize with than the third person referent for the speaker.

While previous studies on Direct / Inverse systems have often relied on the morphological person features of the argument DPs to derive the effect of person hierarchy, I argue that such an analysis does not straightforwardly extend to the Direct / Inverse

markings in the contexts where both the subject and the object are third person DPs (which I call *non-participant contexts*). I propose that the idea from Ch.2–3 that some semantic predicates choose their arguments via Agree can be applied to Direct / Inverse systems, taking a language called Japhug Rgyalrong (henceforth Japhug) as a case study. I show that this approach extends well to non-participant contexts.

Note that Direct / Inverse systems differ from Object Honorifics and benefactive auxiliaries in Japanese in involving overt morphological ϕ -agreement as we have seen in (1). Thus, while I have proposed in Ch.2–3 that the result of Agree is sent to LF to feed semantic predicates, I examine here how the result of Agree affects both PF and LF at the same time in Direct / Inverse systems.

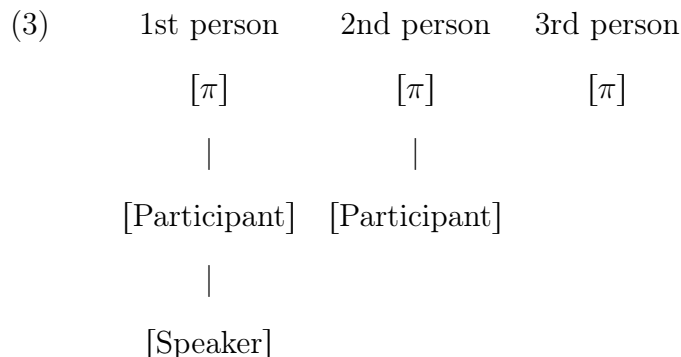
4.1.2 Empathy and Issues with Morpho-syntactic Approaches

A salient factor that affects the choice between Direct and Inverse constructions across languages is the person hierarchy. As I showed in Ch.3 as well, in Nishinaabemwin, the Direct construction is used when the subject is higher than the object on the hierarchy in (2), while the Inverse construction is used when the object is higher than the subject (Béjar and Rezac, 2009). Although there is some small variation in the exact hierarchy across languages, such effect of person hierarchy is a significant characteristic of Direct / Inverse systems cross-linguistically.

(2) Person hierarchy in Nishinaabemwin: $2 > 1 > 3$

Given this effect of person hierarchy, previous studies have often taken purely morpho-syntactic approaches to Direct / Inverse systems in general (Béjar and Rezac, 2009; Lochbihler, 2012; Oxford, 2019; Hammerly, 2020, a.o.). For example, as we briefly reviewed in Ch.3, Béjar and Rezac (2009) account for this phenomenon using Cyclic Agree over person features. They assume that person features can be decomposed as shown in (3). This means that there are entailment relationships among

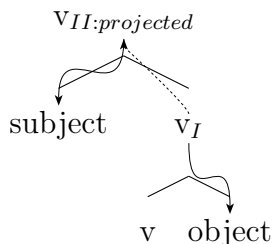
the feature specifications of each person: first person DPs have all the features 2nd persons have, and 2nd person DPs have all the features 3rd person DPs have.¹



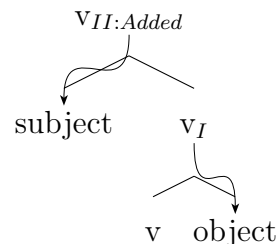
Based on this entailment relationships, Béjar and Rezac (2009) claim that, for a person probe, NPs with richer person features better value the probe. The probe first probes downward and gets valued by the object. However, the subject can sometimes better value the probe than the object. This is the case, for example, in the example in (1-a) above, where the subject is first person while the object is third person. In such cases, the probe projects to v_{II} and agrees with the subject as shown in (4-a). Béjar and Rezac (2009) claim that this projected probe on v_{II} gets realized as the Direct theme sign. On the other hand, when the object satisfies the probe better than the subject (as exemplified by (1-b)), the probe does not get projected and, instead, an additional distinct probe appears on v_{II} to license the person feature on the subject as the structure in (4-b) shows. For Béjar and Rezac (2009), this added probe is realized as an Inverse theme sign.

¹Béjar and Rezac (2009) argue that person feature decompositions can vary slightly across languages, resulting in the difference of the choice between the Direct and the Inverse constructions in $2 \rightarrow 1$ and $1 \rightarrow 2$, for example.

(4) a. Direct



b. Inverse



Béjar & Rezac's analysis only targets contexts where both DPs refer to Speech Act Participants (SAPs) (which I call *participant contexts*) and the contexts where one DP refers to a Speech Act Participant (SAP) and the other does not (which I call *mixed contexts*). However, the Direct / Inverse contrast appears in non-participant contexts (i.e. the contexts where neither DP refers to a SAP) as well. For example, the Oji-Cree examples in (5) show that, although both (5-a) and (5-b) have a 3rd person subject and a 3rd person object, (5-a) has a Direct theme sign *-aa* while (5-b) has an Inverse theme sign *iko*. As I briefly mentioned above, several factors including topicality and animacy, sometimes unified with the concept *empathy* (Oshima, 2007; Jacques and Antonov, 2014), affect the choice between Direct and Inverse in a non-participant context: the Direct form is used when the subject is more empathized with by the speaker than the object, while the Inverse form is used when the object is more empathized with than the subject.

- (5) a. Awaasihs -ak o- waapam -aa -waa -n mahkw -an
 child -PX.PL 3- see -DIR -3PL -obv bear -OBV
 'The children see the bear.'
- b. awaasihs -ak o-waapam -iko -waa -n mahk -an
 child -PX.PL 3-see -INV -3PL -OBV bear -OBV
 'The bear sees the children.' (Oxford, 2017, 3, Oji-Cree)

One way to capture this observation within a morpho-syntactic analysis of Direct / Inverse systems is to extend the representation of person with another kind of feature, as has been proposed by Lochbihler (2012) and Oxford (2019) among others. This

previous literature posits [proximate] as a kind of a person feature assigned to the most topical 3rd person in a certain domain (as well as to the participant pronouns) and extend the entailment relationships in (3) to those in (6). Extension of the Cyclic Agree analysis with the feature [proximate] would account for the Direct / Inverse contrast in non-participant contexts in the following way: if the object is a 3rd person without [proximate] and the subject is a 3rd person with [proximate], the structure looks like (4-a) and the sentence exhibits the Direct pattern. On the other hand, if the object has [proximate] instead of the subject, the sentence has the structure in (4-b) and shows the Inverse pattern. This way one can extend the feature-based morpho-syntactic analysis to the non-participant contexts.

(6)	1st person	2nd person	3rd proximate	3rd obviative
	$[\pi]$	$[\pi]$	$[\pi]$	$[\pi]$
	[Proximate]	[Proximate]	[Proximate]	
	[Participant]	[Participant]		
	[Speaker]			

Positing the feature [proximate] is not an entirely ad-hoc solution: there is what looks like a morphological exponent of the feature [proximate] in some languages. Some Algonquian languages have a system called *Obviation*, which often co-exists with Inverse system (Dahlstrom, 1986; Oxford, 2017). In a paradigm with obviation, when more than one non-coreferring 3rd person DP exists in a certain domain called the *obviation span*, one of the 3rd person DPs gets proximate marking, while the other(s) get obviative marking. The example from Oji-Cree in (5) above shows that, when there are two 3rd person DPs *Awaasihs* ‘child’ and *mahkw* ‘bear’, one of them,

awaasihs in this case, is marked with the proximate (plural) marking *-ak* while the other, *mahkw*, is marked with the obviative marker *-an*. The verbal agreement also reflects the obviative status of the argument DPs. The Oji-Cree example in (5) has an obviative marker *-n* on the verb as well, as a part of the agreement with the obviative-marked DP. Which DP gets proximate marking is decided referring to the similar factors as what we saw for Direct / Inverse systems, including animacy and topicality, and they have often been characterized in a unified manner as empathy (Dahlstrom, 1986; Oshima, 2007). That is, the 3rd person DP whose referent is most empathized with in the relevant span gets proximate marking, and the other 3rd person DPs are marked as obviative. Then these languages seem to have a morphological feature [proximate], the lack of which is realized as an obviative marker. Morpho-syntactic approaches to Direct / Inverse systems utilize this independently motivated feature to capture the Direct / Inverse contrast in non-participant.

However, there is evidence that, in languages with both obviation and Direct/Inverse systems, the Direct / Inverse contrast in non-participant contexts does not reduce to obviation. First, the Direct / Inverse contrast is observed even in the cases where both the subject and the object are obviative. In languages with obviation, it has often been noted that the obviation span can be larger than a clause: it is usually the case that, when there is only one 3rd person DP, the DP is marked as proximate as shown in (7). However, the sentence from Oji-Cree in (8) has obviative marking on *Tepit* ‘David’ conditioned by the presence of proximate DP *Menii* ‘Mary’, although they are in different clauses.

- (7) ni- waapam -aa awaasihs - ϕ
 1- see -DIR child -PX.SG
 ‘I see the child.PROX.’ (Oxford, 2017, 2, Oji-Cree)
- (8) [Ahpil Tepit -an kaa- takohshin -ini -c] Menii - ϕ kii- maacaa
 when David -OBV IC.PST- arrive -OBV -3 Mary -PX.SG PST- leave
 ‘When David.OBV arrived, Mary.PROX left.’ (Oxford, 2017, 3, Oji-Cree)

Such cross-clausal obviation can result in a situation where the subject and the object of the same clause are both obviative-marked. Crucially, such double-obviative clauses still show Direct / Inverse contrast that seems to be controlled by empathy. The examples in (9) are from Plains-Cree, another language that has obviation and a Direct / Inverse system. In (9-a), the matrix subject gets the proximate marking and all the 3rd person DPs inside the relative clause gets obviative marking. The relative clause subject (the man) and the relative clause object (his wife) are both marked obviative and the predicate *ka-nipaha-yit* ‘kill’ takes the Direct form. On the other hand, in (9-b), the verbal morphology shows that the subject of *wa-pame-w* ‘see’ is the only one which is proximate marked. The last predicate *e-ki-nipahikowit* ‘kill’ takes the Inverse form, even though its arguments, the woman’s husband and the Crow Indians, are both obviative-marked.² Examples with a similar pattern are reported in Ojibwe as well (Rhodes, 1990, (25)).

- (9) a. o·hi na·pe·wah ka-nipaha-yit owi·kima·kaniyiwah
 this.OBV man.OBV kill.OBV-OBV.[dir] OBV’s.wife.OBV
 itohtahe·w
 take.there.3-OBV
 ‘he_[prox] took to that place the man_[obv] who had killed his_[obv] wife_[obv].’
 (Plains Cree(Dahlstrom, 1986, 54))
- b. ki-tahtawe· wa-pame·w iskwe·wah e-h-wayawiyit, e-ki-nipahimiht
 presently see.3-OBV woman.OBV go.out.OBV be.killed.OBV
 ona·pe-miyiwah, e-ki-nipahikowit ka·hka·kiwace·na
 her.husband.OBV kill.OBV-OBV.[INV] Crow.Indian.OBV
 ‘Presently he saw a woman come out of her lodge, a certain woman whose
 husband had been killed; the Crow Indians had killed him.’
 (Plains Cree(Dahlstrom, 1986, 55))

These examples pose problems for the morpho-syntactic approach enriched with [proximate] features for two reasons. First, the morpho-syntactic approach with person representation in (6) does not straightforwardly expect the Direct / Inverse con-

²Enriching the entailment hierarchy in (6) with the [\pm animate] distinction among non-proximate DPs, as is proposed in Lochbihler (2012) or Hammerly (2020), does not help in these cases, as both obviative DPs refer to humans.

trast to appear in double obviative cases, given that the two DPs, both with obviative features, would satisfy the probe equally well. Second, the empathy effect is still visible in the examples in (9-b). According to Dahlstrom (1986), the relative clause predicate in (9-a) takes the Direct form because the man's wife is more peripheral than the man, as indicated by the use of possessives (what we will see later as the Descriptor Empathy Hierarchy). For (9-b), Dahlstrom (1986) mentions that the inverse form is used because the speaker is more sympathetic with the woman's husband than the Crow Indians. Given that the morpho-syntactic approach expanded with [proximate] attributes the empathy effect to the characteristics of assignment of the feature [proximate], it does not expect neither the Direct / Inverse contrast nor the existence of an empathy effect in the double obviative constructions.³

Another argument against deriving the Direct/Inverse contrast using the morphological feature [proximate] in non-participant contexts comes from Bliss (2005). Bliss studies Blackfoot, another Algonquian language with both obviation and a Direct/Inverse contrast. Bliss observes that obviation in Blackfoot is sensitive to morphological animacy, while the Direct/Inverse contrast is more sensitive to sentience than morphological animacy. This becomes obvious when one considers a class of

³Lochbihler(2012; p.38, fn.9) suggests that there can be a further featural distinction between obviative and *further obviative* in some languages. This idea is based on the Western Ojibwe example in (i), where a marker *-ini* appears when a 3rd person possessor does not corefer with the subject. This morpheme seems to mark a further obviative status of the possessee, conditioned by the presence of the proximate subject and the obviative possessor (Grafstein, 1984).

- (i) john o-gikeenim-aa-an Mary-an o-miseeh-**ini**
 John 3-know-DIR(NL)-OBV Mary-OBV 3-sister-F.OBV
 ‘John(prox) knows Mary’s(obv) sister (further.obv)’ (Grafstein, 1984)

This additional distinction might allow a morpho-syntactic approach to account for the data with two obviative DPs like (9) by assuming that such distinction is underlyingly present in languages that do not morphologically mark the distinction. In this regard, it is desirable to see what happens when the subject and the object are both further obviative DPs in Western Ojibwe, although I do not have such data at hand unfortunately: a morpho-syntactic approach expects that the Direct/Inverse distinction disappears in such cases.

Note that the extension of the feature system with further obviation still fails to capture the data like (10), discussed in the next paragraph.

nouns that are treated as syntactically animate but semantically non-sentient, including *áto'ahsim* 'sock', *issttoán* 'knife', *pokón* 'ball', *po'táá'tsis* 'stove'. In terms of obviation, these nouns are treated on a par with animate (and sentient) nouns. This creates a context where the thematic subject is an obviative-marked animate sentient noun while the thematic object is a proximate-marked animate insentient noun. If the Direct/Inverse contrast is derived referring to the morphological feature [proximate], then Inverse construction is expected. However, such a sentence appears in a Direct construction: in (10), the predicate *yiispaapiksist* 'throw' has an obviative animate thematic subject ('he') and the proximate inanimate thematic object ('ball'). In spite of that, the theme sign on the predicate *yiispaapiksist* is the Direct marker.

- (10) an-(w)a pokon-(w)a an-(y)i ot-a-(y)iispaapiksist-(y)ii maohksinaa
 DEM-PROX ball-PROX DEM-OBV OBV-DUR-throw-DIR be.red
 'The ball, he is bouncing it, it is red.'⁴ (Bliss, 2005, 65)

Bliss (2005) thus claims that the Direct/Inverse system is independent of obviation in Blackfoot and argues that sentience (or point of view) matters more for the Direct/Inverse construction, which is compatible with the idea that it is empathy that matters for the choice between Direct and Inverse constructions.

To summarize, although positing a feature [proximate] based on the morphological exponence of obviation seems to nicely extend the morpho-syntactic analyses to the Direct/Inverse contrast in non-participant contexts, there are pieces of evidence that suggest that the Direct/Inverse contrast is independent of proximate/obviative marking even in languages with obviation. This, in turn, suggests that morpho-syntactic approaches such as Cyclic Agree do not fully capture the behaviors of Direct/Inverse systems. I propose an alternative analysis for a Direct/Inverse construction, based on a case study of Japhug. More specifically, I extend the idea from Ch.2–3 of interpret-

⁴Bliss (2005) first glosses this sentence as 'The ball that he is bouncing is red' and notes that the gloss I used is the more accurate translation, pointing out that relativization is not involved (i.e. this is not an embedded verb and does not show a conjunct morphology).

ing the result of agreement to the Direct / Inverse system. I show that the behaviors of the Direct / Inverse constructions in Japhug can be explained by considering a semantic predicate on *v* that compares two DPs on the empathy hierarchy, and the two DPs are found via Agree by the probes on the *v* head. While Japhug is the focus of this chapter because its morphology differentiates the current proposal from salient alternatives, I assume that the current account is extendable to (at least some of) the other languages with Direct/Inverse systems.

4.2 The Direct / Inverse system in Japhug

4.2.1 Direct/ Inverse Morphology

Japhug is a Sino-Tibetan language spoken in Mbarkhams County, Rngaba Prefecture, Sichuan Province, China (Jacques, 2010).⁵ Similarly to other languages as described above, Japhug distinguishes Direct / Inverse constructions by theme signs and alternation of the controller of the verbal agreement. In Japhug, Direct / Inverse contrast appears in non-participant (3rd person→3rd person) and mixed contexts (3→SAP / SAP→3), as shown in (11)–(13). In mixed contexts ((11)–(12)), the person hierarchy affects the choice between Direct / Inverse constructions, again similarly to other languages: the Direct form is used in SAP→3 contexts and the Inverse form is used in 3→SAP contexts. The Direct form can be taken to be marked with a phonologically null Direct theme sign as can be seen in (11-a)–(13-a), while the Inverse form is marked with the Inverse theme sign *wɣ*, which is italicized in (11-b)–(13-b).⁶⁷ While

⁵The Japhug data in this dissertation come from Jacques (2010, 2018, 2021) and the references cited therein.

⁶One might notice that the past tense marker *-t* appears only in the Direct sentences in (11)–(12). In Section 4.3.1, I propose that the Direct sentences include *v_{Dir}*. I consider the past tense marker *-t* is an allomorph of *T_{past}* conditioned by the presence of *v_{Dir}*.

⁷While the Direct marker is generally phonologically null, note that (13-a) contains a morpheme *a-*. Jacques (2010) notes that this morpheme appears only in Direct forms in Aorist tense. I consider this to be the allomorph of the Direct theme sign conditioned by the presence of the Aorist tense morpheme, although I do not examine this allomorph in the rest of the discussion.

the theme signs do not appear independently in participant contexts as shown in (14), I consider that the Direct theme sign in 1→2 contexts and the Inverse theme sign in 2→1 contexts are portmanteaued with the person agreement (*ta* in 1→2 contexts and *kuu* in 2→1 contexts).⁸ I call the forms with the Inverse theme sign *Inverse forms* and the forms without the Inverse theme sign *Direct forms* in the rest of the discussion.

- (11) a. Direct form / 1→3
 puu- mtó -t -a
 AOR- see -PST -1SG
 ‘I saw him/her/it.’
 b. Inverse form / 3→1
 puu- wy- mtó -a
 AOR- INV- see -1SG
 ‘He/she/it saw me.’
 (Jacques, 2010, 129)
- (12) a. Direct form / 2→3
 puu- **tuu**- mtó -t
 AOR- 2- see -PST
 ‘You saw him/her/it.’
 b. Inverse form / 3→2
 puu- **tuu**- wy- mto
 AOR- 2- INV- see
 ‘He/she/it saw you.’
 (Jacques, 2010, 129)
- (13) a. Direct form / 3→3
 ɛdyrzi kuu ɭamu puu-
 Rdorje ERG Lhamo AOR-
 a- mto
 3SG>3- see
 ‘Rdorje saw Lhamo.’
 b. Inverse form / 3→3
 ɭamu ɛdyrzi kuu puu-
 Lhamo Rdorje ERG AOR-
 wy- mto
 INV- see:3SG>3
 ‘Lhamo was seen by Rdorje.’
 (Jacques, 2010, 129-130)

⁸Such a view is in line with the conjecture by Jacques (2010) that the *a* in the agreement prefix of 1→2 context *ta*- historically derives from the Direct theme sign *a* that appears in Aorist tense (see also fn.7). (But see Jacques (2018) for an idea that this *a*- derives from an agentless passive marker.) Additionally, Jacques (2018) notes that, in languages related to Japhug (Tshodbun, Zbu, Situ), 2→1 marking involves the morpheme *kə*, adjacently followed by an inverse marker (*o* in Tshodbun / *w* in Zbu and Situ). It seems plausible to consider that *kə* and the inverse marker *wy* diachronically fused into the 2→1 marker *kuu* in Japhug.

- (14) a. 1→2
 tɕe azo tu-**ta**-fsraŋ
 LNK 1sg IPFV-1→2-protect
 ra tɕe,
 be.needed:FACT LNK
 ‘I have to save you.’
- b. 2→1
 wortɕ^h i wojɣr zo
 please please EMPH
 tu-**kuu**-qur-i
 IPFV-2→1-help-1PL
 ra
 be.needed:FACT
 ‘Please, help us.’

(Jacques, 2021, 551)

The ϕ -agreement interacts with the Direct/Inverse theme signs. In (12), for example, the verb shows agreement (boldfaced) with the thematic subject (the seer in these examples) in the Direct forms, while the verb shows agreement with the thematic object (the one who is seen) in the Inverse forms. The specific morphological agreement for each context is summarized in (15) and the featural content of each morpheme is summarized in (16).

- (15) Transitive verb forms in Japhug (Jacques, 2010, 134)

Patient										
	1s	1d	1p	2s	2d	2p	3s	3d	3p	
Agent	1s				ta-R	ta-R-ndzi	ta-R-nuu	R-a	R-a-ndzi	R-a-nuu
	1d							R-tei		
	1p							R-i		
	2s	kuu-R-a	kuu-R-tei	kuu-R-i				tuu-R		
	2d	kuu-R-a-ndzi						tuu-R-ndzi		
	2p	kuu-R-a-nuu						tuu-R-nuu		
	3s	wɣ-R-a	wɣ-R- tei	wɣ-R-i	tuu-wɣ-R	tuu-wɣ-R-ndzi	tuu-wɣ-R-nuu	R		
	3d	wɣ-R-a-ndzi						R-ndzi		
	3p	wɣ-R-a-nuu						R-nuu		
								wɣ-R	wɣ-R-ndzi	wɣ-R-nuu

(16) Japhug agreement morpheme list

Form	Function
-a	1sg
-tɕi	1du
-i	1pl
tur-	2
-ndzi	2/3du
-nuu	2/3pl
ta-	1>2 (Dir)
kuu-	2>1 (Inv)
wɣ-	inverse

(Jacques, 2010, 138; slightly modified for 1>2 and 2>1)

These tables show that the person (but not number) agreement morphemes (*tur-*, *ta-* and *kuu-*) precede the root, while the agreement morphemes that encode number information (*-a*, *tɕi*, *-i*, *-ndzi* and *-nuu*) follow the root. In some contexts, both the thematic subject and the thematic object control the agreement, while only one does in the other contexts. More specifically, in participant contexts, both DPs trigger the agreement in the form of portmanteau agreement *ta* (1→2) or *kuu* (2→1). In the 1s→3 and 3→1s contexts, the predicate shows number agreement with both the 1st person DP (*a*) and the 3rd person DP (*-∅ / -ndzi / -nuu*). Although only number agreements are visible in these contexts, I simply assume that these contexts show agreement with both arguments in terms of both person and number, with the person agreement being phonologically null for both 1st person and 3rd person.

In the rest of the contexts, the thematic subject controls the agreement in the Direct forms and the thematic object controls the agreement in the Inverse forms. As we have seen in (12), the Direct form is used in a 2→3 context while the Inverse form is used in a 3→2 context and it is consistently the 2nd person DP that controls the agreement in these contexts, whether it is the thematic subject or the thematic object. The 2nd person agreement is overtly realized as the prefix *tur-*. Note that not only

the person agreement but also the number agreement following the root alternates depending on the Direct / Inverse construction. See the 2d→3p (Dir) case and the 3p→2d (Inv) case, for example. In both cases, the predicate shows the dual marker (*-ndzi*), not the plural marker (*-nuu*), expressing the number information on the subject in the Direct form (2d→3p) and that on the object in the Inverse form (3p→2d). For 3→3 cases, inverse marking can but does not have to be present. Similarly to the 2→3 and 3→2 cases, the controller of the number agreement correlates with the presence of the inverse marker: when the inverse marker is present, the thematic object decides the number agreement, while the thematic subject does when it is absent. Thus, for example, in 3d→3p appears with the dual marking (*ndzi*) when the inverse marker is absent, but with the plural marking (*nuu*) when the inverse marker is present.

The observations so far seem to indicate that the choice between the Direct form and the Inverse form is made based on the person features of the thematic subject and the thematic object, at least in the participant and mixed contexts. However, the Direct/Inverse contrast in non-participant contexts suggest that the person features are not the sole factor that affects the choice between the Direct/Inverse forms. The Direct/Inverse contrast appears also in contexts where both the thematic subject and the thematic object are 3rd person and person features alone cannot determine which forms are used in those cases. In the next section, I review the data that suggest that it is the empathy relationship that decides which form to be used in all the contexts.

4.2.2 Empathy effect in Japhug

Jacques (2010, 2021) reports several factors that determine the use of Direct or Inverse form. In this section, I review them and show that they either support or are compatible with the hypothesis that the empathy determines the choice between the Direct form and the Inverse form in Japhug. More specifically, I show that the Inverse form is used when the referent of the thematic object is more empathized with than

the referent of the thematic subject, while the Direct form is used when the referent of the thematic subject is more empathized with than the referent of the thematic object or they are equally empathized with.

Before going into the detailed examination of the Japhug Direct / Inverse system, however, I make clear the assumptions about the factors that affect empathy. Kuno (1987) defines empathy and represents the degree of empathy from the speaker as shown in (17), as I also mentioned in Ch.3. Following Kuno and Kaburaki (1977), Kuno (1987) and Oshima (2007), I assume that there are several factors that affect the empathy relationship between two entities as shown in (18)–(22).⁹ Note that, while Kuno (1987) proposes (18) based on the behaviors of Japanese and English, it has been noted that the Speaker Empathy Hierarchy can slightly differ across languages (Oshima, 2007).

- (17) *Empathy*: Empathy is the speaker's identification, which may vary in degree, with a person/thing that participates in the event or state that (s)he describes in a sentence.

Degree of Empathy: The degree of the speaker's empathy with x, $E(x)$, ranges from 0 to 1, with $E(x) = 1$ signifying his/her total identification with x, and $E(x) = 0$ a total lack of identification. (Kuno, 1987, 206)

- (18) *Speech-Act Participant Empathy Hierarchy* (Kuno, 1987, 212)

The speaker cannot empathize with someone else more than with himself.
 $E(\text{speaker}) > E(\text{others})$

- (19) Humanness Hierarchy (Kuno and Kaburaki, 1977, 653)

⁹Oshima (2007) formalizes the humanness hierarchy in (19) in a slightly different way from Kuno and Kaburaki (1977) as shown in (i).

- (i) *Animacy Empathy Hierarchy* (Oshima, 2007, (16))
 It is easier for the speaker to empathize with animate objects than with inanimate objects.
 $E(\text{animate}) > E(\text{inanimate})$

Human > Animate Nonhuman > Thing

- (20) Topic Empathy Hierarchy (Kuno, 1987, 210)

Given an event or state that involves A and B such that A is coreferential with the topic of the present discourse and B is not, it is easier for the speaker to empathize with A than with B.

$E(\text{discourse-topic}) \geq E(\text{nontopic})$

- (21) Surface Structure Empathy Hierarchy (Kuno, 1987, 211)

It is easier for the speaker to empathize with the referent of the subject than with the referents of other NPs in the sentence.

$E(\text{subject}) > E(\text{other NPs})$

- (22) Descriptor Empathy Hierarchy (Kuno, 1987, 207)

Given descriptor x (e.g., John) and another descriptor f(x) (e.g., John's brother), the speaker's empathy with x is greater than with f(x).

$E(x) > E(f(x))$

Of course, I do not consider that these are the sole factors that affect empathy hierarchy. I imagine that other numerous factors, such as physical / psychological closeness and social status, affect the empathy relationship. I consider the factors in (18)–(22) to be the ones that are relatively solid and easy to linguistically characterize among all the potential factors.

I further assume the view of empathy in (23) proposed by Oshima (2007).

- (23) Linguistic empathy is a universal notion. Empathy phenomena in different languages are controlled by largely overlapping sets of factors. When there is a conflict among factors to determine empathy relations, the resolution may vary cross-linguistically. (Oshima, 2007, (20b))

I thus consider that, if these factors play important roles in determining whether to use the Direct or Inverse construction in Japhug, we can conclude that the choice between the Direct/Inverse constructions is determined based on empathy relationship. However, all of these factors are not necessarily expected to be decisive, as there can be conflicts among these factors (as well as other factors) which are resolved by a language-specific strategy according to (23). Note that, under this view, the strength of the effect of each factor in Japhug does not have to be the same as that in Japanese we saw in Ch.3, as there can be cross-linguistic differences in the resolutional strategies.

4.2.2.1 Person information

First of all, as already seen above, the Direct form is used for SAP→3 cases, and the Inverse form is used for 3→SAP cases, and the SAP arguments control the agreement on the verb (although the 3rd person argument additionally triggers agreement in 3→1 and 1→3 cases as shown above). Given that no exceptions are noted in Jacques (2010, 2021), I consider person information to be a strong determinant of the Direct/Inverse contrast in Japhug.

As we saw above in (18), person information is a factor that is known to affect empathy relationship. Recall that Speech-Act Participant Empathy Hierarchy slightly varies across languages (Oshima, 2007). I assume that the variant of Speech-Act Participant Empathy Hierarchy Japhug uses is the one in (24).

(24) Japhug version of Speech-Act Participant Empathy Hierarchy:

$$E(\text{speaker}) > E(\text{addressee}) > E(\text{others})$$

Given this version of Speech-Act Participant Empathy Hierarchy, the idea that empathy determines the Direct / Inverse choice naturally accounts for the effect of person information on the Direct / Inverse choice. When the thematic subject is 1st person

distinction between human and nonhuman animate is as strong.

4.2.2.3 Topicality / Saliency

Jacques (2010) examines a series of Japhug texts and, using measures of topicality from Givón (1983) and Dryer (1994) (referential distance, persistence and overttness), shows that the thematic object of an Inverse clause tends to be more topical than the thematic subject, while the thematic subject is more topical than the thematic object in a Direct clause. Given the Topic Empathy Hierarchy in (20), this observation also supports the view that the choice between the Direct / Inverse constructions refers to the idea of empathy.

Furthermore, Jacques (2021) claims that the saliency of the thematic subject / the thematic object affects the choice between the Direct and the Inverse construction. Jacques (2021) raises the example in (26), where the inverse marker appears on *tsum* ‘take’ and argues that this is because the thematic object of this verb, a human boy, is the main character of this story.

- (26) *stu* *kuu-xtɕi* *nuu* *kuu* ‘...’ *to-ti* *tɕendɣre* *gro* *numuu*
 most SBJ:PCP-be.small DEM ERG IFR-say LNK pigeon DEM
 uu-ŋga *nuu* *to-nuu-ŋga* *q^h e*, *tɕe* *nuu* *uu-mke*
 3SG.POSS-clothes TOP IFR-AUTO-wear LNK LNK DEM 3SG.POSS-neck

In Japhug, the inverse marker *wy* is also used as one of the verbal markings in transitive sentences with generic subjects. This marking does not care about the animacy of the object, as shown in (i).

- (i) *ɣʃu* *nuu* *kunguu-rtɕɣy* *mbro* *ri*, *kɣ-sɣtɕ* *u* *khuu* *tɕe* *tɣtɕ* *u*
 tower DEM nine-stairs be.high:FACT LNK INF-illuminate be.possible:FACT LNK lamp
 tú-wɣ-zwɣɾ *tɕe* *sɣmtɔ*
 IPFV-INV-light.up LNK be.visible:FACT
 ‘Even if the watchtower is nine stairs high, it can be illuminated with a lamp, that is, when
 people light up a lamp, it is visible (inside).’ (Jacques, 2018, 408)

Jacques (2018) conjectures that this use of *wy* derives from the inverse marking on sentences with generic subjects, given that generic subjects are less topical. Although *wy* in (i) seems to be grammaticalized as a generic marker from a synchronic point of view, it might have been the case at some point in the history that the sentences with the generic animate subject and the specific inanimate object was marked with a true Inverse marker, with the effect of topicality overriding the effect of humanness hierarchy.

ko-rqoʁ q^he tɕendɤre tó-**wy-tsum** to-nuquambuumbjom q^he
 IFR-hug LNK LNK IFR-INV-take.away IFR:UP-fly LNK
 ‘The smallest [daughter]_i said ‘...’, she_i wore the pigeon skin, he_j hugged her_i
 neck, and she_i took him_j and flew away [with him].’ (Jacques, 2021, 570)

Given that the main character of the story is most likely to be one of the most frequent and persistent referent in the entire text, this pattern also suggests that the topicality contributes to the choice of the choice between the Direct / Inverse constructions.

4.2.2.4 Possessives

Jacques (2021) observes that there is a strong tendency for the inverse form to be used when the thematic subject is a possessed noun and the thematic object is its possessor as shown in (27). Given the Descriptor Empathy Hierarchy in (22) proposed by Kuno (1987), this tendency also shows that the empathy affects the choice of inverse marking.¹¹

- (27) a. tɕe u-pi ɓnuuz numi kumɤ
 LNK 3SG.POSS-elder.sibling two DEM:DU also
 mu-pjɣ-**wy-suɣxɤl**
 NEG-IFR-INV-recognize
 ‘Even her_i two elder sisters did not recognize her.’ (Jacques, 2021, 569)¹²

¹¹Note that, according to Jacques (2021), the possessive relationship does not decisively determine the Direct/Inverse construction in Japhug as shown in (i), where the Inverse markers are absent on the predicates where the thematic subject refers to the mother of the thematic object.

- (i) tɕ^h eme wuma zo ku-pe ci pu-ŋu q^h e, u-mu
 girl really EMPH SBJ:PCP-be.good INDEF PST.IPFV-be LNK 3SG.POSS-mother
 u-wa ni ku pu-z-nyja-ndzi q^h e
 3SG.POSS-father DU ERG SENS-CAUS-be.regrettable-DU LNK
 mu-ta-suyɛ-ndzi,
 NEG-AOR:3→3’-CAUS-comeII-DU
 ‘[His wife]_i was a very nice girl, her_i parents were unwilling to part with her_i and did not let
 her_i come.’ (Jacques, 2021, 569)

This is compatible with the view in (23) that there can be conflict among factors in (18)–(22) and each factor does not have to be decisive.

¹²“INV” in the gloss (the second line) of this example is missing in Jacques (2021). I assume that INV is intended to be there in this example, given that (i) the morpheme *wy* exists and remains unglossed in this example and (ii) this sentence is raised as an example of inverse sentences by

- b. tɕendɿre rɕɿlpɯ ɣu u-rzaβ nɿ-k-ɿβzu-ci tɕe, tɕe
 LNK king GEN 3SG.POSS-wife IFR-PEG-become-PEG LNK LNK
 u-pi ni ku wuma zo, nɿkinu,
 3SG.POSS-elder.sibling DU ERG really EMPH FILLER
 pɕɿ'-wɿ-nɿzɿmɿɿn
 IFR.IPFV-INV-envy
 'She became the queen, and her_i sisters were envious of her_i.'

(Jacques, 2021, 569)

4.2.2.5 Trans-clausal coreference

Jacques (2010) reports the tendency that the Inverse marker is likely to appear when the thematic object of a sentence is the subject (either a transitive subject or an intransitive subject) of the previous sentence. This tendency is compatible both with the Surface Structure Empathy Hierarchy in (21) above, which says that the subject referent is more likely to be empathized than the referent of other DPs, and with the Topic Empathy Hierarchy, under the view that the topic tends to be encoded as a subject (Givón, 1983, a.o.).

Overall, the factors that are known to affect empathy relationships cross-linguistically are reported to affect the choice between the Direct / Inverse constructions in Japhug. This gives enough support to the view that the empathy determines the choice between the Direct/Inverse constructions. I thus make the generalizations in (28).

(28) The empathy condition on the Direct / Inverse forms

- a. The Direct form is used when $E(\text{thematic subject}) \geq E(\text{thematic object})$
- b. The Inverse form is used when $E(\text{thematic object}) > E(\text{thematic subject})$

Now the question is how specifically the grammar encodes the empathy condition described in (28). We have seen that an approach to attribute the empathy condition to a feature [proximate] fails. Recall that, in Ch.3, I considered that the Japanese

Jacques (2021).

constructions in Japhug.

4.2.3 The involvement of Agree

So far, we have seen that the Japhug Direct / Inverse contrast involves an empathy relationship that can be semantically represented following Oshima (2006, 2007). However, there are also syntactic aspects of Direct / Inverse constructions. More specifically, I show that Direct / Inverse constructions involve the syntactic operation Agree in the choice of the participants in the empathy comparison. This claim is not surprising given that Direct / Inverse constructions involve morphological ϕ -agreement with either one or both of the thematic subject and the thematic object. In this section, I further show that, when there is more than one object, the distribution of the object that matters for the Direct/Inverse constructions can be accounted for if the Direct / Inverse construction involves Agree.

First, Japhug has a class of ditransitive verbs, called *secundative verbs* by Jacques (2021), that mark the recipient argument, as well as the theme argument, with the phonologically null absolutive case. One of those verbs is *mbi* ‘give’ as shown in (30). Notice that the recipient argument *u-bi* ‘his younger brother’ here is marked with a phonologically null absolutive case.

- (30) *u-bi* *tumgo* *ɲɛ-mbi*
 3sg.POSS-younger.sibling food IFR-give
 ‘He gave food to his younger brother.’ (Jacques, 2021, 1190)

Crucially, for the sentences with a secundative verb, it is the recipient argument, not the theme argument, that affects the form of the predicate (Jacques, 2021). In (31), with a 3rd person theme and a 2nd person recipient, *mbi* shows 2nd person agreement, which appears in 3→2 sentences, instead of the null 3rd person agreement, which appears in 3→3 sentences. The empathy relationship also cares about the subject

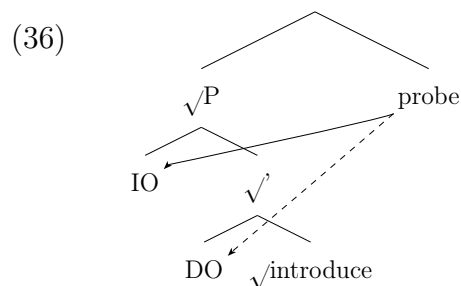
‘You have to give me your youngest daughter.’

Note that the prioritization of the recipient over the theme is a common feature across object ϕ -agreement, and this prominence of recipient argument in agreement pattern follows from the intervention condition on Agree as defined in (34)–(35) as we saw in Ch.2–3: under the assumption that the recipient is higher than the theme argument and thus intervenes between the probe and the theme, as shown in the structure in (36). What is crucial here is that the choice of the DPs which participate in determining between the Direct / Inverse forms, that is the empathy comparison, also prioritizes a recipient.

(34) **Intervention condition:** There is no YP such that YP comes between XP and H and YP has another instance of F.

(35) A comes between B and C, if and only if

- a. B c-commands A and, for all X such that X dominates A, X dominates C and the reverse is not true, or
- b. C c-commands A and, for all X such that X dominates A, X dominates B and the reverse is not true



One might still suspect that it is the DP with a recipient theta-role that matters here, instead of the structural status of being the highest argument. However, there is empirical evidence that it is not about the recipient theta-role itself that determines the empathy effect in Japhug. Japhug has another set of ditransitive predicates which

are called *indirective* verbs by Jacques (2021). These predicates overtly case-mark the recipient argument, in contrast with secundative verbs, which mark both objects with null absolutive case. For example, the verb *k^ho* ‘give’ marks the recipient argument with a genitive case marker, as shown in (37).

- (37) a-wa ku, *turme yuu* u-rzaß
 1SG.POSS-father ERG person GEN 3SG.POSS-3SG.POSS-wife
 nuu-wy-k^ho-a cti nɣ
 PFV-INV-give-1SG be.AFF:FACT SFP
 ‘My father has offered me in marriage to someone.’ (Jacques, 2021, 581)

Crucially, the genitive-marked recipient argument is ignored by the Direct/Inverse system (Jacques, 2021). For example, in (37), with the theme being the 1st person and the recipient being the third person, the predicate shows the 3→1 agreement form instead of 3→3 agreement, and it takes the Inverse marker. This supports the view that it is the theme argument, not the recipient argument, that is compared with the subject on the empathy hierarchy in this example. The Inverse marking in (37) would not be expected if it were the unknown recipient that is compared in terms of empathy with ‘my father’. Similarly, in (38), where the recipient is 1st person and the patient is 3rd person, the predicate takes 2→3 form instead of 2→1 form.

- (38) zuuy a-yuu-thu-**tuu-khym** ra
 1SG.GEN IRR-CIS-IRR:DOWNSTREAM-2-give[3] NPST:must
 ‘You will then have to give it to me.’ (Jacques, 2010, 145)

This pattern is expected under the current view that Agree selects the DPs that participate in the empathy comparison, given that some languages treat inherently case-marked DPs as inactive for Agree.¹⁴ On the other hand, this is not expected

¹⁴It has been considered that such inherently case marked DPs would trigger a defective intervention effect and prevent the agreement between the probe and elements lower than the case marked DPs (Chomsky, 2000). The existence of defective intervention, however, has been put in doubt more recently (Bobaljik, 2008; Bruening, 2014). Another possibility is that the indirect verbs have different structure from the secundative verbs and a oblique goal of an indirect verb is generated

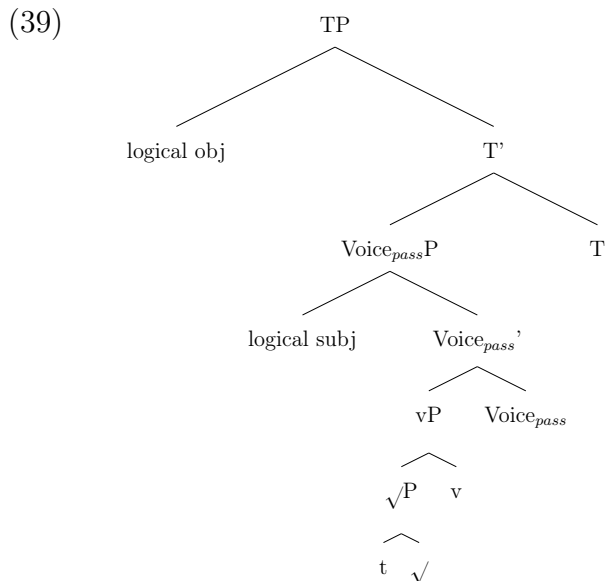
under the view that Inverse marking cares about the thematic recipient independently of its visibility for agreeing probes. Such a view would expect that the empathy comparison always holds between the agent and the recipient.

The observations in this section show that the thematic object that participates in the empathy comparison is the structurally highest one that is accessible to the probe. Along with the morphological ϕ -agreement that correlates with the Direct/Inverse marking, this suggests that Agree is involved in the derivation of Direct / Inverse constructions in Japhug. But how can these syntactic aspects be reconciled with the idea from Section 4.2.2 that the Direct / Inverse constructions semantically compare two DPs on empathy hierarchy? We saw in Section 4.1.2 that the approach where one reduces the empathy effect to the semantics of [proximate] feature is not plausible given the behavior of Direct/Inverse marking in languages that have obviation. In Section 4.3, I claim that the proposal from Ch.2–3 can be applied to Direct/Inverse constructions in Japhug to capture the empathy effect and the syntactic aspect of these constructions.

4.2.4 What the Japhug Inverse construction is not

Before going into a detailed analysis of the Direct/Inverse construction, I clarify what the Japhug Inverse construction is not. One might think that the Inverse construction is like a passive without demotion of the agent into an adjunct. Under such a view, the Inverse construction is derived by an A-movement of the thematic object, instead of the thematic subject, into Spec TP position, as shown in the hypothetical structure in (39). The verbal agreement is then the realization of the agreement on T, which agrees with what is in its specifier.

lower than the theme. I do not explore these possibilities any further here.



Such an analysis is in fact proposed by Bruening (2001) for Passamaquoddy and Baker (2003) for Mapudungun. Under this passive-without-demotion analysis, the syntactic and the semantic component do not explicitly encode empathy effect. But, as Bruening (2001) points out, one can still expect an epiphenomenal discourse effect triggered by the promotion of the object, similarly to passive cases; passive constructions are often used when the thematic object is prominent, topical or empathetic. Thus, the empathy effect follows even without explicit encoding in the grammar.

However, there are two reasons to think that the passive-without-demotion analysis is not applicable to Japhug. First, Japhug exhibits overt case marking. The case marking in Japhug generally follows ergative / absolutive alignment. What is crucial here is that it is consistently the thematic subject that is marked with the ergative case, whether the predicate is in Direct or Inverse form. For example, in (40), it is always the seer *ɸdɤrzi* ‘Rdorje’, that is marked with the ergative case marker *ku*. The thematic object, on the other hand, is marked with the phonologically null absolutive case, both in (40-a) and (40-b). Thus, as long as the Japhug ergative case is a structural one, which is assigned to the DP that c-commands another DP in the same domain (Baker and Bobaljik, 2017), this consistent ergative marking on the thematic

subject suggests that it is consistently the thematic subject that moves into the Spec TP position both in the Direct form and in the Inverse form. That is, the passive-like movement of the thematic object into a position above the thematic subject does not occur in the Inverse form.

- (40) a. $\text{ʁdʏrzi} \text{ ku } \text{ɬamu} \text{ pu-a-mto}$
 Rdorje ERG Lhamo AOR-3SG>3-see
 ‘Rdorje saw Lhamo.’
- b. $\text{ɬamu} \text{ ʁdʏrzi} \text{ ku } \text{pú-wy-mto}$
 Lhamo Rdorje ERG AOR-INV-see:3SG>3
 ‘Lhamo was seen by Rdorje.’ (Jacques, 2010, 129-130)

Then the question is whether the ergative marking in Japhug is truly a structural one that comes from c-commanding another DP in the same domain (Baker and Bobaljik, 2017), not an inherent one that goes with the DPs with agentive theta role. The data in (41)–(42) show that the ergative case marking behaves as a structural one in Japhug. First, (41) shows that the ergative marking is conditioned by the transitivity of the structure and does not occur on the intransitive subject even if the subject has an agent theta-role.¹⁵ This is the hallmark of the structural ergative marking according to Baker and Bobaljik (2017). Furthermore, (42) shows that the ergative marking appears on a transitive subject, even if the subject does not have an agentive theta-role. This also suggests that the ergative case marking in Japhug is not an inherent one.¹⁶

¹⁵Jacques (2021) notes that an ergative case marker can appear on the subject of semi-transitive verbs, which shows intransitive morphology but can take a semi-object. I consider this to further support the idea that the condition for ergative case assignment is the c-command of another DP.

¹⁶Another characteristic of the ergative case marker in Japhug is that it becomes optional on the 1st person / 2nd person DPs (Jacques, 2021). For example, the ergative marking does not occur in (i). I consider the optionality of ergative case on SAP DPs as a morphological effect.

- (i) $\text{maʁ} \quad \text{nɣ}, \text{ azo} \text{ tɣ-mɔo-t-a}, \quad \text{ kuki} \quad \text{ ku } \text{tɕi} \text{ mɣ-βze}$
 not.be:FACT SFP 1SG PFV-prepare-PST:TR-1SG DEM.PROX ERG also NEG-MAKE[III]:FACT
 rca!
 SFP
 ‘No, it is I who prepared (our lunch), she does not do it’ (Jacques, 2021, 305)

- (41) a. *nɣki tɣ-rjit nuu mɣsɣmdɣla zo to-ɲke*
 DEM INDEF.POSS-child DEM in.advance-EMPH IFR-walk
 ‘This child started walking early.’ (Jacques, 2021, 805)
- b. *tɕ^heme ci pu-taɁ ɲu-ɲ-u*
 girl INDEF PST.IPFV-weave SENS-be
 ‘A girl was weaving.’ (Jacques, 2021, 588)
- c. *tɕe uzo nuu ɲɣ-nu-p^hɣo matɕi tɕe, numaɁɲɣ ɣú-ndza*
 LNK 3SG DEM IFR-AUTO-flee LNK LNK otherwise INV-eat:FACT
pjɣ-ɲu
 IFR-be
 ‘(The rabbit), he had fled, otherwise he would have been eaten.’
 (Jacques, 2021, 686)
- (42) a. *ndzi-julco ra ku wuma pjɣ-wɣ-ɲsma-ndzi*
 3DU.POSS-neighbour PL ERG really IFR-INV-envy-DU
 ‘Their neighbours envied the two of them.’ (Jacques, 2021, 549)
- b. *numu rɣlpu u-tɕu nuu ku a-pú-wɣ-nu-rga-a*
 DEM king 3SG.POSS-son DEM ERG IRR-IPFV-INV-APPL-like-1SG
ra
 have.to:FACT
 ‘May the prince (the king’s son) love me!’ (Jacques, 2021, 862)

Thus, the consistent ergative marking on the thematic subject across Direct / Inverse contrast shows that the thematic object remains low, indicating that the passive-without-demotion analysis is not applicable to the Japhug inverse construction.

Second, the non-demotive passive analysis does not straightforwardly derive the position of the agreement morpheme either. The example in (43) shows that the 2nd person agreement in 3→2 or 2→3 contexts (boldfaced) appears closer to the root than the negative or aspectual morphemes. Under the non-demotive passive analysis, it is T that bears the 2nd person agreement, as the 2nd person DP is considered to reside in Spec TP. Assuming that the Neg head and the Asp head occurs in between the v and the T head, following the Mirror Principle (Baker, 1985), the non-demotive passive analysis expects that the 2nd person agreement morpheme should appear in

a position farther from the verb than the negative and the aspectual morphemes, contrary to the fact.

- (43) qapar kuɪ nɣzo a- mɣ- yu- tɣ- **túu-** wɣ- ndza
 dhole ERG 2SG IRR- NEG- CICLOC- PFV- 2- INV- eat
 ‘(Let us hope that) the dhole will not come to eat you.’ (Jacques, 2021, 473)

A similar point can be made with $3 \rightarrow 1s$ and $1s \rightarrow 3$ cases as well. Recall that, in $3 \rightarrow 1s$ and $1s \rightarrow 3$ cases, the predicate shows morphological agreement with both DPs as shown in (44)–(45).

- (44) a. $1s \rightarrow 3s$: Root-a (‘Root-1s’)
 b. $1s \rightarrow 3d$: Root-a-ndzi (‘Root-1s-3d’)
 c. $1s \rightarrow 3p$: Root-a-nuɪ (‘Root-1s-3p’)
- (45) a. $3s \rightarrow 1s$: wɣ-Root-a (‘Root-1s’)
 b. $3d \rightarrow 1s$: wɣ-Root-a-ndzi (‘Root-1s-3d’)
 c. $3p \rightarrow 1p$: wɣ-Root-a-nuɪ (‘Root-1s-3p’)

Under the non-demotive passive analysis, in these cases, the 1st person singular DP should reside in Spec TP and the 3rd person DP should remain inside the verbal phrase. Thus, T should agree with 1st person singular DP, while it should be a head inside the verbal phase that agrees with the third person DP. However, the first person singular morphology *-a* appears closer to the verbal predicate than the 3rd person number morphology (*ndzi*, *nuɪ*). If the first person singular morphology reflects the agreement with T, following the Mirror Principle, it is expected to appear in a position farther from the verb than the 3rd person number agreement on a head inside the verbal phase.

It should be noted that the Mirror Principle is not always obeyed by the agreement morphemes (Cinque, 1999). It is, however, not completely ignored either, as the

example from Baker (1985) shows. In the example from Chamorro in (46-a), the plural agreement *man/fan* appears outside of the passive morpheme when it agrees with the surface subject. However, in (46-b), where the plural agreement is with the causee (the surface object), the plural agreement appears inside the causative morpheme.

- (46) a. Para#u#fan-s-in-aolak i famagu'un gi as tata-n-niha
 IRR-3PS-PL-PASS-spank the children OBL father-their
 'The children are going to be spanked by their father.'
- b. Hu#na'-fan-otchu siha
 1SS-CAUS-PL-eat them
 'I made them eat.' (Baker, 1985, 374, Chamorro)

This supports the view that agreement morphemes also follow the Mirror Principle to some extent. Thus, the agreement position in Japhug in (43)–(45) at least shows some evidence against the non-demotive passive analysis, in combination with other pieces of evidence.

One possible argument for the passive-without-demotion view is the word order. The linear order between the argument DPs is reversed in the Inverse sentence in (47), for example.

- (47) ɬamu ɸdɿrzi kuɯ pú-wy-mto
 Lhamo Rdorje ERG AOR-INV-see:3SG>3
 'Lhamo was seen by Rdorje.' (Or 'Rdorje saw Lhamo' under the current view¹⁷) (Jacques, 2010, 129-130)

This seems to support the view that the thematic object is in fact moved to a higher position in the Inverse form but not in the Direct form. However, it is not clear whether the use of the Inverse form is the cause of the reverse word order here. First of all, Jacques (2010) notes that no solid observation about the interaction with word

¹⁷While Jacques (2010) gives a passive English sentence as a translation of this example to capture the topicality effect of the Inverse construction, he does not claim that this sentence involves passivization.

order can be made straightforwardly, especially given that Japhug frequently uses null pronouns and most of the available data do not involve two overt arguments. Moreover, Jacques (2021) includes at least one Inverse sentence where the thematic subject precedes the thematic object: in (48), the thematic subject (*qapar kuu* ‘the dhole’) precedes the second person singular pronoun *nyzo*, which is the thematic object, although the sentence is in the Inverse form.

- (48) *qapar kuu nyzo a-mɣ-yu-tɣ-tú-wy-ndza*
 dhole ERG 2SG IRR-NEG-CICLOC-PFV-2-INV-eat
 ‘(Let us hope that) the dhole will not come to eat you.’ (Jacques, 2021, 473)

As Jacques (2010) observes that Japhug allow scrambling of the argument DPs, I consider the word order reversal in (47) to be the result of scrambling pragmatically motivated by the saliency of the object.

4.3 The analysis

4.3.1 Deriving the Direct/Inverse contrast

So far, I have shown that the Direct/Inverse constructions in Japhug involve both a semantic aspect (reference to the empathy hierarchy) as well as a syntactic aspect (morphological ϕ -agreement / the distribution of the thematic object that participates in agreement and the empathy comparison). In this section, I extend the proposal from Ch.2–3 that the result of Agree feeds interpretation to the Direct/Inverse head in Japhug to account for these observations.

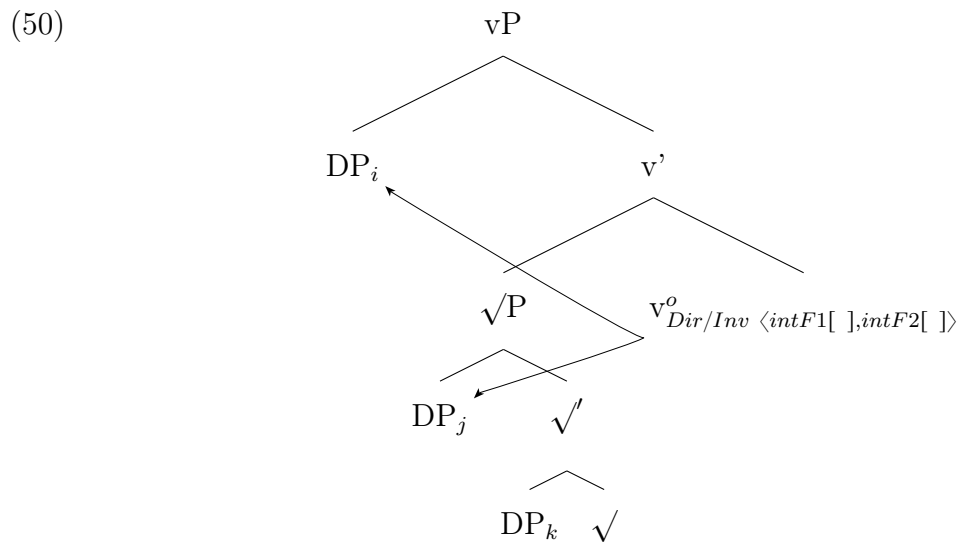
First of all, I consider the head responsible for the Direct / Inverse contrast is located inside the verbal phase. Recall from the discussion in Section 4.2.4 that the overt Inverse marker *wy*, as well as the agreement morphology that correlates with the Direct / Inverse marking, appears below Neg and Asp. The crucial example is

repeated in (49).

- (49) quapar kwi nɣzo a- mɣ- yuu- tɣ- **túu-** **wɣ-** ndza
 dhole ERG 2SG IRR NEG CISLOC PFV 2 INV eat
 ‘(Let us hope that) the dhole will not come to eat you.’ (Jacques, 2021, 473)

Assuming the Mirror Principle, this suggests that the head responsible for the contrast is located relatively low, most likely in the verbal phase. I assume in this dissertation that the head in question is *v* in Japhug.

I assume two lexically distinct *v* heads; the Direct *v* head, which is realized as the (phonologically null) Direct theme sign, and the Inverse *v* head, which is realized as the Inverse theme sign *wɣ*. In transitive sentences, at the point of numeration, either a Direct *v* head or an Inverse *v* head is picked. Both of them have two unvalued but interpretable index features, and these features probe to get valued by index features on goal DPs. One of the probes goes downward to find the highest object, and the other goes upward to find the subject in the specifier of *v*P. Thus, the structure looks like (50), with bi-directional probes from *v*. As a result, the features on *v* get valued as shown in (51).



- (51) $\langle intF1[j], intF2[i] \rangle$

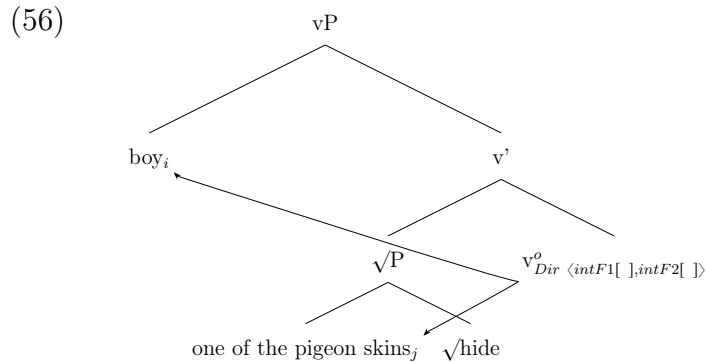
These valued index features survive to LF, given their interpretability. I argued in Section 4.2.2 that the idea that Direct / Inverse constructions add the presuppositional meanings in (52) to the sentence nicely captures the empathy conditions in these constructions in Japhug.

- (52) a. The meaning introduced by the Direct form:
 X does not outrank Y over the Empathy Hierarchy in the context
- b. The meaning introduced by the Inverse form:
 X outranks Y over the Empathy Hierarchy in the context

I claim that these semantics are introduced by the *v* heads referring to these valued index features. More specifically, in addition to their canonical semantics, the Direct *v* head and the Inverse *v* head introduce the presuppositional meanings roughly represented as shown in (53). The representations in (53) are similar to (52), except that those in (53) specify “X” and “Y” by referring to the result of the downward Agree ($intF_1[]$) and that of the upward Agree ($intF_2[]$). That is, the representations of the Direct *v* meaning in (53) says that the referent of the downward Agree goal ($\llbracket NP_{intF_1[]} \rrbracket$) does not outrank the referent of the upward Agree goal ($\llbracket NP_{intF_2[]} \rrbracket$) over the Empathy Hierarchy. Similarly, the representation of the Inverse *v* meaning in (53) says that the referent of the downward Agree goal ($\llbracket NP_{intF_1[]} \rrbracket$) outranks the referent of the upward Agree goal ($\llbracket NP_{intF_2[]} \rrbracket$) over the Empathy Hierarchy.

- (53) a. The meaning introduced by \emptyset (Direct *v*):
 $\llbracket NP_{intF_1[]} \rrbracket$ does not outrank $\llbracket NP_{intF_2[]} \rrbracket$ over the Empathy Hierarchy
 in the context
- b. The meaning introduced by *wy* (Inverse *v*):
 $\llbracket NP_{intF_1[]} \rrbracket$ outranks $\llbracket NP_{intF_2[]} \rrbracket$ over the Empathy Hierarchy in the
 context

When a Direct *v* head appears along with the thematic subject referring to the boy and the thematic object referring to one of the pigeon skins, the downward probe from Direct *v* (*intF1*[]) finds the DP referring to one of the pigeon skins while the upward probe (*intF2*[]) from it finds the DP referring to the boy. The structure is shown in (56).



As a result of these Agree relationships, the probe features are valued as shown in (57). Recall that the Direct *v* head has the presuppositional meaning in (58). Thus, the valuation in (57) leads to the presuppositional meaning roughly represented as shown in (59). As this is compatible with the empathy relationship that is pragmatically plausible based on the humanness hierarchy in (55), the sentence is acceptable.

$$(57) \quad \langle \text{intF1}[j], \text{intF2}[i] \rangle$$

(58) The meaning introduced by \emptyset (Direct *v*):

$\llbracket \text{NP}_{\text{intF1}[j]} \rrbracket$ does not outrank $\llbracket \text{NP}_{\text{intF2}[i]} \rrbracket$ over the Empathy Hierarchy in the context

(59) $\llbracket \text{NP}_{\text{intF1}[j]} \rrbracket$ does not outrank $\llbracket \text{NP}_{\text{intF2}[i]} \rrbracket$ over the Empathy Hierarchy in the context

=One of the pigeon skins does not outrank the boy over the Empathy Hierarchy in the context

What happens if an Inverse v , instead of a Direct v , occurs in the same sentence? The structure is like (56), except that v_{Dir} is replaced by v_{Inv} . The result of the valuation would be the same as (57). Crucially, however, the presuppositional meaning introduced by the Inverse v is the one repeated in (60). This means that the valuation in (57) results in the meaning roughly represented in (61). As this is incompatible with the pragmatically plausible empathy relationship, the use of this sentence becomes infelicitous.

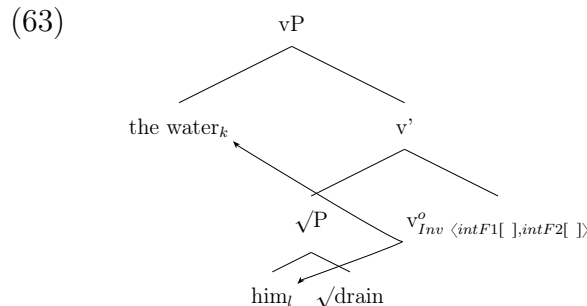
(60) The meaning introduced by wy (Inverse v):

$\llbracket NP_{intF_1[\]} \rrbracket$ outranks $\llbracket NP_{intF_2[\]} \rrbracket$ over the Empathy Hierarchy in the context

(61) $\llbracket NP_{intF_1[j]} \rrbracket$ outranks $\llbracket NP_{intF_2[i]} \rrbracket$ over the Empathy Hierarchy in the context
 =One of the pigeon skins outranks the boy over the Empathy Hierarchy in the context

On the other hand, the sentence in (62) has an inanimate subject and an animate object and it takes the Inverse form. For this sentence, the downward probe from the v head finds the animate object and the upward probe from the v head finds the inanimate subject, as shown in the structure in (63). This results in the valuation of the probe as shown in (64).

(62) *tu-ci nuu kuu taʁ-nʁ-taʁ taʁ-nʁ-taʁ ʒo tó-wʁ-tsum*
 NEU-water DEM ERG up-CONJ-up up-CONJ-up PART EVD:UP-INV-take
 ‘The water drained him upwards.’ (Jacques, 2010, 144)



$$(64) \quad \langle \text{intF1}[l], \text{intF2}[k] \rangle$$

As the *v* head is an Inverse *v* head in (63), this valuation results in the presuppositional meaning roughly represented in (65). As this is compatible with the pragmatically plausible empathy relationship motivated by the humanness hierarchy, this sentence can felicitously appear in the Inverse construction as shown in (62).

$$(65) \quad \llbracket \text{NP}_{\text{intF1}[l]} \rrbracket \text{ outranks } \llbracket \text{NP}_{\text{intF2}[k]} \rrbracket \text{ over the Empathy Hierarchy in the context} \\ = \text{the referent of "him"} \text{ outranks the water over the Empathy Hierarchy in the} \\ \text{context}$$

If the *v* head is a Direct *v* head, however, this valuation results in the presuppositional meaning roughly represented in (66). As this is incompatible with the pragmatically plausible empathy relationship, the Direct construction would be infelicitous with this example.

$$(66) \quad \llbracket \text{NP}_{\text{intF1}[l]} \rrbracket \text{ does not outrank } \llbracket \text{NP}_{\text{intF2}[k]} \rrbracket \text{ over the Empathy Hierarchy in the} \\ \text{context} \\ = \text{the referent of "him"} \text{ does not outrank the water over the Empathy Hierar-} \\ \text{chy in the context}$$

While we have seen the derivation of the examples whose empathy relationship is determined by animacy, similar results hold with the examples where the empathy relationship is determined by other factors such as person or topicality. For example, we saw above that the Direct / Inverse marking in Japhug is affected by person: $1 \rightarrow 3$ sentences appear in Direct form while $3 \rightarrow 1$ sentences appear in Inverse form, as repeated in (67). I argued that this is because the person feature affects the empathy relationship by the Speech-Act Empathy Hierarchy, as repeated in (68), and the choice between the Direct form and the Inverse form is made based on the empathy

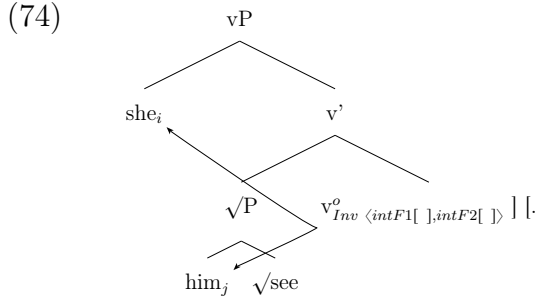
- (72) $[[NP_{intF_1[j]}]]$ outranks $[[NP_{intF_2[i]}]]$ over the Empathy Hierarchy in the context
 =the referent of “him” outranks the speaker over the Empathy Hierarchy in
 the context

This is impossible under the Speech Act Participant Empathy Hierarchy and hence the Inverse marking is not possible in $1 \rightarrow 3$ contexts. Exactly the reverse happens for the contexts in $3 \rightarrow 1$, making the Inverse marker, but not the Direct marker, possible in such contexts.

Similarly, I argued above that the topicality also affects the empathy relationship, which in turn decides the Direct / Inverse marking. For example, the predicate *tsum* ‘take.away’ in (73) is marked with Inverse, as the thematic object of the verb is the main character of this entire story.

- (73) *stu* *ku-xtci* *nuu* *ku* ‘...’ *to-ti* *tɛendɤre* *gro* *nuu*
 most SBJ:PCP-be.small DEM ERG IFR-say LNK pigeon DEM
 u-ŋga *nuu* *to-nu-ŋga* *q^h e*, *tɛe* *nuu* *u-mke*
 3SG.POSS-clothes TOP IFR-AUTO-wear LNK LNK DEM 3SG.POSS-neck
 ko-rqoɓ *q^he* *tɛendɤre* *tó-wɣ-tsum* *to-nuquambuumbjom* *q^he*
 IFR-hug LNK LNK IFR-INV-take.away IFR:UP-fly LNK
 ‘The smallest [daughter]_i said ‘...’, she_i wore the pigeon skin, he_j hugged her_i
 neck, and she_i took him_j and flew away [with him].’ (Jacques, 2021, 570)

This Inverse marking is also derived straightforwardly. The relevant part of the example has the structure in (74). As usual, the probe on *v* is valued as shown in (75). Thus, the Inverse *v* adds the meaning roughly represented in (76). This is compatible with the context, as the referent of “he” is the main character and it is plausible to be empathized more with him than the referent of “her”.



(75) $\langle intF1[j], intF2[i] \rangle$

(76) $\llbracket NP_{intF1[j]} \rrbracket$ outranks $\llbracket NP_{intF2[i]} \rrbracket$ over the Empathy Hierarchy in the context
 =the referent of “him” outranks the referent of “she” over the Empathy Hierarchy in the context

Recall that these factors, animacy, person and topicality, as well as other factors, together determine the empathy relationship. As I mentioned above following Oshima (2007), these factors can sometimes conflict with each other and a language can have its own way to resolve such conflicts. In Japhug, sentences in $3 \rightarrow 1$ or $3 \rightarrow 2$ contexts, for example, do not seem to appear in the Direct form even though it is possible to imagine a situation where a 3rd person DP works as a topic in the presence of a 1st person or 2nd person DP. This suggests that topicality is a less strong determiner of the empathy relationship than the person information in Japhug and, when they conflict, Japhug prioritizes the person information.

4.3.2 Deriving the morphology

The proposal so far succeeds in deriving the effect of empathy on the choice between the Direct and the Inverse theme signs. However, another crucial aspect of the Direct / Inverse system is the morphological ϕ -agreement pattern that interacts with the alternation of the theme signs. The account so far is not yet satisfactory in deriving the morphological agreement pattern that correlates with the alternation in Direct and Inverse theme signs. In this section, I propose how the analysis can be extended

to capture the morphological ϕ -agreement pattern.

I propose that the index-probes proposed in 4.3.1 also result in morphological agreement in Japhug. That is, the result of Agree over index features directly affects both LF and PF in Japhug.

In the previous section, I proposed that bi-directional probes that target index features on DPs are responsible for the choice of the Direct / Inverse theme signs. For the following reasons, I consider that it is these probes, not a distinct set of probes, that result in morphological ϕ -agreement in Japhug. First of all, ϕ -agreement and the choice between the Direct / Inverse constructions interact as shown above: in non-participant and some mixed contexts, the subject triggers ϕ -agreement in Direct forms while the object does in Inverse forms. Such an interaction suggests that there is close connection between the derivation of theme signs and the derivation of ϕ -agreement. Second, as already pointed out above, the theme signs and the ϕ -agreement appear in similar positions. More specifically, they both appear closer to the verbal Root than the Neg head or the aspectual head as shown in (77) and they are adjacent to each other, which is compatible with the view that they are associated with the same head.

- (77) quapar kuu nɣzo a- mɣ- yuu- tɣ- **túu- wɣ-** ndza
 dhole ERG 2SG IRR NEG CISLOC PFV 2 INV eat
 ‘(Let us hope that) the dhole will not come to eat you.’ (Jacques, 2021, 473)

Third, they both agree with the same set of DPs, that is, the subject and the highest object.

I thus explore a way to derive the morphological ϕ -agreement pattern from the index probe proposed in 4.3.1. This attempt requires answers to two questions. First, while I have talked about Agree over index features, how do the probes get valued also by the ϕ features of the goal DPs? Second, in cases where only one of the arguments decides the agreement morphology, how is the DP that controls the mor-

phological agreement chosen, given that the choice correlates with the choice between the Direct/Inverse marking? I answer these questions in this section.

4.3.2.1 Agreeing over ϕ -features

The first question is relatively easy to answer. In Ch.2–3, I have argued that index features are paired with person features and it is in fact this pair, which I called *person-index* features, that are probed. The motivation behind this proposal was that the probes involved in Object Honorifics and Benefactives in Japanese are relativized to animate NPs. For example, the honoree of OH has to be the dative object in cases like (78), suggesting that the honoree in OH has to be the highest object (i.e. the closest object to the probing head right above \sqrt{P}). I accounted for this pattern as an intervention effect, following Boeckx and Niinuma (2004). However, an inanimate dative NP *kaizyoo* ‘place’, does not block the theme object from serving as the honoree in (79), suggesting that what serves as the honoree is the referent of the closest *animate* NP. I analyzed this effect by saying that (i) the index feature is paired with a person feature (Wechsler and Zlatić, 2000; Sudo, 2012; Podobryaev, 2017), (ii) person features in Japanese are held only by animate NPs and (iii) the probing features target only person-index features and hence NPs lacking person features are invisible to the probe.

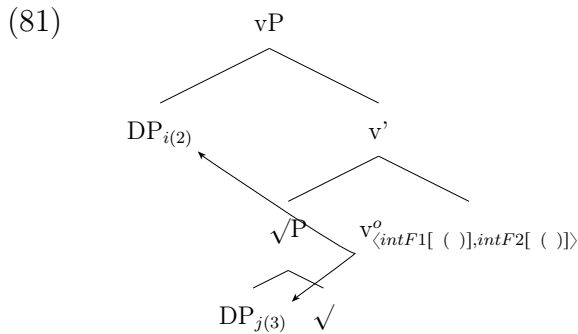
- (78) a. Hanako-ga Tanaka.sensei-ni Mary-o
 Hanako-NOM Tanaka.prof-DAT Mary-ACC
go-syookai-si-ta.
 HON.PREF-introduce-do-PAST
 ‘Hanako introduced (OH) Mary to Professor Tanaka.’
- b. Hanako-ga Mary-ni Tanaka.sensei-o
 Hanako-NOM Taro-DAT Tanaka.sensei-ACC
 syookai-si-ta/#**go-syookai-si-ta**
 introduce-PAST/HON.PREF-introduce-do-PAST
 ‘Hanako introduced / #introruced (OH) Professor Tanaka to Mary.’

(Boeckx and Niinuma, 2004, 456)

- (79) Watasi-wa kaizyoo-ni Tanaka.sensei-o o-ture-si-ta
 1sg.-TOP place-DAT Prof.Tanaka-ACC HON.PREF-take-do-PAST
 ‘I took (OH) Prof.Tanaka to the place’ (Boeckx and Niinuma, 2004, 456)

Applying this idea to the current case, I claim that the probes from the *v* heads do not look for index features but for person-index features and retrieve the person information along with the index information from the goal. For example, in (80), where the subject is 2nd person and the object is third person, the Agree relation and valuation will look like (81) and (82).

- (80) nɣzo turme ra to-tur-yut tɕe,
 2SG people PL IFR:UP-2-bring LNK
 ‘You(SG) brought people [here].’ (Jacques, 2021, 547)



- (82) $\langle \text{intF1}[j(3)], \text{intF2}[i(2)] \rangle$

I claimed above that the index features survive to LF because of their interpretability. Note that this does not mean that they have to be deleted on the PF side: interpretable features are generally considered to be visible on the PF side as well.¹⁸ Thus, it is natural to assume that the person features on these probes can also result in morphological agreement.

Note, however, that there are two issues to be addressed regarding this idea. First, Japhug Direct/Inverse marking does not seem to get affected by animacy in

¹⁸But see Baker and Camargo Souza (2020) for related discussions. I discuss this issue further in Ch.6.

the way Japanese Object Honorifics or Benefactives do. For the Japanese OH data in (79), we saw that the inanimate NPs are invisible to the probes. This is not the case in Japhug, however. While Japhug Direct / Inverse constructions are affected indirectly by animacy via its effect on the empathy relationship, the sentence in (83), for example, shows that an inanimate object still triggers morphological (number) agreement. This shows that inanimate DPs are visible to the probes in Japhug and, hence, the probes in Japhug are not relativized to the animate DPs.

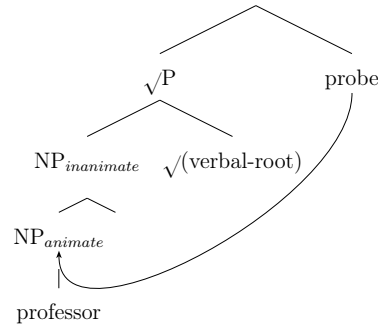
- (83) *tu-ndze-a-ndzi* *ra*
 IPFV-eat[III]-1SG-DU be.needed:FACT
 ‘I’d like to eat them.’ (Jacques, 2021, 556)

This difference can be derived by simply assuming that, while Japanese person features are held only by animate NPs, this is not the case in Japhug. Thus, the inanimate DPs in Japhug can be found by person-index probes in the same way as animate DPs.

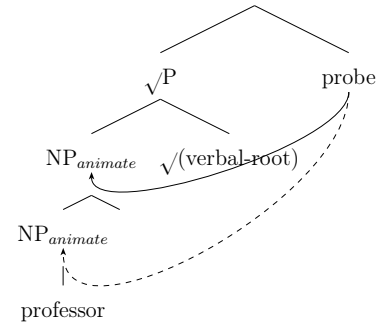
This point can be further confirmed by the interaction between possessive DPs and Direct / Inverse markings. Recall that, in Japanese, since inanimate DPs are invisible to the probe, a downward probe can find the possessor NP as long as the entire NP is inanimate, as shown in (85-a). For example, the referent of the possessor noun *sensei* ‘professor’ in (84-a) can serve as the honoree. On the other hand, if the entire NP is animate as shown in (85-b), the whole NP intervenes between the possessor and the probe and the possessor cannot serve as the honoree as exemplified in (84-b).

- (84) a. *watasi-wa* [*[sensei]-no* *hon*]-o **o-yomi-si-ta**
 1sg-TOP professor-GEN book-ACC HON.PREF-read-do-PAST
 ‘I read (OH) the professor’s book.’
 b. *#watasi-wa* [*[sensei]-no* *rinzin*]-o **o-tazune-si-ta**
 1sg.-TOP professor-GEN neighbor-ACC HON.PREF-visit-do-PAST
 ‘I visited (OH) the professor’s neighbor.’

(85) a.



b.

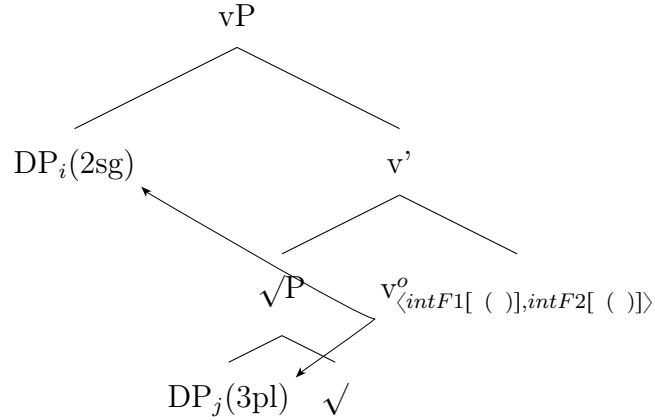


If an inanimate DP is visible to probes on *v* in Japhug, the Direct / Inverse system is predicted to be sensitive to the entire DP, not the possessor DP, even when the entire DP is inanimate. This prediction is borne out as shown in (86). It contains an inanimate DP with an animate possessor ‘my things’ as an object to the second predicate ‘take.away’. If inanimate DPs are invisible to probes, we would expect the Direct / Inverse marking on this predicate to care about the 1st person possessor on the object and Inverse marking should appear. However, this predicate occurs in the Direct form, indicating that the inanimate DP ‘my things’ is visible to the downward probe from *v*.

- (86) *azuy* *ta-ɕu-mjɣm*, *azuy* *a-laxt* ɕ^h *a* *ra*
 1SG:GEN AOR:3→3'-CAUS-be.painful 1SG:GEN 1SG.POSS-thing PL
 ja-nu-tsum-nu
 AOR:3→3'-VERT-take.away-PL
 ‘He hurt me and took away my things.’ (Jacques, 2021, 321)

The other issue is that Japhug ϕ -agreement is over person and number features, not just person features. This suggests that the number features are valued on the probe along with the person feature. I assume that, in Japhug, the number feature is bundled with the person feature and thus together values the person-index probe. This requires a further revision of the representations. Thus, while I have represented the Agree relation and the valued probes in (80) as (81)–(82) above, I revise them as (87)–(88).

(87)

(88) $\langle intF1[j(3pl)], intF2[i(2sg)] \rangle$

I assume that (87)–(88) are the actual structure and valued probes involved in Japhug Direct/Inverse constructions.

4.3.2.2 Deciding the morphological realization

I have shown that the v can receive the value of the ϕ -features on DPs through the index probes I proposed in Section 4.3.1. Then the next question is how exactly the surface morphology is derived, including the interaction between the ϕ -agreement pattern and the theme signs.

Morphological operations in Japhug I have argued that there are two distinct lexical heads v_{Dir} and v_{Inv} in Japhug. One of them occurs in a structure and, whichever it is, it contains two probes that look for person(-number)-index features and one of them agrees with the thematic object while the other agrees with the thematic subject. After valuation, the head is equipped with the information about (i) whether it is a Direct v head or an Inverse v head (which is decided in the numeration, not by the Agree process), (ii) the person, number and index of the thematic object, and (iii) the person, number and index of the thematic subject. Then the next question is how these features acquire the phonological forms as repeated in (89) through Vocabulary Insertion.

(89)

Agent

Patient									
	1s	1d	1p	2s	2d	2p	3s	3d	3p
1s				ta-R	ta-R-ndzi	ta-R-nuu	R-a	R-a-ndzi	R-a-nuu
1d							R-tei		
1p							R-i		
2s	ku-R-a	ku-R-tei	ku-R-i				tuu-R		
2d	ku-R-a-ndzi						tuu-R-ndzi		
2p	ku-R-a-nuu						tuu-R-nuu		
3s	wy-R-a	wy-R- tei	wy-R-i	tuu-wy-R	tuu-wy-R-ndzi	tuu-wy-R-nuu	R		
3d	wy-R-a-ndzi						R-ndzi		
3p	wy-R-a-nuu						R-nuu		
							wy-R	wy-R-ndzi	wy-R-nuu

(Jacques, 2010, 134)

(Jacques, 2010, 134)

I propose the Vocabulary Insertion rules in (90); these rules are applied to *v* heads with these pieces of information.

(90) Vocabulary Insertion rules

- a. $[(1)], [(2)], v_{inv} \rightarrow \text{ku-}$
- b. $[(1)], [(2)], v_{dir} \rightarrow \text{ta-}$
- c. $[(2)] \rightarrow \text{tuu-}$
- d. $[(\text{person})] \rightarrow \emptyset\text{-}$
- e. $\text{sg} \rightarrow \text{-a} / [(1_)]$
 $\text{-}\emptyset / \text{elsewhere}$
- f. $\text{du} \rightarrow \text{-tei} / [(1_)]$
 $\text{-ndzi} / \text{elsewhere}$
- g. $\text{pl} \rightarrow \text{-i} / [(1_)]$
 $\text{-nuu} / \text{elsewhere}$
- h. $v_{Dir} \rightarrow \emptyset\text{-}$
- i. $v_{Inv} \rightarrow \text{wy-}$

Note that, as seen in some of the rules in (108), some of the Japhug morphemes treat 2nd person as marked (person marking is special for 2nd person (*tuu*)), while others treat 1st person as marked (number morphemes are special for 1st person). This suggests that the feature system in Japhug is structured such that both the 2nd

person and the 1st person can be identifiable as marked, meaning that the persons should not have strict hierarchical featural entailment relationships like the system assumed by Béjar and Rezac (2009) reviewed in Section 4.1.2. I instead characterize the 1st person as [(1)], 2nd person as [(2)] and 3rd person as [(3)], and treat each of them as marked. I refer to an underspecified person feature by the representation [(person)]. A system that aims to account for a wider morphological data set might need to further complicate the representation, but I leave that issue aside in this work.

For some of the cases in the transitive morphology paradigm, these rules straightforwardly realize all the features on *v*.¹⁹ For example, in the 3d→1s case, where the *v* head with valued probes looks like (91), all the information on the head is realized by some morpheme, although some of the morphemes are phonologically null. (Readers are referred to the Appendix for the detailed processes of Vocabulary insertion.)

$$(91) \quad v_{Inv} \langle F1[j(3du)], F2[i(1sg)] \rangle$$

$$(92) \quad \emptyset\text{-}\emptyset\text{-w}\check{y}\text{-Root-a-ndzi} \text{ ('person-person-Inv-Root-(1)sg-du')}$$

However, recall that, when the downward goal and the upward goal are both 2nd or 3rd person DPs, such double expressions of agreement are avoided. That is, there seems to be a rule that requires that one of *intF1*[] or *intF2*[] be deleted when two features that are 2nd person or 3rd person are present on the same head. An important question here is how to determine the feature that is going to be deleted. Recall that it is the agreement with the subject that surfaces in a Direct construction and it is the agreement with the object that surfaces in an Inverse construction.

I propose that, in Japhug, there is a set of impoverishment rules in (93). The rule in (93-a) requires that, when there are two non-first person features on a Direct *v* head, the downward probe gets deleted. On the other hand, the rule in (93-b) requires

¹⁹The intransitive agreement paradigm also derives from the straightforward application of these rules, under the assumption that the predicate agrees with the sole argument DP in an intransitive sentence.

that, when there are two non-first person features on an Inverse *v* head, the upward probe gets deleted. This ensures that the thematic object controls the morphological agreement in Inverse forms while the thematic subject does so in Direct forms.

(93) *Person-Number Impoverishment*

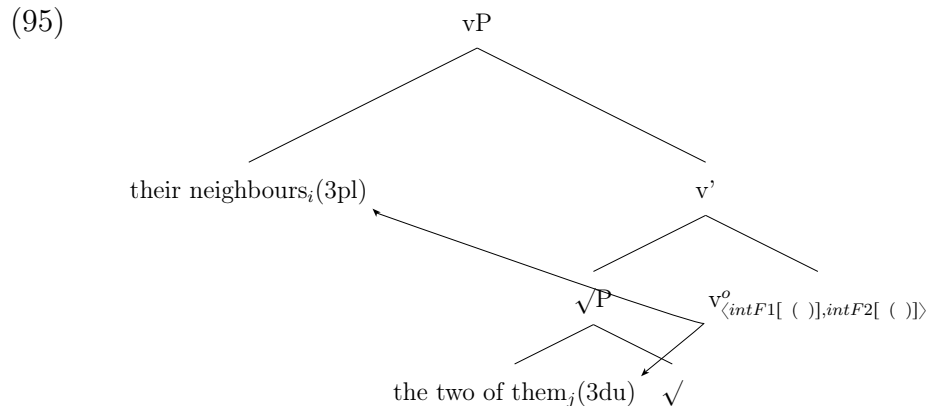
Apply the rules below when two features that are non-first person co-occur on a head.

a. $F_1[] \rightarrow \emptyset / v_{Dir}_$

b. $F_2[] \rightarrow \emptyset / v_{Inv}_$

The derivation is straightforward. Consider, for example, the case in (94), where the thematic subject is 3rd person plural and the thematic object is 3rd person dual and the *v* head is Inverse. As a result of Agree indicated in (95), the valued probe looks like (96-a). As both probes are valued with non-1st person features, the rule in (93) is applicable. As the *v* head in (94) is Inverse, the context for (93-b) is satisfied, and thus, it is the upward probe that gets deleted, leaving the feature in (96-b). Thus, given the Vocabulary insertion rules (90-d) (repeated in (97-a)), (90-f) (repeated in (97-b)) and (90-i) (repeated in (97-c)), the verb gets the morphological form in (98).

- (94) ndzi-juulco ra kuu wuma pjɣ-**wy-nɣsma-ndzi**
 3DU.POSS-neighbour PL ERG really IFR-INV-envy-DU
 ‘Their neighbours envied the two of them.’ (Jacques, 2021, 549)

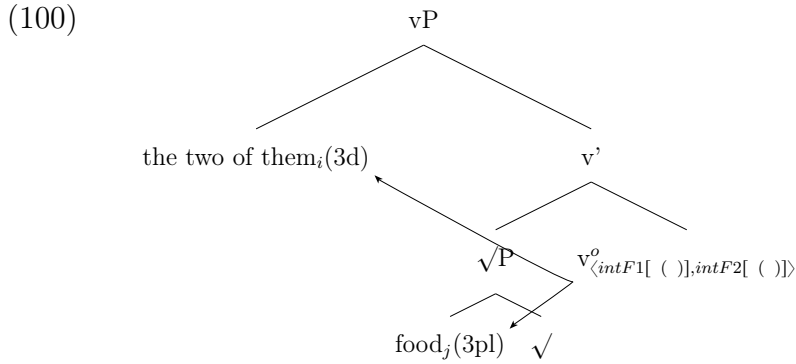


- (96) a. $v_{Inv} \langle intF1[j(3du)], intF[i(3pl)] \rangle$
 b. $v_{Inv} \langle intF1[j(3du)], intF[i(3pl)] \rangle$
- (97) Vocabulary Insertion rules
- a. $[(person)] \rightarrow \emptyset-$
 b. $du \rightarrow -ndzi / \text{elsewhere}$
 c. $v_{Inv} \rightarrow wy-$
- (98) \emptyset -wy-Root-ndzi (person-Inv-Root-du)

Conversely, in (99), the second occurrence of ‘take’ takes a Direct form and the subject controls the number agreement: the predicate gets dual marking where the subject (‘the two of them’) is dual and the object (‘food’) is plural.

- (99) tɕendyre <yinliao> to-nundo-ndzi, kyndza ra to-nu-**ndo-ndzi** q^h e,
 LNK drink IFR-AUTO-take-DU food PL IFR-AUTO-take-DU LNK
 qɾɿŋgɾɿ w-t^h ɿcu tɕe to-numa-ndzi qhe,
 TOPO 3SG.POSS-downstream LOC IFR-rest-DU LNK
 nɿ-nɿmpole-ndzi q^h e, tɕe ko-nu-yi-ndzi
 IFR-do.sightseeing-DU LNK LNK IFR:EAST-VERT-come-DU
 ‘The two of them took with them drinks and food, and rested and did sight-
 seeing further down from Qrangak, and then came back.’
 (Jacques, 2021, 597)

Here, the *v* on the second occurrence of ‘take’ establishes Agree relationships with the goals as shown in (100) and the probes get valued as shown in (101-a). This time, given that the *v* head is the Direct one, the impoverishment rule in (93-a) applies and the result of the downward probe gets deleted, as shown in (101-b). Thus, Vocabulary insertion applies to the representation in (101-b) and the rules in (102) realize this head as (103).



- (101) a. $v_{Dir}\langle intF1[j(3pl)], intF[i(3du)] \rangle$
 b. $v_{Dir}\langle intF1[j(3du)], intF[i(3pl)] \rangle$

(102) Vocabulary Insertion rules

- a. $[(person)] \rightarrow \emptyset-$
 b. $du \rightarrow -ndzi / \text{elsewhere}$
 c. $v_{Dir} \rightarrow \emptyset-$

(103) $\emptyset-\emptyset\text{-Root-ndzi}$ (person-Dir-Root-3d)

Thus, I have shown that the morphological agreement of Japhug can be derived from the bi-directional index feature Agree analysis I proposed in Section 4.3.1. That is, the idea from Ch.2–3 that the result of Agree feeds semantic predicates succeeded in deriving (i) the semantic empathy relationship between the thematic subject and the thematic object, (ii) the syntactic distribution of the thematic subject and the thematic object and (iii) the morphological forms of the predicates in Direct/Inverse constructions in Japhug. The details of the morphological derivation, especially concerning how Fission and number feature impoverishment work in some contexts, are included in the Appendix for readers who are interested.

Extension to other languages The person-number impoverishment rules in (93) combined with the analysis above capture the observation that objects trigger ϕ -agreement in Inverse sentences and subjects trigger ϕ -agreement in Direct sentences

in Japhug. One might think, however, that this approach is unsatisfactory in that it does not capture the cross-linguistic prevalence of the pattern in languages with Direct / Inverse system that, when the core agreement slot shows only one agreement, it is agreement with the argument that has a higher status in the person hierarchy (Béjar and Rezac, 2009; Despić et al., 2019). Recall, for example, the Nishnaabemwin pattern repeated in (104) from Section 4.1.2, where it is the 1st person that triggers agreement rather than 3rd person, whether the 1st person is the thematic subject or the thematic object. While the Japhug Direct/Inverse construction, especially the $2 \rightarrow 3$ and $3 \rightarrow 2$ contexts, shows a clear similarity to this cross-linguistic pattern, the rules in (93) are idiosyncratic to Japhug and do not say anything about the cross-linguistic prevalence of the pattern. If the current proposal (bi-directional Agree feeding the semantic empathy comparison) is to be extended to other languages, how does the current account capture this cross-linguistically common pattern in morphological agreement?

- (104) a. n- waabm -aa
 1- see -DIR
 ‘I see him/her. ($1 \rightarrow 3$)’
 b. n- waabm -igw
 1- see -INV
 ‘S/he sees me. ($3 \rightarrow 1$)’ (Valentine, 2001, 271, Nishnaabemwin)

While this is an issue to be explored in future studies from a typological point of view, I tentatively claim that the rules in (93) are not arbitrarily chosen rules, but derive from a functional motivation. I consider that there is a functional principle in (105), which is a modification of the principle in (106) proposed by Givón (1985). I consider “distinct and independent coding expressions” (e.g. overt marking versus incorporation or deletion) in Givón’s version in (106) to be cases of rich morphological marking and, thus, (105) is a broader version of the statement in (106).

- (105) The more important an item is in the communication, the richer morphological marking it receives.
- (106) Givon's proposal (Givón, 1985, 206)
- The more important an item is in the communication, the more distinct and independent coding expression it receives.

The principle in (105) (and the original proposal in (106) by Givón (1985)) is motivated by iconicity between saliency in the cognitive domain and saliency in the linguistic expression: what is more cognitively salient gets more salient linguistic marking. It is straightforward to assume that the entity higher on the empathy hierarchy is, in a cognitive domain, more important or salient to the speaker than the entity lower on the hierarchy: by definition, the speaker puts himself/herself in the shoes of someone he/she empathize with, and thus the entity higher on the empathy hierarchy in a sense controls the communicated content. By parallelism between the cognitive domain and the linguistic expression, the entity higher on the empathy hierarchy gets more salient marking in the linguistic expression as well. Thus, when a language chooses to express morphological agreement with only one of the DPs *v* agrees with, by the principle in (105), it is the agreement with the more empathized entity that is chosen. The impoverishment rule proposed in (93) is the way Japhug formalizes this functional pattern.²⁰

4.4 Chapter Summary

In Chapter 4, I have shown that the idea that the result of Agree can feed semantic predicates can be extended to Direct/Inverse constructions, focusing on a case study on Japhug. I have shown that the current approach can capture the empathy effect,

²⁰This account does not necessarily limit the effect of the principle in (105) to the Direct / Inverse systems. The broader effect of this principle needs further study.

the syntactic distribution of the thematic object that matters for empathy comparison and the morphological agreement in the Direct/Inverse constructions in Japhug. This provides an alternative account to a purely morpho-syntactic approach mainly proposed in the literature on Algonquian languages, which I showed does not straightforwardly capture the empathy effect in non-participant contexts. Furthermore, the discussion in this section was also informative to the current theoretical idea by showing that the valued person-index feature not only feeds semantic predicates but can also be sent to PF at the same time which triggers morphological agreement.

Appendix: details of the morphological derivation

In Section 4.3.2, I presented a rough idea of how the valued person(-number)-index probes on *v* acquires morphological realization in Japhug. This Appendix shows a more detailed analysis of how the Vocabulary Insertion works in Japhug Direct / Inverse system. The purpose here is to show that a detailed analysis on the Japhug morphology is possible in a way that is compatible with the claim in Section 4.

I repeat the morphological paradigm of the Direct / Inverse system in Japhug in (107).

(107)

Agent	Patient								
	1s	1d	1p	2s	2d	2p	3s	3d	3p
				ta-R	ta-R-ndzi	ta-R-nuu	R-a	R-a-ndzi	R-a-nuu
								R-tei	
								R-i	
	2s	ktu-R-a	ktu-R-tei	ktu-R-i				tuu-R	
	2d	ktu-R-a-ndzi						tuu-R-ndzi	
	2p	ktu-R-a-nuu						tuu-R-nuu	
	3s	wy-R-a	wy-R-tei	wy-R-i	tuu-wy-R	tuu-wy-R-ndzi	tuu-wy-R-nuu	R	
	3d	wy-R-a-ndzi						R-ndzi	
	3p	wy-R-a-nuu						R-nuu	
							wy-R	wy-R-ndzi	wy-R-nuu

(Jacques, 2010, 134)

I propose the Vocabulary insertion rules in (108) and show that the specific morphological patterns in (107) are the realization of the result of Agree based on these

rules and some impoverishment rules proposed below.

(108) Vocabulary Insertion rules

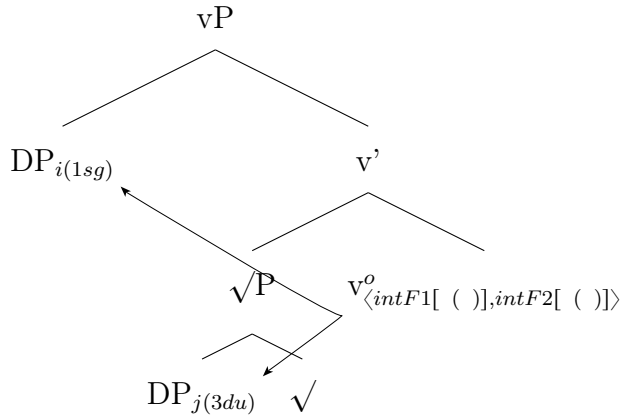
- a. $[(1)], [(2)], v_{inv} \rightarrow \text{kũ-}$
- b. $[(1)], [(2)], v_{dir} \rightarrow \text{ta-}$
- c. $[(2)] \rightarrow \text{tũ-}$
- d. $[(\text{person})] \rightarrow \emptyset\text{-}$
- e. $\text{sg} \rightarrow \text{-a} / [(1_)]$
 $\text{-}\emptyset / \text{elsewhere}$
- f. $\text{du} \rightarrow \text{-tɕi} / [(1_)]$
 $\text{-ndzi} / \text{elsewhere}$
- g. $\text{pl} \rightarrow \text{-i} / [(1_)]$
 $\text{-nuu} / \text{elsewhere}$
- h. $v_{Dir} \rightarrow \emptyset\text{-}$
- i. $v_{Inv} \rightarrow \text{wY-}$

First, recall that the morphology reflects the person / number features of both DPs in participant contexts, where agreement surfaces as portmanteaux along with Direct / Inverse theme signs, and in the 1s→3 and 3→1s cases. Given that the current analysis assumes bi-directional probes finding both the subject and the object, the cases with double agreement pattern are straightforwardly expected by the current analysis.

I start with the case where the subject is 3rd person dual and the object is 1st person singular. The verbal morphology in this case is shown in (109). In such cases, by the empathy considerations, only v_{Inv} , but not v_{Dir} , can occur. As shown in (110), the v_{Inv} head enters the Agree relationship with the subject and the object, and the valued probes look like (111).

(109) Ø-Ø-wy-Root-a-ndzi (person-person-Inv-Root-(1)s-(3)d)

(110)



(111) $V_{Inv\langle F1[j(3du)], F2[i(1sg)] \rangle}$

How then can the head in (111) be realized as (109)? Note, first, that (109) contains more than one vocabulary item, even though it is a realization of the elements on one node in (111). This means that Fission is involved in the derivation of the form in (109). I take the view of Fission by Halle (2000), which is based on the proposal by Noyer (1992): certain nodes are marked as being subject to Fission. On such nodes, the first cycle of Vocabulary Insertion is done as usual. Simultaneously with Vocabulary insertion, however, a subsidiary node is generated and the features that are not realized by the first Vocabulary Insertion are copied onto that new node. This subsidiary node is targeted by the next cycle of Vocabulary Insertion and this Fission process can be iterated.

Getting back to the example in (109), Vocabulary insertion targets the head in (111), repeated in (113-a). The rules relevant here are (108-d), the $[(1_)]$ rule in (108-e) (for the singular on the 1sg feature), the elsewhere rule in (108-f) (for the dual on the 3du feature), as repeated in (112). I consider the $[(1_)]$ rule in (112-b) to be the most specific among (112) by its specification of the feature and the environment. Thus it is applied first following the Subset Principle, although the order of rule

application does not create a substantial difference in this case.²¹ Then Fission creates a node in (113-b). The next most specific rule is either (112-c) or (112-d), and I assume that one of them is arbitrarily picked. Suppose for now that (112-c) is picked. The form *ndzi* gets inserted and the node in (113-c) is created by Fission. Then (112-d) is applied to (113-c), with *wy* inserted and the node in (113-d) being created. Finally, the rule in (112-a) is applied to either one of the person features, 3 and 1, resulting in the Fission of the other, to which again the rule in (112-a) is applied. Thus the morphological form is correctly expected to contain *a*, *ndzi* *wy* and \emptyset s.

- (112) a. $[(\text{person})] \rightarrow \emptyset$
 b. $\text{sg} \rightarrow -a / [(1_)]$
 c. $\text{du} \rightarrow \text{-ndzi}$ (elsewhere)
 d. $v_{Inv} \rightarrow \text{wy-}$
- (113) a. $v_{INV}\langle F1[j(3du)], F2[i(1sg)] \rangle$
 b. $v_{INV}\langle F1[j(3du)], F2[i(1sg)] \rangle$ *Root-a*
 c. $v_{INV}\langle F1[j(3du)], F2[i(1sg)] \rangle$ *Root-a-ndzi*
 d. $v_{INV}\langle F1[j(3du)], F2[i(1sg)] \rangle$ *wy-Root-a-ndzi*
 e. $v_{INV}\langle F1[j(3du)], F2[i(1sg)] \rangle$ $\emptyset\text{-}\emptyset\text{-wy-Root-a-ndzi}$

Note here that the order of morpheme insertion does not necessarily correspond to the linear order of the morphemes (Halle, 2000). One can assume that there is a templatic slot for each morpheme (Noyer, 1992) or the linear order is determined by interactions among idiosyncratic suffixal / prefixal nature of each morpheme, constraints on syllable structures and other unknown factors (Halle, 2000). The linear order in the current paradigm can be partially accounted for by assuming that each affix has

²¹One might think that applying (112-b) earlier than (112-a) is crucial, as (112-b) refers to the person feature in the environment specification. However, as is mentioned later, Noyer (1992) notes that the lexically realized feature is still visible for secondary conditioning. Thus, the current system does not crucially hinge on applying (112-b) earlier than (112-a).

suffixal / prefixal nature as part of its idiosyncratic information. However, that still leaves the order between the two number morphemes unaccounted.²² I assume that some other factor affects the decision of the linear order but leave the exact nature of the factor unresolved here.

While we have seen the derivation of the morphology in 3d→1s context, exactly the same morphological operations, except the application of the v_{Dir} rule instead of the v_{Inv} rule, happens for the cases where the subject is 1st person singular and the object is 3rd person dual. The probe features are valued as shown in (114) and it results in the phonological form in (115), exactly the same form as (109) except for the use of the null Direct marker.

$$(114) \quad \langle F1[i(1sg)], F2[j(3du)] \rangle$$

$$(115) \quad \emptyset\text{-}\emptyset\text{-}\emptyset\text{-Root-a-ndzi (person-person-Dir-Root-(1)s-(3)d)}$$

Note that the linear order with regard to the two number morphemes is the same in (115) and (109). That is, the structural position of the goal DPs which originally held these features does not affect the linear order here. This goes well with the current view that these features are on the same head v as a result of Agree and morphological operations such as Fission and linearization decide how the head is realized.

Recall that, for two participant contexts, on the other hand, the person agreement is expressed by portmanteau morphemes of ϕ -features of both DPs and the theme sign. To start with 2→1sg cases, the agreement results in the portmanteau morpheme *kui* as well as two number morphemes, *a* as a number agreement with 1sg, and one more agreement with the 2nd person NPs. The 2du→1sg case, for example, shows the morphological form in (116).

²²Phonotactics do not seem to be the factor here. The syllable structures allowed in Japhug are (C)(C)(C)V(C) (Jacques, 2021) and this can be satisfied no matter what the order between the number morpheme is. Furthermore, the syllable structure of the verb stem does not affect the order between the number morphemes, although such an effect is well expected under the view that phonotactics is the deciding factor here.

(116) *ku*-Root-a-ndzi (2>1.Inv-Root-1s-2d)

In this context, the probes are valued as shown in (117-a). Note that, by the empathy effect from the person hierarchy, only v_{Inv} is available in this context. First, by the Subset Principle, the rule in (118-a) is applied. While the conditions for the rules in (119) are also satisfied in (117-a), they cannot beat (118-a) and thus fail to be applied. By Fission, this creates a subsidiary node in (117-b). Now the rule in (118-b) and (118-c) are applied one by one, as shown in (117-c)–(117-d).²³ Note that the rule in (118-b) refers to the person feature already realized by (118-a), I follow Noyer (1992) in assuming that a lexically realized feature is not eligible to undergo insertion any further, but is still visible for secondary conditioning of allomorphy in other elements.

- (117)
- a. $v_{Inv}\langle F1[i(1sg)], F2[j(2du)] \rangle$
 - b. $v_{Inv}\langle F1[i(1sg)], F2[j(2du)] \rangle$ *ku*-Root
 - c. $v_{Inv}\langle F1[i(1sg)], F2[j(2du)] \rangle$ *ku*-Root-a
 - d. $v_{Inv}\langle F1[i(1sg)], F2[j(2du)] \rangle$ *ku*-Root-a-ndzi

(118) Relevant Vocabulary Insertion rules

- a. $[(1)], [(2)], v_{inv} \rightarrow \text{ku-}$
- b. $sg \rightarrow -a / [(1_)]$
- c. $du \rightarrow \text{-ndzi} / \text{elsewhere}$

(119) Competing rules

- a. $[(2)] \rightarrow \text{tu-}$
- b. $[(\text{person})] \rightarrow \emptyset\text{-}$
- c. $v_{Inv} \rightarrow \text{wY-}$

For the rest of the double agreement cases, there are some complications in number

²³While the rule in (118-b) is applied earlier than (118-c) in (117-c)–(117-d), the order here is arbitrary and the result is the same even if the order is reversed.

morphology. First, in 1→2 contexts, only the number agreement with the 2nd person DP surfaces. Second, in the rest of the double agreement contexts (i.e. 2→1, 1→3 and 3→1), when the 1st person argument is dual or plural, only the number agreement with the 1st person argument surfaces (and the number of the other argument is suppressed). To capture this pattern, I propose the number impoverishment rules in (120) are applied in this order. The rule in (120-a) ensures that the 1st person is deleted in 1→2 contexts, and the rule in (120-b) derives the deletion of the number agreement with a non-1st person argument, when it is on the same head as 1du/pl.

(120) Number Impoverishment rules (Apply in this order)

a. $\text{Num} \rightarrow \emptyset / \langle F_1[2], F_2[1 \text{ } __] \rangle$

b. $\text{Num} \rightarrow \emptyset / H_{__, \{1du, 1pl\}}$

In 1sg→2du contexts, for example, the probes are first valued as shown in (121-a). The impoverishment rule in (120-a) is applied and the number feature on F2 gets deleted as shown in (121-b). (120-b) is not applicable in this case. The Vocabulary insertion rules are applied to (121-b): the rule in (108-b), repeated in (122-a), inserts the portmanteau morpheme *ta* first, and the rule in (108-f), repeated in (122-b), inserts the elsewhere dual morpheme into the subsidiary node created by Fission. This correctly derives the morphology in (123).

(121) a. $v_{Dir} \langle F_1[i(2du)], F_2[j(1sg)] \rangle$

b. $v_{Dir} \langle F_1[i(2du)], F_2[j(1sg)] \rangle$

(122) Vocabulary Insertion rules

a. $[(1)], [(2)], v_{dir} \rightarrow \text{ta-}$

b. $\text{du} \rightarrow \text{-ndzi} / \text{elsewhere}$

(123) $\text{ta-Root-ndzi} (1>2.\text{Dir-Root-2d})$

In 1pl→3du context, on the other hand, the probes are first valued as shown in (124-a). While the impoverishment rule in (120-a) does not apply to (124-a), the rule in (120-b) impoverishes the number feature on the 3rd person feature as shown in (124-b). Vocabulary insertion rules are applied to (124-b): the rule in (108-d), repeated in (125-a), realizes the (non-2nd) person features with phonologically null morphemes and the (108-g), repeated in (125-b), inserts the 1st person plural morpheme *i*, correctly deriving the form in (126).

(124) a. $v_{Dir}\langle F1[i(3du)], F2[j(1pl)] \rangle$

b. $v_{Dir}\langle F1[i(3du)], F2[j(1pl)] \rangle$

(125) Vocabulary Insertion rules

a. $[(\text{person})] \rightarrow \emptyset$ -

b. $pl \rightarrow -i / [(1_)]$
 $-nuu / \text{elsewhere}$

c. $v_{Dir} \rightarrow \emptyset$ -

(126) \emptyset - \emptyset - \emptyset -Root-*i* (person-person-Dir-Root-1pl)

Note that the rules in (120) have to be strictly ordered. Recall that, in 1d/pl→2 contexts, it is the number feature on the 1st person, not the one on the 2nd person that undergoes impoverishment. This is captured only if the rule in (120-a) is applied prior to (120-b). If (120-b) is applied first, the number on the 2nd person would undergo impoverishment.

So far, I have examined the morphology of double agreement cases in detail. For the cases where the predicate manifests agreement with only one of the arguments, the person-number impoverishment rule as proposed in Section 4.3.2 above (repeated in (127)) first impoverishes the feature. Let me take the 3d→3p Inverse case as an example, where the *v* head looks like (128-a) after the valuation. As both features

Chapter 5

Overlapping reference in Switch Reference

5.1 Introduction

In this chapter, I extend the idea that semantic predicates can get their arguments via Agree to another empirical domain, *Switch Reference* (henceforth *SR*) (Haiman and Munro, 1983; Finer, 1985; McKenzie, 2012; Arregi and Hanink, 2018, 2019, 2021; Clem, 2019; Baker and Camargo Souza, 2020; Camargo Souza, 2020, a.o.). I claim that this idea straightforwardly makes it possible to attribute set-theoretic meanings to the SR markers and capture a notorious set of data in the SR literature regarding overlapping reference.

SR is a phenomenon where the complementizer of a clause (or a marker near it) indicates whether the subject of the clause refers to the same entity as the referent of the subject of another clause. SR between the embedded clause and the matrix clause is visible on various kinds of embedded Cs, including Cs in adverbial clauses, complement clauses and relative clauses. The Kiowa example in (1) from McKenzie (2012) shows SR in adverbial clauses. The complementizer on the adverbial clause

takes the form *tsẽ:* when the embedded subject and the matrix subject co-refer with each other, while it takes the form *ẽ:* when they have distinct referents.

(1) Adverbial clauses (Kiowa)

- a. Ø-hé:ba=**tsẽ:** em-só:
 3s-enter:PF=when:SS 3sA:RO-sit.down:PF
 ‘[When she₁ came in], she_{1/*2} sat down.’
- b. Ø-hé:ba=**ẽ:** em-só:
 3s-enter:PF=when:DS 3sA:RO-sit.down:PF
 ‘[When she₁ came in], she_{*1/2} sat down.’ (McKenzie, 2012, 46)

The Washo sentences in (2) from Arregi and Hanink (2019) are examples of SR in complement clauses. The verb-final marker takes the form of *š* when the subjects of the matrix clause and the embedded clause do not corefer as shown in (2-a). On the other hand, no marking appears in the same slot in (2-b), where the two subjects co-refer.

(2) Complement clauses (Washo)

- a. [Emily_i t’išinájaw k’-éʔ-i-š-ge] l_j-ášašé:s-šemu-yi
 Emily singer.good 3-be-IND-DS-NM.ACC 1-know-really-IND
 ‘I know well that Emily is a good singer.’ (Arregi and Hanink, 2019, 1)
- b. [Adele [[daláʔak ʔ-ígi-yi -Ø] -ge] hámup’áy-e:s-i]
 Adele mountain 3-see-IND -SS -NMLZ1 3.forget-NEG-IND
 ‘Adele remembers that she saw the mountain.’

(Arregi and Hanink, 2018, 39)

Washo shows a similar contrast in relative clauses as well. The sentences in (3) contain internally-headed relative clauses in their object positions. In (3-a), the subject of the relative clause and the subject of the matrix clause refer to different entities and the relative clause contains a marker *š*. On the other hand, in (3-b), the matrix subject and the embedded subject both refer to the same entity and the relative

clause contains no corresponding marker.

(3) Relative clauses (Washo)

- a. [daʔmóʔmoʔ_j gó:beʔ ʔí:miʔ-i-š-ge] lé:_i-saʔ
 [woman coffee 3/3.drink-IND-DS-NM.ACC] 1.PRO-also
 l-é:me-gaʔlá:m-i
 1/3-drink-want-IND
 ‘I also want to drink the coffee that the woman is drinking.’
- b. *pro*_i [*pro*_i git-ŋaʔmíʔmíŋ bó:ŋ-i-yi-Ø-ge]
pro [*pro* 3-child.R 3/3.call-IND-SS-NM.ACC]
 wehigí:git-ha-aʔ
 3/3.instruct-CAUS-DEP
 ‘She instructed her children who she called.’

(Arregi and Hanink, 2021, (40))

The markers for different subject constructions are called Different Subject (DS) markers and the markers for the same subject constructions are called Same Subject (SS) markers. Following McKenzie (2012), I call the subject in the SR-marked clause (the embedded clause) the *pivot*, and the subject in the other clause (the matrix clause) the *anti-pivot*. While SR is also observed between two conjoined clauses, as SR between two conjoined clauses has been argued to show different behaviors from SR in embedding contexts (McKenzie, 2012), I focus on SR in embedded clauses in this chapter.¹

¹More specifically, McKenzie (2012) argues that SR in conjoined clauses tracks the situation described by the two clauses rather than the referents of the subjects. For example, in Kiowa conjoined clauses, a DS marker appears when the situations described by the conjoined clauses refer to different situations, even though the subjects refer to the same entities, as shown in (i-a). Similarly, the conjoined clauses get an SS marker as long as the two clauses refer to the same situation, even when the subject of the two clauses differ, as shown in (i-b).

- (i) a. *Context:* Your friend sees a group of young men at a fair, but doesn’t recognize them. She asks you what they have been doing in the events.
- Kídel jógùdàu ét gúnhêl nàu éháudèkì ét
 yesterday young.man-INV [3i:rfl] dance.PF-EVID and.DS today [3i:rfl]
 dáuvaìdèhèl
 sing.fight-PF-EVID
 ‘The young men danced yesterday, and they sang today.’

Various theoretical accounts for SR have been proposed in previous literature and many of them involve Agree as I review in Section 5.2. However, there are data which have been problematic to these accounts, namely the data with overlapping reference between the two subjects. While the two subjects in the examples in (1)–(3) above either completely co-refer or have completely disjoint reference, there can be cases where there is a partial overlap between the referents of the two subjects as exemplified in the data from Washo in (4). In (4-a), the referent of the embedded subject *Emily* is a subset of the referent of the matrix subject *Adele ida Emily* ‘Adele and Emily.’ Conversely, in (4-b), the referent of the matrix subject is the subset of the referent of the embedded subject. Both the DS marker and the SS marker are available in both of the sentences.

- (4) a. [Emily gé:gel-a- $\{\check{s}, \emptyset\}$] Adele ida Emily wagayáy-i
 Emily 3.sit-DEP-DS,SS Adele and Emily 3.talk-IND
 ‘Adele_i and Emily_j are talking while Emily_j is sitting.’
 b. [Adele ida Emily wagayáy-a- $\{\check{s}, \emptyset\}$] Emily baša?-i
 [Adele and Emily 3.talk-DEP- $\{DS, SS\}$] Emily 3.write-IND
 ‘Emily_i is writing while Adele_j and Emily_i are talking.’

(Arregi and Hanink, 2019, (14)–(15), Washo)

While either the DS marker or the SS marker is allowed in the Washo examples in (4), languages differ as to what marker they use in what kind of overlapping relationship as I show in detail in Section 5.3.1. The paradigm suggests that a set-theoretically complex relationship between the pivot and the anti-pivot is encoded in each SR marker. I claim that the idea that the result of Agree can feed semantic predicates straightforwardly provides us a way to attribute set-theoretic meaning to

-
- b. *Context:* Someone asks you ‘Where are the horses?’, you reply:

Fá sòn gà fáuyàu gàu fá tó gà tòmàu
 some grass [3p:3s] eat-IMPF and.SS some water [3p:3s] drink-IMPF

‘Some are eating grass and some are drinking water.’ (McKenzie, 2012, 168, Kiowa)

each SR marker, without abandoning the idea that SR involves Agree.

5.2 SR involves Agree

Previous studies agree on the view that the embedded C head (or some head near the embedded C) is responsible for the SR marking. Then the question is how the C head accesses the pivot (i.e. the embedded subject) and the anti-pivot (i.e. the matrix subject), especially given that C does not have a direct selectional relationship with the pivot or the anti-pivot. One operation that makes such a long-distance relationship possible is Agree. In fact, although SR markers often fail to exhibit ϕ -agreement, many recent studies have nonetheless claimed that the SR marker accesses the two relevant subjects via bi-directional Agree and have provided evidence for the view based on the distribution of the pivot / anti-pivot (Arregi and Hanink, 2019, 2021; Baker and Camargo Souza, 2020; Camargo Souza, 2020; Clem, 2019, 2021). In this section, I review this evidence.

5.2.1 Pivot selection

I start by looking at the syntactic distribution of the pivot, that is, the subject of the embedded clause marked with SR markers. This section shows that C chooses the embedded subject as a pivot using downward probing.

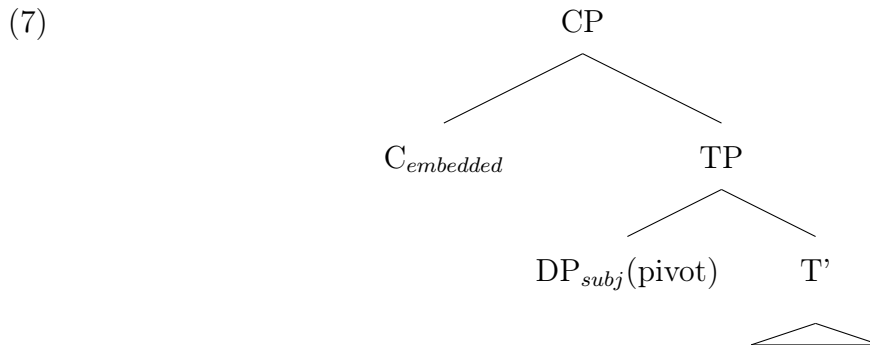
Recall from Ch.1 that I defined Agree as an operation constrained by the following conditions.

- (5) A feature F on a head H agrees with XP, XP a maximal projection, only if the following conditions are satisfied:
 - a. **C-command condition:** There is a c-command relationship between H and XP.

- b. **Intervention condition:** There is no YP such that YP comes between XP and H and YP has another instance of F.
 - c. **Phase condition:** H and XP are contained in the same phase
- (6) A comes between B and C, if and only if
- a. B c-commands A and, for all X such that X dominates A, X dominates C and the reverse is not true, or
 - b. C c-commands A and, for all X such that X dominates A, X dominates B and the reverse is not true

It has been argued that the choice of the embedded subject as a pivot straightforwardly follows from the view that SR-marked C probes downward, conforming to these conditions of Agree, and chooses the goal as its pivot (McKenzie, 2012; Arregi and Hanink, 2021; Baker and Camargo Souza, 2020; Camargo Souza, 2020).

First, the embedded subject almost trivially satisfies the c-command condition in (5-a) under the view that the embedded C head (or a head around it) is responsible for the SR marking. Assuming a standard structure in (7) where the (embedded) C head c-commands the embedded TP, the embedded subject is naturally expected to be c-commanded by the embedded C head.



For the phase condition as well, we can straightforwardly assume that the embed-

ded subject satisfies it, given that the embedded Spec TP is in the same CP phase as the C in the same clause.²

The intervention effect is also at work in terms of which DP can serve as the pivot. For most of the SR systems, it is almost always the subject that serves as the pivot (McKenzie, 2012): C cannot arbitrarily choose one of the DPs inside the embedded clause as a pivot.³ This can be explained given that the subject is the highest DP in the c-command domain of the C and it is the first DP that the C finds first when probing down. Note that it is the structural position of the subject, that is, its status of being the highest NP below C, not the agenthood or the external-argumenthood of the subject, that matters here. For example, Baker and Camargo Souza (2020) show that, in one of their target languages, Shipibo, with predicates that take two internal arguments but no external arguments, it is the experiencer argument that occupies a higher position, as can be told from the number-agreement pattern in the simple clause sentence in (8): the experiencer can, but the theme argument cannot, trigger the agreement on T. Crucially, they show that SR also tracks the experiencer argument with these predicates. The example in (9) shows that the SS marker is possible when the matrix subject corefers with the experiencer, but not when it corefers with the theme.

- (8) a. **Joni-bo=ra** kenti keen-**kan**-ai
 person-PL.ABS=EV pot.ABS want-PL-IPFV
 ‘The people want the pot.’

²Following Shlonsky (2012), I assume that the phasal head in the C domain is Fin, the lowest C-related head under the cartographic approach, and the rest of the C-related projections serve as a phase edge, as they all constitute a single extended projection. Thus any head in the C domain can access the complement of C.

³A very small number of languages are reported to have an SR marker that tracks the coreference between the matrix subject and the embedded object (Clem, 2019; Baker and Camargo Souza, 2020; Camargo Souza, 2020), which Baker and Camargo Souza (2020) and Camargo Souza (2020) call *OS* marking. Baker and Camargo Souza (2020) argue that the pivot in *OS* marking is selected via downward Agree from v. Clem (2019), on the other hand, derives the pattern by using the idea of an insatiable probe, which agrees with all the DPs in the domain. While I do not go into the *OS* marking pattern, these analysis suggests that the rare *OS* pattern is also not incompatible with an Agree analysis of SR.

- b. Jose=ra ochiti-bo keen(*kan)-ai
 José.ABS=EV dog-PL.ABS want-(*pl)-IPFV
 ‘José likes the dogs.’ (Baker and Camargo Souza, 2020, (15), Shipibo)
- (9) a. [Rosa kenti keen-**ax**]=a maro-ke
 Rosa.ABS pot.ABS want-SS.PFV.ABS=EV sell-PFV
 ‘Rosa_i liked the pot but she_i sold it.’
- b. *[Rosa kenti keen-**ax**]=a toet-a iki
 *Rosa.ABS pot.ABS want-SS.PFV.ABS=EV break-PTCP AUX
 ‘Rosa liked the pot_i, but it_i broke.’
- (Baker and Camargo Souza, 2020, (16), Shipibo)

Thus, the idea that it is Agree that creates the long-distance relationship between the C head and the pivot is compatible with the empirical observations about the distribution of the pivot.

5.2.2 Anti-pivot selection

At the beginning of Section 5.2, I mentioned that one motivation for the Agree analysis of SR is that Agree allows the C head to access the pivot or the anti-pivot in a long-distance fashion. This point becomes more important in anti-pivot (matrix subject) selection, as the Agree-view for anti-pivot selection (Arregi and Hanink, 2019, 2021; Clem, 2019; Baker and Camargo Souza, 2020; Camargo Souza, 2020) contrasts with the view by McKenzie (2012), who claims that the SR-marked CP is in a local position to the matrix subject and directly composes with it. I thus show in this section that (i) the relationship between C and the subject can be long-distance, but (ii) the long-distance relationship is yet constrained by the locality conditions on Agree in (5).⁴

⁴I do not discuss the difference between the cyclic downward Agree view by Clem (2019) and the upward Agree view by Arregi and Hanink (2021). See Ch.6 for further discussion on upward Agree and cyclicity.

5.2.2.1 The long-distance relationship between C and the anti-pivot

Before going into the evidence for the long-distance relationship between C and the anti-pivot, let me briefly summarize the analysis from McKenzie (2012), who claims that the C head directly composes with the matrix subject as an anti-pivot. Let us take the Kiowa example in (10) to illustrate the derivation proposed by McKenzie. This sentence involves DS marking, as the embedded subject *John* and the matrix subject *Sam* do not corefer.

- (10) Sam ʔēm- k^hĩ:p̥: John ϕ- hé:ba=ẽ:
 Sam [3s:rfl] leave:PF John [3s] enter:PF=when.DS
 ‘Sam₁ left when John₂ entered.’ (McKenzie, 2012, 223, Kiowa)

First of all, McKenzie assumes that the adverbial CP with a DS marker in this example has the semantics in (11). (11) takes an entity x and returns a property of situations that are temporally proximal to the situation where John does not equal to x and John entered.

- (11) $\llbracket \text{when-DS John entered} \rrbracket$
 $= \lambda x \lambda s. \text{WHEN}(\iota s'. D(s') \& \text{John} \neq x \& \text{entered}(\text{John})(s'))(s)$
 (McKenzie, 2012, 228)

According to McKenzie, the adverbial clause adjoins to the matrix vP. As shown in (12), the adverbial clause combines with the matrix predicate via Event Identification and the resulting vP as a whole denotes a property of an entity. This property combines with the subject DP in the matrix Spec vP (i.e. the anti-pivot) by canonical functional application. This results in the meaning that the pivot and anti-pivot have different referents.

(12)

$$\llbracket v^\circ P_{VP} \rrbracket = \lambda x \lambda s. \text{agent}(x)(s) \ \& \ P(x)(s) : \langle e, \langle s, t \rangle \rangle$$

$$\lambda x \lambda s. \text{agent}(x)(s) \ \& \ \text{left}(x)(s) \ \& \\ \text{WHEN}(\iota s'. D(s') \ \& \ \text{John} \neq x \\ \& \ \text{entered}(\text{John})(s'))(s) : \langle e, \langle s, t \rangle \rangle$$

$$\lambda x \lambda s. \text{agent}(x)(s) \ \& \ \text{left}(x)(s) \\ \langle e, \langle s, t \rangle \rangle$$

$$\text{CP} : \langle e, \langle s, t \rangle \rangle \\ \lambda x \lambda s. \text{WHEN}(\iota s'. D(s') \ \& \ \text{John} \neq x \\ \& \ \text{entered}(\text{John})(s'))(s)$$

(McKenzie, 2012, 228; (212b))

However, this local composition view by McKenzie (2012) cannot be extended to some of the SR examples reported in other works. There are two kinds of examples that defy an McKenzie-type account.

Various scope possibilities for Adverbial SR clauses The first set of data that does not go well with the McKenzie-style account involves the scope of the adverbial SR clauses. Under the McKenzie style account, the position of the adjunction of those SR clauses should be fixed and cannot vary: it has to be always adjoined to vP before the introduction of the agent argument. However, Baker (p.c.) points out that in Panoan languages, SR clauses can semantically scope over or scope under the imperfective aspect in matrix clause. In the example in (13), the SS-marked adverbial clause scopes under the main clause imperfective/generic aspect. What it says is “it is generally the case that [[when they killed some food], they did this]”. On the other hand, in the last part of the example in (14) (“[[despite being an adult woman] you don’t do your things well]”), the SS marking *xon* occurs on the embedded clause “despite being an adult woman”, which adjoins to the clause “you don’t do your things well”, which contains an imperfective aspect marker with generic interpretation. (This clause itself is subordinated to the rest of the example by the complementizer “when”.) Here the interpretation of the last part is “(the women will laugh at you

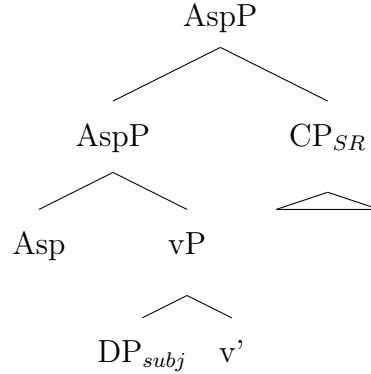
when) [despite being an adult woman, [it is generally the case that you don't do your things well]]", where the despite clause scopes outside of the generic quantification associated with the matrix imperfective marker. The interpretation is not that "(The women will laugh at you when) it is generally the case that when you become an adult woman, you don't do your things well".

- (13) [Jahuequi rete-Shon] ronqui acati-can-ai ...[bar-in
 something/food kill-SSPFV.ERG PRT do-PL-IPFV (sun-LOC
 racan-Shon-res pi-quin]
 put-SS.PFV.ERG-? eat-SS.IPFV.ERG
 'When(ever) they killed some food, they would do this: they laid it out in
 the sun, and ate it.' (Baker, p.c.; Shipibo)

- (14) Mi-bé ainbo-bo-ra mi-ki shiro-na-ke, mi-bé
 2-COM woman-PL:ABS-EV 2-DAT make.fun-PREV-CMPL 2-COM
 ainbo-baon-ra mi-a osan-na-ke, [[yozan i-xon-bi]
 woman-PL:ERG-EV 2-ABS laugh.at-PREV-CMPL adult.woman be-PSSA-EM
 mi-n jawéki a-kin jakóma-[a]i-tian]
 2-GEN thing do.T-SSSA good:NEG:di.T-S-DS
 'Beware that the women around you make fun of you, beware that the women
 around you laugh at you, when despite being an adult woman you don't do
 your things well.' (Valenzuela, 2003, 292)

Under the assumption that a scope difference corresponds to a difference in the attachment site, what these data show is that SR clauses are not always adjoined to the same position. They sometimes can be adjoined to a position above the matrix imperfective aspect as represented in (15), or they can be adjoined below it.

(15)



Crucially, under the standard assumption that the subject is introduced in Spec vP, the structure in (15) is not compatible with the account by McKenzie, given that the SR-marked CP is adjoined above AspP and hence above vP: the SR-marked adjunct clause is adjoined to a position too high to combine with the subject DP via canonical functional application. Thus, the McKenzie-style account, which requires the adverbial clause to always adjoin to vP, does not straightforwardly expect this scope variation. On the other hand, the idea that the SR-C accesses the anti-pivot via upward Agree can correctly predict the possibility of SR marking under the structure in (15): under the assumption that the matrix subject moves to Spec TP, an upward probe from the SR-C can straightforwardly find the matrix subject.

SR in Complement clauses Another piece of evidence from against the local composition account is SR-marking on complement clauses, not adverbial clauses, as argued by Arregi and Hanink (2021). Recall that some languages have SR markings on the complement clauses of the matrix verbs. Washo exemplifies this point as repeated in (16). Arregi and Hanink (2021) point out that, in such sentences, the SR clause occurs too low to be predicated of the matrix subject together with the matrix predicate, as shown in the structure in (17).⁵

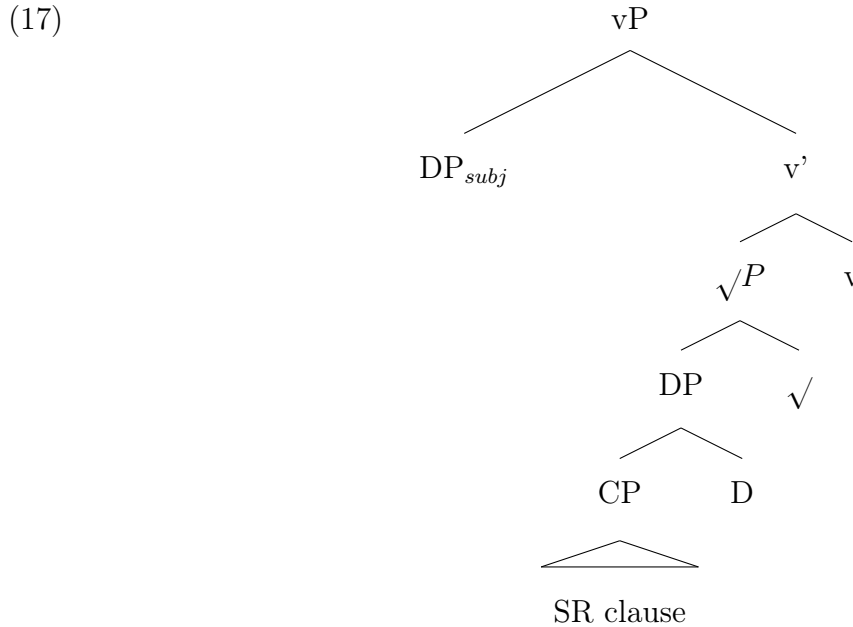
⁵The embedded clause has a D head on it in the structure in (17), as the embedded clause in Washo contains a nominalizer.

- (16) a. [Emily_i t'íšináŋaw k'-éʔ-i-š-ge] l_j-ášašé:s-šemu-yi
 Emily singer.good 3-be-IND-DS-NM.ACC 1-know-really-IND
 'I know well that Emily is a good singer.'

(Arregi and Hanink, 2019, 1, Washo)

- b. [Adele [[daláʔak ʔ-ǵi-yi -Ø] -ge] hámup'áy-e:s-i]
 Adele mountain 3-see-IND -SS -NMLZ1 3.forget-NEG-IND
 'Adele remembers that she saw the mountain.'

(Arregi and Hanink, 2018, 39, Washo)



This structure suggests that the SR clause is not in a position to directly compose with the matrix subject. Thus, the complement SR clauses in (16) provide counter-evidence to the local composition account.⁶⁷

Washo is not the only language that has complement SR clauses. Choctaw also

⁶Baker (2021) gives an alternative account to SR-markings on complement clauses. He claims that there is a perspectival operator in the complement clauses that is controlled by the matrix subject, and it is this operator that serves as the anti-pivot. Under such a view, the relationship between C and the anti-pivot is not necessarily long-distance.

⁷Yimei Xiang (p.c.) points out that a semantic approach to anti-pivot selection can account for the SR marking on complement clauses by assuming a type-shifting operation on the matrix predicate: adopting McKenzie's assumption that an SR-marked clause P is of type $\langle e, st \rangle$, one can posit a type-shifting operation which shifts the matrix verb to the form $\lambda P_{e,st}.\lambda x.[V](P(x), x)$. Note, however, that such an account does not straightforwardly capture the observation from Baker and Camargo-Souza (in press) discussed in the next section that the syntactic phasehood of the complement clause affects the possibility of SR marking.

has this pattern, as shown in (18). In fact, the typological surveys by Jacobsen (1983) and McKenzie (2015) suggest that SR marking on complement clauses is not a rare pattern, although not every language allows it.

- (18) a. John-at anokfilli-h [pisachokma-ka-t]
 John-NM think-TNS good-looking-COMP:SS
 ‘John_i thinks that he_i is goodlooking.’
 b. John-at anokfilli-h [pisachokma-ka-N]
 John-NM think-TNS good-looking-COMP-ds
 ‘John_i thinks that he_j is goodlooking.’ (Broadwell, 2006, 269)

Thus, the cross-linguistically observable pattern supports the Agree analysis of the anti-pivot selection.

5.2.2.2 Conditions for Agree are at work

The data we have seen so far show that the SR-marked clauses do not always have a directly local relationship to the anti-pivot, suggesting that some theoretical device that allows the C head to access the anti-pivot at a distance is needed, such as Agree. On the other hand, we can observe that the long-distance relationship is still constrained by the locality conditions on Agree.

First, it has been noted that an SR marker in a multiply embedded clause can select the immediately higher subject as its anti-pivot, but not the ones higher than that. For example in (19), the lowest clause is marked with DS, because the subject of the lowest clause refers to the dog, while the subject of the immediately higher clause refers to the woman.

- (19) [[súku? baŋáya ʔ-éʔ-o -š -ge] daʔmóʔmoʔ bóŋi-yi -š -gi]
 dog outside 2-COP-IND -DS -NMLZ1 woman 3.call-IND -DS -NMLZ1
 p’á:š-ug-i
 3.enter-hither-IND
 ‘The dog who was outside who the woman called came in.’

(Arregi and Hanink, 2021, (17))

Note that the subject of the highest clause also refers to the dog and, if it can serve as the anti-pivot for the SR marker on the lowest clause, we expect SS marking in the lowest clause, contrary to what we observe. This shows that the anti-pivot selection is sensitive only to the immediately higher clause. This is compatible with the Intervention condition in (5-b) and the Phase condition in (5-c): it follows from the Intervention condition in the sense that only the closest subject serves as the pivot.⁸ It is compatible with the Phase condition in the sense that there is a clear C phase boundary in between the SR-marked C (C_{SR} in (20)) and the subject of the non-immediately higher clause (subject₁ in (20)), while no C boundary exists between the immediately higher subject (subject₂ in (20)) and the SR-marked C.

(20) [subject₁ ... [C ... subject₂ ... [C_{SR} ...]]]

One might wonder whether the vP phase in the immediately higher clause does not block Agree between the SR-marked C and the subject of the immediately higher clause in (i). I assume that the SR-marked C accesses the subject while the subject is in Spec vP, which is still visible from the SR-marked C. The same thing can be said for SR-marking on complement clauses.⁹

Further evidence for the relevance of the Phase condition comes from Baker and

⁸Arregi and Hanink (2018, 2021) note that an SR marker in Washo ignores non-subject elements, even if it intervenes between the matrix subject and the SR marker, as exemplified by (i). In (i), the embedded subject corefers with the matrix object, but a DS marker appears nonetheless.

(i) [baša:ʔ té:bił-a l-í:gi-yi -š -ge] t'éliwhu l-éšil-i
 book table-OBL 1-see-Ind -DS NMLZ1 man 1OBJ-give-IND
 'The man gave me the book I saw on the table.' (Arregi and Hanink, 2018, 42, Washo)

They derive this subject-orientedness by arguing that the probe is relativized to nominative DPs.

⁹This approach has to account for the sensitivity to nominative case of the probe as discussed in fn. 8, although I do not try to solve the issue here. Alternatively, one can follow Baker (2021), discussed in fn. 6 above, and consider that what serves as the anti-pivot in SR marking on a complement clause is an operator in the left periphery of the complement clause.

Camargo-Souza (in press). In Yawanawa, some complement clauses, including the one in (21-a) comes without the phasal C head. This can be seen by the pattern of case assignment: the matrix subject in (21-a) has ergative case marking. This case marking is conditioned by the presence of an object in the embedded clause, as can be shown by the contrast with (21-b). That is, the ergative marking on the matrix subject is triggered by the presence of the object in the embedded clause. This is expected if (i) ergative marking is assigned to a DP which c-commands another DP in the same phase and (ii) there is no C phase in the complement clauses in (21).

- (21) a. shayaN [yuma pitxaN-kiN] tapiN-a
 Shaya.ERG fish cook-SS.IPFV.ERG know-PFV
 ‘Shaya knows how to cook fish.’
- b. Shaya [saik-i] tapiN-a
 Shaya.NOM sing-SS.IPFV.NOM know-PFV
 ‘Shaya knows how to sing.’ (Baker and Camargo-Souza, in press, (4))

Crucially, they report that Yawanawa allows SR marking on complement clauses only with this type of non-phasal clauses. This observation follows if (i) the SR marker in Yawanawa is not the C head itself but a head below the phasal C head, and (ii) the phrasal C head blocks Agree between the SR marker and the subject of the higher clause.

Thus, overall, the anti-pivot selection can be done at a distance, but is still sensitive to the locality conditions imposed on Agree. This fits nicely with the idea that the anti-pivot selection as well as pivot selection is done via Agree.

	piv \supset anti-pivot	piv \subset anti-pivot	languages
SS-for- $=$	DS	DS	Choctaw (Broadwell, 2006, Muskogean) Huallaga Quechua (Weber, 1989, Quechua) (Pima (Langdon and Munro, 1979, Uto-Aztecan))
SS-for-p \supset ap	SS/DS	DS	Gokana (Comrie, 1983) ¹⁰
	SS	DS	Diyari (Austin, 1981) Mparntwe Arrernte (Wilkins, 1988) Shipibo (previous temporal marker) (Valenzuela, 2003)
SS-for-p \subseteq ap	DS	SS	Yawanawa (Camargo-Souza, p.c.)
SS-for-overlap	SS/DS	SS/DS	Washo (Arregi and Hanink, 2019) Kashaya (Oswalt, 1983)
	SS	SS	Huichol (Comrie, 1983)

Table 5.1: The typology of SR marking in overlapping reference

‘Adele_i and Emily_j are talking while Emily_j is sitting.’

- b. [Adele ida Emily wagayáy-a- $\{\check{s}, \emptyset\}$] Emily bašaʔ-i
 [Adele and Emily 3.talk-DEP- $\{\text{DS}, \text{SS}\}$] Emily 3.write-IND
 ‘Emily_i is writing while Adele_j and Emily_i are talking.’

(Arregi and Hanink, 2019, (14)-(15))

What is interesting here is that languages differ as to how their SR markers treat such overlapping reference cases, as shown in Table 5.1. Choctaw (Broadwell, 2006) is what I call an *SS-for- $=$* language, where DS markers have to be used for examples with any kind of overlapping reference. In the examples in (24), whether the pivot referent includes the anti-pivot referent or the anti-pivot referent includes the pivot referent, the DS marker \tilde{o} has to be used and the corresponding SS markers *oosh* is not available.¹¹

- (24) a. Akaka’ nipi’ isht ala-li-tok- \tilde{o} , oklah il-ipa-tok
 chicken meat INSTR arrive-1sI-PT-PART:DS PLUR 1PI-wat-PT
 ‘I brought chicken and we ate.’
 b. Hi-tok-oosh 1930-akō Tucker pit ok-ii-wiha-ttook.
 do-PT-PART:SS 1930-CON:AC Tucker away PLUR-1PL-move-DPAST
 Makaa-tok-oosh 1936-akō Pearl River wiha-t
 do:so-PT-PART:SS 1936-CON:AC Pearl River move-PART

¹⁰Comrie (1983) notes that Gokana diverges from other SR systems in several respects and characterizes it as non-prototypical as a SR language.

¹¹Although the English translation takes the form of conjoined clauses, I consider this sentence to involve an embedding structure, given that Broadwell (2006) mentions that SR marking in Choctaw only appears in embedded clauses.

il-ala-ttook-**õ** ahátta-lish ohmi-h
 1PI-arrive-DPAST-PART:DS exist:HN-1sI-PART:SS do-TNS
 ‘And in 1930, we moved to Tucker. In 1936, we moved to Pearl River,
 and I live (there) now.’ (Broadwell, 2006, 265)

In Shipibo-Konibo (Valenzuela, 2003), on the other hand, the SS marker *xon* is used in clauses describing an event preceding the event in the matrix clause when the pivot includes the anti-pivot as shown in (25-a), but the DS marker *ketian* has to be used when the anti-pivot includes the pivot as shown in (25-b).¹² I call this type of languages *SS-for-p \supseteq ap languages*.

- (25) a. (No-a) jema-n nokó-**xon**-ra e-a koshi-bo
 1p-ABS village-LOC meet:MID-PSSA-EV 1-ABS chief-PL:ABS
 bena-i ka-[a]i
 search-SSSS go-INC
 ‘When we arrive at the village, I will look for the authorities.’
- b. E-n wame chachi-**ke-tian**-ra jatí-xon-bi no-n
 1-ERG piche:ABS drive-P-DS-EV altogether-A-EM 1p-ERG
 pi(-kan)-ai
 eat-PL-INC
 ‘Once/when I drive a piche, we will eat altogether.’

(Valenzuela, 2003, 431-432)

What I call an *SS-for-p \subseteq ap language* is the converse of an *SS-for-p \supseteq ap language*: it SS-marks the cases where the anti-pivot includes the pivot while DS-marks the cases where the pivot includes the anti-pivot. It is known that this type of language is much rarer than languages of the other types (Wiesemann, 1982; Stirling, 1993), but the literature suggests the possible existence of such languages (Cocopa, Maidu (McKenzie, 2015) / Yankunytjatjara (Stirling, 1993)). Furthermore, Livia Camargo-Souza (p.c.) suggests from her field notes that Yawanawa (a Panoan language), at least with some complementizers, falls into this pattern as shown in (26). In (26-a),

¹²The SS marker *xon* is the form used when the matrix subject is ergative. The form *ax* is used as an SS marker instead when the matrix subject is absolutive. See also (28) and fn.15 below.

where the anti-pivot includes the pivot, the SS marker must be used. On the other hand, in (26-b), where the pivot includes the anti-pivot, the DS marker must be used.¹³

- (26) a. [*pro* Txini nuku-**ashe**] nũ ka
 pro Txini meet-SS we go.PFV
 ‘I met Txini and we (I+Txini) left.’
- b. [Nũ ka-i-**nũ**] ě saik-ãin-a
 we go-IPFV-DS I sing-going-PFV
 ‘We(I+Txini) were going and I was singing.’

Finally, an *SS-for-overlap language* is exemplified by Washo as we saw above in (23), where the overlapping reference can be marked with SS independently of the direction of inclusion.

Note that among the SS-for- $p \supseteq ap$ and SS-for-overlap languages, a further distinction has been observed about the optionality of SS marking in inclusive cases.¹⁴ For example, we already saw that Washo, an SS-for-overlap language, allows optionality between SS and DS marking in inclusive cases in (23) above. Although Arregi and Hanink (2019, 2021) note that there are no clear cases of languages that exhibit obligatory SS marking in inclusive cases, in Huichol, another SS-for-overlap language, Comrie (1983) notes that SS marking is required in the example in (27).

- (27) a. taame te- haataʔazia-**ka**, nee ne- petia
 we 1PL arrive-SS I 1SG leave
 ‘When we arrived, I left.’
- b. nee ne- haataʔa-**ka**, tanaiti te- pekii
 I 1SG arrive-SS together 1PL leave
 ‘When I arrived, we left together.’ (Comrie, 1983, 26-27, Huichol)

¹³It has to be noted that the SR marker in (26-a) is a perfective one while the one in (26-b) is an imperfective one. This leaves open the possibility that the perfective SR marker shows a SS-for- $p \supseteq ap$ behavior and the imperfective SR marker shows a SS-for- $=$ behavior. Such intra-language variation is discussed shortly.

¹⁴While SS-for- $p \supseteq ap$ languages could potentially have a parallel distinction, it is not possible to tell given the rarity of SS-for- $p \supseteq ap$ languages.

The typology in Table 5.1 is about how languages behave with respect to cases where inclusive relationship exists between the two subjects. There is one more logically possible relationship between two DPs, which I have not discussed: the non-inclusive overlapping relationship. For example, when one DP refers to a group consisting of John and Mary and the other DP refers to a group consisting of John and Bill, the two DPs overlap but are not in inclusive relationship in either direction. While some reports exist about non-inclusive overlap cases (Broadwell, 2006; Comrie, 1983), not many examples of this sort are available in the literature yet. I leave the typological generalization about non-inclusive overlap open here. While my analysis below might need slight adjustments depending on the further empirical findings, nothing in my core proposal about the Agree feeding into semantic predicates depends on any assumptions about non-inclusive overlap cases.

While we have seen cross-linguistic variation with regard to how to deal with overlapping reference, similar variation can be observed even within a language. Valenzuela (2003) reports that in Shipibo there are different SR markers depending on what the temporal relationship between the events denoted by the two clauses is, and depending on the transitivity of the matrix clause. Below are the SR marking patterns under the inclusive relationship between the two subjects for the adjunct clause denoting a preceding event to the matrix clause and for the adjunct clause denoting a following event to the matrix clause. Both are from the paradigm used for an intransitive matrix clause.¹⁵ The tables in (28) show that the SR markers for the dependent clauses denoting a previous event show SS-for- $p \supseteq ap$ behavior as we saw above in (25), while the SR markers of the dependent clauses denoting a following event show SS-for- $=$ behavior.¹⁶

¹⁵The paradigm becomes more complex when we consider the forms for the SR markers used when the matrix clause is transitive. Specifically, the person features of pivot and anti-pivot affect the choice of SR markers in those cases, as also observed in other languages (Comrie, 1983; Nevins and van Urk, 2019). I do not include the cases with transitive matrix clause here and do not examine the effect of the person features in detail.

¹⁶What Valenzuela (2003) considers to be a following-event-denoting clause marker is argued to

- (28) a. previous-event-denoting dependent clause / intransitive Matrix clause
- | | |
|------------------------|-----------------------|
| piv \supset anti-piv | SS (- <i>ax</i>) |
| piv \subset anti-piv | DS (- <i>ketian</i>) |
- b. following-event-denoting dependent clause / intransitive Matrix clause
- | | |
|------------------------|--------------------|
| piv \supset anti-piv | DS (- <i>non</i>) |
| piv \subset anti-piv | DS (- <i>non</i>) |
- (the summary of the pattern from Valenzuela (2003, 430, Table 9.2))

These cross-linguistic / intra-language variations suggest that (i) the SR markers can encode logically complex relationship between the two DPs and (ii) each lexical SR marker decides which specific relationship between the pivot and the anti-pivot it marks. This means that there have to be mechanisms that relate the result of Agree to the description of the logical relationship specified by each lexical item. In Section 5.4, I claim that we can naturally apply the idea that Agree can provide arguments to a semantic predicate to this case. But before going into that, I review what the previous literature has said to capture SR marking in overlapping reference cases.

5.3.2 Previous approaches to overlapping reference

It has been a long-standing issue in the SR literature how to account for the overlapping reference case. In this section, I review how some previous studies have addressed to this issue.

5.3.2.1 The “pick-one” approach

Arregi and Hanink (2018, 2019, 2021) have an Agree-based analysis to Switch Reference. To derive the canonical coreference / disjoint reference pattern, they propose that the C head probes both downward and upward for index features [ID] and

be a purposive / irrealis clause marker by Baker and Camargo Souza (2020). As the detailed nature of this clause marker does not affect the discussion here, I stick to the description by Valenzuela (2003).

multiple-agrees (Hiraiwa, 2001, 2005) with the pivot and the anti-pivot. As a result, two index features are copied onto the embedded C. When the two DPs have distinct referential indices, two different index features are copied onto one C, resulting in a feature conflict on C. Following Harbour (2011), they assume that vocabulary insertion is sensitive to such feature conflict. Specifically, they assume vocabulary insertion rules like (29). The rule in (29-a) states that a certain form of C is inserted when there is a feature conflict on that C. The rule in (29-b) states that a different form is inserted elsewhere. The form for the feature conflicting C is what is called the DS marker and the elsewhere form is what is called the SS marker.

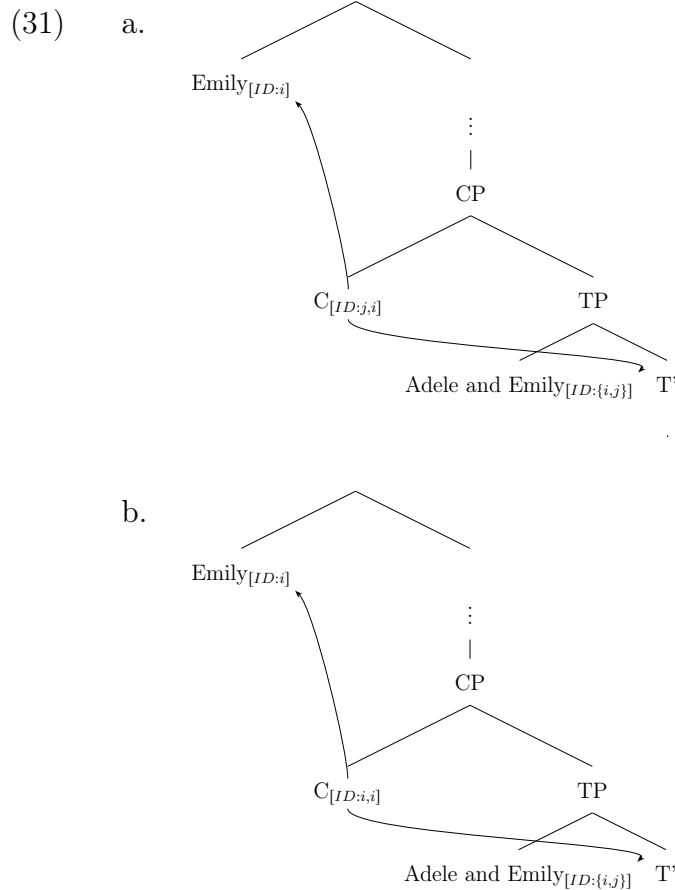
- (29) a. $[_{C}ID:i, ID:j] \leftrightarrow \text{DS-marker (where } i \neq j)$
 b. $[_C] \leftrightarrow \emptyset \text{ (elsewhere)}$

In order to extend the analysis to the inclusive pattern in Washo, an SS-for-overlap language where SS marking optionally appears whether the referent of the pivot is the superset of the referent of the anti-pivot or vice-versa, Arregi and Hanink (2019, 2021) propose the following idea.¹⁷ They assume that a plural DP has a set of index features. In Washo, when a probe for the index feature finds a DP with a set of multiple index features (i.e. a plural DP), it can arbitrarily pick one of the index features and copy it without copying the rest. For example, the C head in the example in (30) probes downward and finds the DP with the feature $[ID : i, j]$, that is, the DP *Adele and Emily*. This C has an option to copy the index feature j originally from Adele or the index feature i from Emily. At the same time, it gets the index feature i of Emily from its upward probe. This results in an optional valuation of C as shown in (31). If C gets j from its downward probe, C gets valued as $[ID : j, i]$ as shown in (31-a) and the DS marker as a conflict form is inserted as shown. Conversely, if C gets i

¹⁷Arregi and Hanink (2021) propose another potential analysis for the inclusive pattern. I discuss it in Section 5.4.4.

from its downward probe, C is valued as $[ID : i, i]$ as shown in (31-b) and the SS marker as an elsewhere form is inserted. The same “pick-one” process occurs for the upward probe, when the anti-pivot is a plural DP. Thus, either direction of inclusion optionally allows SS marking, deriving the optional SS-for-overlap pattern.

- (30) [Adele ida Emily wagayáy-a- $\{\check{s}, \emptyset\}$] Emily bašaʔ-i
 [Adele and Emily 3.talk-DEP- $\{\text{DS}, \text{SS}\}$] Emily 3.write-IND
 ‘Emily_i is writing while Adele_j and Emily_i are talking.’

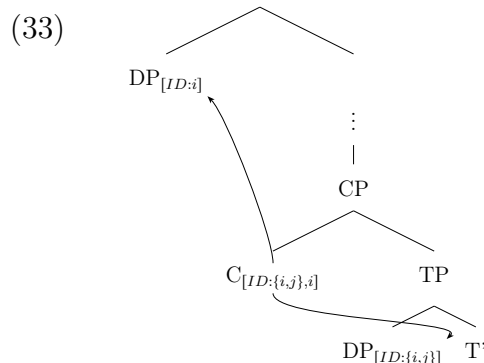


A&H further argue that the possibility of this “pick-one” type of Agree is parameterized as shown in (32). In SS-for-overlap languages like Washo, Agree copies exactly one index feature, resulting in the pick-one pattern I have just shown. On the other hand, in SS-for= languages like Choctaw, which require exact equality for SS

marking, Agree copies all the index features on the DP as shown in (33).¹⁸ Thus, in SS-for- $=$ language, overlapping reference necessarily leads to a feature conflict on C.

(32) ID-Probe Parameter

Agree copies all/exactly one index in the value of [ID] in the Goal.



Nevins and van Urk (2019) further extend this idea to capture SS-for- $p \supseteq ap$ languages. In addition to the theoretical device proposed by Arregi and Hanink (2019), Nevins & van Urk propose the redundancy parameter in (34). SS-for- $p \supseteq ap$ languages are like SS-for- $=$ languages in terms of the ID-probe parameter in (32). That is, they copy all the index features on the goal. However, in SS-for- $p \supseteq ap$ languages, but not in SS-for- $=$ languages, the redundancy parameter in (34) is on. Let us take as an example the data in (35) of a preceding event clause in Shipibo, which shows an SS-for- $p \supseteq ap$ behavior. Recall that an SS marker *xon* occurs in (35-a) where the referent of the pivot includes the referent of the anti-pivot. The structure of (35-a) is represented in (36-a). On the other hand, a DS marker *ketian* occurs in (35-b), where the referent of the anti-pivot includes the referent of the pivot. The structure of (35-b)

¹⁸I represent multiple index features from the same plural DP as a set (e.g. $\{i, j\}$), distinguishing them from the features valued by a different DP. A&H does not seem to make this distinction and represent the ID value on C in (33) as $[i, i, j]$, for example. However, without this distinction, A&H incorrectly predict DS marking in SS-for- $=$ languages like Choctaw when the goals are plural, even if they exactly corefer with each other. This distinction between multiple indices from one DP and the multiple indices from different DPs is also made in Nevins and van Urk (2019) introduced below, although their notation is slightly different from what I adopt.

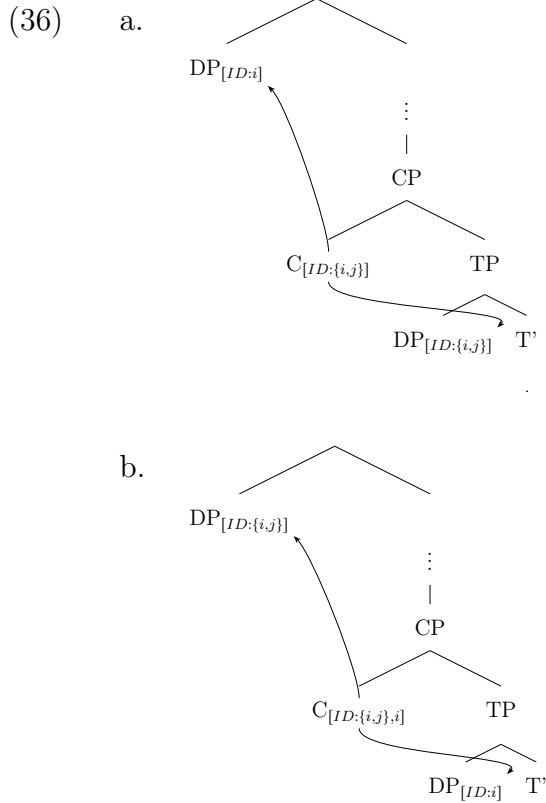
is represented in (36-b). Assuming that the downward probe for pivot occurs before the upward probe for anti-pivot, the probe first agrees with the pivot $DP_{[ID:\{i,j\}]}$ and gets valued by its ID features $[ID : \{i, j\}]$. Then C moves on to the Agree with the anti-pivot $DP_{[ID:i]}$. However, in (36-a), the value on the anti-pivot is not copied onto C because it is a subset of the ID features already held by C. Thus, there will be no feature conflict in this case, resulting in the SS marking in (35-a). On the other hand, in an anti-pivot \supset pivot context as shown in (35-b) and (36-b), the probe is first valued by the index features on the pivot. This time, the value of the anti-pivot is still copied on to C leading to the DS marking, as the value on the anti-pivot is not the subset, but the superset, of the value on C.

(34) Redundancy parameter

A probe P will not copy a feature F:val if that value is a subset of a value for F already present on P. (Nevins and van Urk, 2019)

- (35) a. (No-a) jema-n nokó-**xon**-ra e-a koshi-bo
 1p-ABS village-LOC meet:MID-PSSA-EV 1-ABS chief-PL:ABS
 bena-i ka-[a]i
 search-SSSS go-INC
 ‘When we arrive at the village, I will look for the authorities.’
- b. E-n wame chachi-**ke-tian**-ra jatí-xon-bi no-n
 1-ERG piche:ABS drive-P-DS-EV altogether-A-EM 1p-ERG
 pi(-kan)-ai
 eat-PL-INC
 ‘Once/when I drive a piche, we will eat altogether.’

(Valenzuela, 2003, 431-432)



While this analysis of overlapping reference derives SS-for=, SS-for- \supseteq and SS-for-overlap languages (i.e. all the common types), there are several typological problems with this analysis of inclusion. First, if we allow the pick-one type of Agree as proposed by A&H, it is predicted that DS marking is possible when the pivot and the anti-pivot refer to the same plural entity in SS-for-overlap languages. Suppose we have a pivot and an anti-pivot which both refer to the plural entity $\{i, j\}$. If a language copies exactly one feature from each DP, arbitrarily picking one, the probe is optionally valued as shown in (37). This prediction does not seem to be correct, however. Although it would be notable if such a pattern exists, no DS marking is reported for the co-referring plural subject. For example, Martathunira is an SS-for-overlap language as shown in (38): it allows SS marking in both direction of inclusion. Dench (1988), however, reports SS marking in cases with co-referring plural DPs without any hint of optional DS marking.

(37) $[DP_{[ID:\{i,j\}]} \dots C_{[ID:i,j]/[ID:i,i]}] DP_{[ID:\{i,j\}]}$

(38) a. $piv \supset anti-piv$

Nganaju mimi warrirti-i panyu-ma-lalha ngaliya puni-lu
 1sg.GEN uncle spear-ACC good-CAUS-PAST 1.dl.exc.NOM go-PURP.SS
 mrla-a manku-**lu**
 meat-ACC get-PURP.SS
 ‘My uncle fixed up a spear so we two could go to get meat.’

b. $piv \subset anti-piv$

Mgaliya nganaju mimi nhuwa-lalha tharnta-a nganaju mimi
 1dl.exc.NOM 1sg.GEN uncle spear-PAST kangaroo-ACC 1sg.GEN uncle
 mungka-**ru**
 eat-PURP.SS
 ‘We two, my uncle and me, speared a roo so my uncle could have a feed.’

(Dench, 1988, 117)

(39) Kayarra kanarri-lha nganaju nhawu-**lu**
 two come-PAST 1sg.ACC see-PURP.SS
 ‘Two people came to see me.’

(Dench, 1988, 117)

Also, as A&H themselves note, their system predicts that DS marking is always optional in the inclusion cases in SS-for-overlap languages. When a language has a “pick-one” strategy, there is always a possibility that the index shared by the other DP is picked by the probe. We already saw above, however, that there are languages that seem to exhibit the obligatory SS marking in inclusion cases, such as Huichol (Comrie, 1983).

Furthermore, given that the typological variation is characterized as parametric variation in the Agree mechanism in (32) and (34), this line of analysis predicts that each language should be consistent about the treatment of inclusive patterns. We already saw in Section 5.3.1 that at least some languages are reported as having intra-language lexical variation with respect to the treatment of inclusion.

Given these considerations, I consider a “pick-one” Agree analysis to be unsatis-

factory in capturing the typological variation.¹⁹

5.3.2.2 Partial binding approach

Another common view of SR is that it involves binding in addition to Agree/agreement (Finer, 1985; Watanabe, 2000; Baker and Camargo Souza, 2020). Finer (1985) and Watanabe (2000) claim that the SS marker is like an anaphor in requiring a coreferential binder in the matrix clause, while the DS marker is like a pronoun in banning a coreferential binder from appearing in the (local) matrix clause. Baker and Camargo Souza (2020) also claim that the SS marker establishes the binding relationship between the pivot and the anti-pivot, although in a slightly different way from Finer (1985) or Watanabe (2000). According to B&C-S, the SS marker first creates a referential dependency between the pivot and the anti-pivot. Then either the pivot or the anti-pivot is QR-ed to bind into the other. Thus, while (the feature of) the anti-pivot is always the binder for the approach by Finer (1985) and Watanabe (2000), either can bind the other in the approach by Baker and Camargo Souza (2020).

With this background, B&C-S offer a potential account for the overlapping reference pattern in binding approaches. It is known that there is a phenomenon called *partial binding*, where the binder is a subset of the bindee (Rullman, 2004; Kratzer, 2009). For example, (40-a) has the interpretation in (40-b). Thus, under either variation of the binding approaches, it is possible to derive (at least some) overlapping reference patterns by saying that partial binding between the two DPs is at work in SS marking in such cases. (See also Finer (1984) for a similar idea.)

- (40) a. Only I mentioned our AV capabilities to the conference selection committee.
- b. *I was the only person x such that x mentioned the audiovisual capabilities of x and her group* (Kratzer, 2009, 229)

¹⁹See Camargo Souza (2020) for other problematic predictions from this approach.

The aim of Baker and Camargo Souza (2020) was not to capture the full typology, but we can try to see what typological predictions it makes. First of all, this approach derives the parital coreference pattern from the general mechanism of binding, independently of each language / SR-marker. Thus, this approach to overlapping reference does not straightforwardly expect the presence of cross-linguistic variation with regard to how to treat cases with overlapping reference. Especially, the existence of SS-for= languages, where the overlapping reference never leads to SS marking, is not expected in any of the binding approaches combined with the possibility of partial binding.

Furthermore, there is an issue with the other types of languages as well. Partial binding is asymmetric in the sense that, while the bindee can be the *superset* of the binder, it cannot be the *subset* of the binder. For example, the example in (41) does not have a binding interpretation compatible with the context. That is, it cannot be interpreted as “the speaker and the speaker’s family are the only people that the father from their own family wins the award”.

- (41) *Context:* The speaker applied for the best-dad award. The speaker and his family are confident that he will win. But the other applicants as well as their family members are not so confident about themselves. (Instead, they all think the speaker would win the award.)

Only we_{S,S's family} think I would win the award.

This asymmetry constrains the predictions about overlapping reference patterns in a different way for the Finer-Watanabe approach and for the B&C-S approach. First, recall that, under the approach by Finer (1985) and Watanabe (2000), (the feature of) the anti-pivot always binds (the feature of) the pivot, but not the other way around. Given the asymmetry of partial binding in (41), these approaches combined with the possibility of partial binding most straightforwardly predict that all the languages

should allow SS marking when the pivot includes the anti-pivot, but not the other way around. This means that SS-for- $p \subseteq ap$ languages and SS-for-overlap languages are not expected.²⁰ On the other hand, in B&C-S, we saw that either pivot or anti-pivot can bind the other. Thus, B&C-S approach most straightforwardly predicts that all the languages are SS-for-overlap languages where SS marking is allowed no matter what the direction of the inclusion. Given the discussion so far, the binding approach does not expect the full range of typological variation we saw in Table 1.

5.3.2.3 Discourse anaphor approach

Camargo Souza (2020) proposes another approach to overlapping reference. While she assumes that the SS marker establishes the anaphoric relationship between the pivot and the anti-pivot similarly to Baker and Camargo Souza (2020), she implements the idea not by using QR, but by assuming that, when an anaphoric relationship is established between the two DPs by the SS-marker, the one linearly to the right picks up a discourse referent introduced by the one to the left. Crucially, when the DP to the left introduces multiple referents to the discourse, the other DP, which anaphorically depends on it, can refer to any of those discourse referents, depending on pragmatic saliency. Thus, taking a hypothetical example in (42), the pivot (i.e. the embedded subject) introduces three discourse referents, A, B and the plural entity $A \oplus B$. Any one of these options can be picked up as a discourse referent and be anaphorically related to the Anti-pivot by the SS marker.

(42) When [A and B] arrived-SS, A/B/they went to sleep.

As the choice among these options depends on the pragmatic saliency, DS marking

²⁰Finer (1984) asserts that partial binding is possible in either direction in SR, and the possibility of partial binding differs in each language. This idea makes a prediction that there is cross-linguistic variation with regard to the possibility of (40-a) or (41) and that variation correlates with the variation in the overlapping reference cases in SR. Finer (1984) does not provide the data of the form in (40-a) or (41) in SR languages examined there and thus I leave this possibility open here.

as shown in (43) is possible, for example, as long as A is not pragmatically salient enough to serve as a discourse referent.

(43) When [A and B] arrived-DS, A went to sleep.

As Camargo Souza (2020) suggests, this account most straightforwardly makes a different typological prediction from the ones made by previous approaches: overlapping reference should be possible as long as the left one of the pivot / the anti-pivot includes the right one, but not the other way around. I do not examine this prediction against cross-linguistic data, as I do not have enough data to do so.²¹

What I am more concerned here is that it does not predict the SS-for= languages (or SS-for= SR markers such as the following-event denoting adverbial C in Shipibo in (28)). Under her account, SS marking in overlapping reference contexts is available by default as a pragmatic option. That leaves unaccounted the observations that some languages and some SR-markers do not allow SS marking in either direction.

5.3.3 Interim Summary

While I have reviewed three different approaches to overlapping reference, the shared difficulty among these approaches is to derive the full cross-linguistic / intra-linguistic variations, given that they try to derive the variation pattern from a general principle independent of each SR-marker. Aiming for an account by an independent general principle is a reasonable attempt. First, such an approach would be theoretically more interesting and desirable than attributing the variation to a property of each lexical item, as long as it captures all the empirical data. Second, note that all the approaches reviewed in this section utilize Agree or agreement in some way in terms of the selection of the pivot and/or the anti-pivot. As there has been no standard theoretical device to let each lexical item encode the logically complex relationship

²¹See Camargo Souza (2020, 266-267) for a relevant discussion on the data from Washo.

between the goals of Agree, it has not been possible to encode the relationship on each SR marker. However, we now saw that these previous approaches do not fully capture the empirical observations. Furthermore, I have proposed the idea that the result of Agree can be fed into some semantic predicates. In the next section, I apply this idea to the analysis of SR and show that it can derive the typological variation within an Agree approach to SR.

5.4 A new proposal

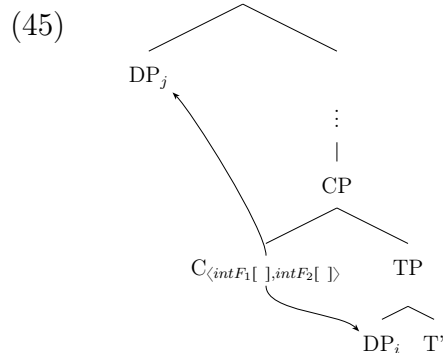
In this section, I extend to the analysis of SR the idea that Agree can feed arguments to semantic predicates. I start with the SS marker that requires exact coreference and the DS marker that appears when there is no exact coreference (i.e. the SR markers in SS-for-= languages) and extend the analysis to the overlapping reference cases.

5.4.1 The core mechanism

Following the previous studies on SR (Arregi and Hanink, 2019, 2021; Nevins and van Urk, 2019; Baker and Camargo Souza, 2020; Camargo Souza, 2020), I assume that the embedded C head agrees with the pivot and the anti-pivot, although I deviate from those studies in some of the detailed assumptions. More specifically, as I did for Japanese Object Honorifics, Japanese Benefactives and Japhug Direct/Inverse constructions, I assume that the embedded C head has two distinct probes, one of which goes downward and the other of which goes upward. These probes look for index features and get valued by the index features of the goal DPs. I continue to assume that these index features are binder indices and, thus, the DPs that are co-indexed are co-bound. I do not necessarily assume that plural DPs bear a set of multiple index features, although such an assumption is not incompatible with the current account either. These probes are unvalued but interpretable features and can

be represented as shown in (44). As a result of Agree as represented in the structure in (45), the probes on C are valued as shown in (46). As these probes are interpretable features, they survive until LF, not getting deleted at the point of spell-out.

$$(44) \quad \langle \text{int}F_1[\], \text{int}F_2[\] \rangle$$



$$(46) \quad \langle \text{int}F_1[i], \text{int}F_2[j] \rangle$$

A notably distinct aspect of my proposal from the other Agree-based approaches is the idea that the lexical meaning of each C specifies the exact set-theoretic relationship that holds between the two DPs.²² For example, the SS marker in SS-for-= languages, which requires the exact equality in the referents between the two DPs, introduces the meaning roughly represented in (47-a). Similarly, the DS marker in SS-for-= languages, which appears whenever there is no exact equality, can be considered to introduce the meaning represented in (47-b). The use of one of these markers is felicitous only when the meaning introduced by it is true. The idea of representing set-theoretic relationship in the lexical semantics of each SR marker is similar to the semantic account of SR by McKenzie (2012), which I discussed in Section 5.2.²³ However, my proposal makes it compatible with the view that both the pivot and

²²I set aside the question regarding whether this meaning is an at-issue one or not.

²³McKenzie (2012) also hints at the possibility that the lexical semantics encoding a set-theoretic relationship captures the pattern of SR-marking in overlapping reference.

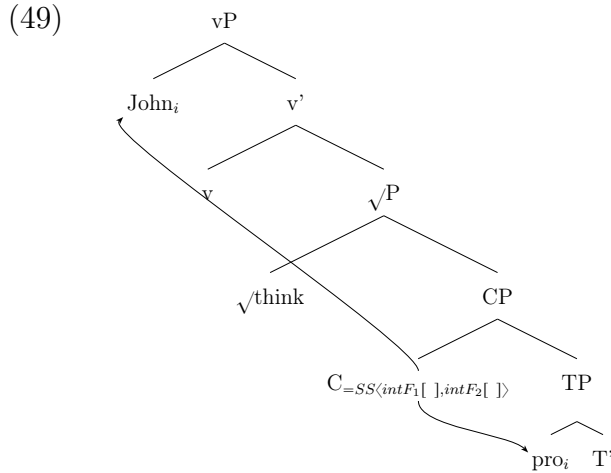
the anti-pivot are selected by Agree. That is, crucially, the entity that serves as the arguments for these logical predicates are provided by the value on the probes, retrieved via Agree operations.

- (47) a. $C_{=SS}: \llbracket DP_{intF_1[]} \rrbracket = \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\neq DS}: \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$

Note here that what the logical predicates in these meanings ($=$, \neq) compare are the denotations of goal DPs, and not the index features. Thus, for example, even if the goal DPs are referential and they accidentally corefer with each other but are not cobound, the statement in (47-a) will be true. This point becomes more crucial in the overlapping reference cases, as is discussed in Section 5.4.4. Of course, (47-a) is also compatible with cases in which one DP binds the other and the two goal DPs are coindexed.

Let me show how the specific derivations proceed by using examples from Choctaw. As Choctaw is an SS-for= $=$ language, its SS marker *-kat* introduces the meaning in (47-a) and its DS marker *-kã* introduces the meaning in (47-b). I start with the example in (48), where the two subjects corefer. In this case, I assume that the two DPs are simply co-bound and hence are assigned the same index features (but again, this assumption itself is not crucial for the use of SS marker). The sentence has the structure in (49), and the probes on the $C_{=SS}$ head are valued as shown in (50). This results in the interpretation in (51). This is true, making the use of SS felicitous.

- (48) John-at anokfilli-h [pisachokma-kat]
 John-NM think-TNS good-looking-COMP:SS
 ‘John_i thinks that he_i is goodlooking.’ (Broadwell, 2006, 269)



(50) $\langle intF_1[i], intF_2[i] \rangle$

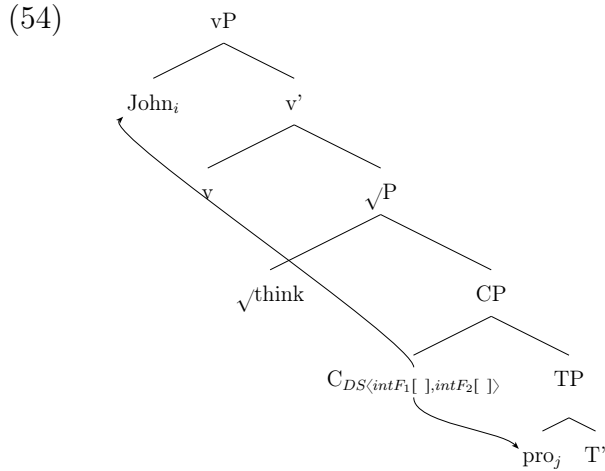
(51) $\llbracket DP_{intF_1[i]} \rrbracket = \llbracket DP_{intF_2[i]} \rrbracket$
 John=John

In contrast, the use of $C_{\neq DS}$ is infelicitous here, given that the valuation in (50) results in the meaning in (52).

(52) $\llbracket DP_{intF_1[i]} \rrbracket \neq \llbracket DP_{intF_2[i]} \rrbracket$
 John \neq John

In the example in (53), on the other hand, the two DPs refer to different entities. For the ease of exposition, let me assume that the referent of the embedded subject is Bill. In such cases, of course, the two DPs have distinct index features (i.e. distinct binder indices). This sentence has the structure in (54) and, as a result of Agree, the probe features on the $C_{\neq DS}$ are valued as shown in (55). This results in the meaning in (56). Thus, the use of DS marker is felicitous in this example.

(53) John-at anokfilli-h [pisachokma-ka]
 John-NM think-TNS good-looking-COMP-DS
 ‘John_i thinks that he_j is goodlooking.’ (Broadwell, 2006, 269)



$$(55) \quad \langle \text{intF}_1[j], \text{intF}_2[i] \rangle$$

$$(56) \quad \llbracket \text{DP}_{\text{intF}_1[j]} \rrbracket \neq \llbracket \text{DP}_{\text{intF}_2[i]} \rrbracket$$

Bill \neq John

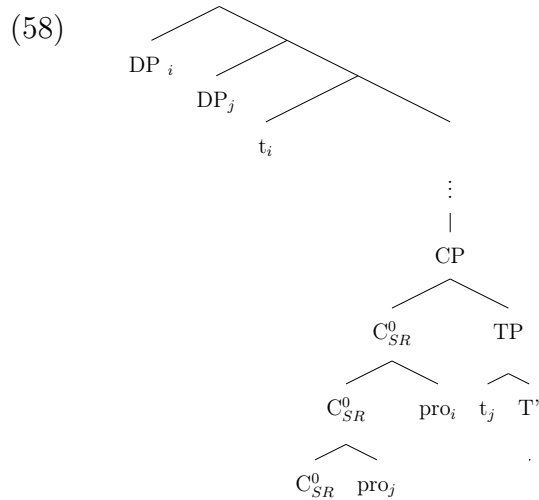
The use of $C_{=SS}$ is infelicitous, given that the valuation in (55) results in the meaning in (57).

$$(57) \quad \llbracket \text{DP}_{\text{intF}_1[j]} \rrbracket = \llbracket \text{DP}_{\text{intF}_2[i]} \rrbracket$$

Bill = John

For the semantic composition, as I did in previous chapters, I assume that the valued index probes are converted to *pro*-like elements that are co-indexed with their goals and get projected on C, as in the structure in (58). These *pros* are now in positions from which they can undergo semantic composition with C_{SR} . The DPs that are agreed with by these probes, including referential DPs, undergo QR to a position that can bind this *pro* and the *pro*-like elements are co-bound by them with their co-indexed traces. For example, in (53), where the two DPs have different binder indices, each of them gets QR-ed as shown in (58) and binds its trace as well as its coindexed *pro*-like element. When the C_{SR} is the DS marker as in (53), this creates

a semantic structure roughly represented in (59).²⁴

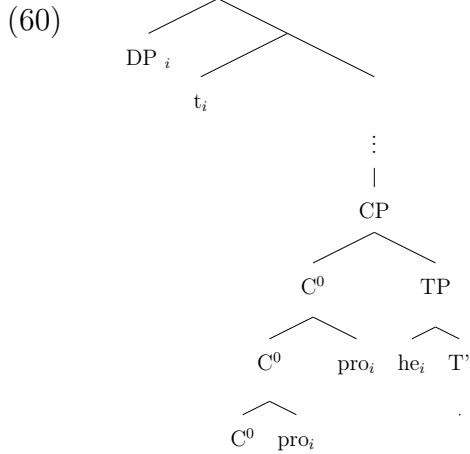


(59) $\lambda x.\lambda y. x$ thinks that y is good looking and $x \neq y$

For the cases where the pivot is bound by the anti-pivot as exemplified by (48) above, the derivation proceeds in the same way except that only the anti-pivot QRs as a binder and binds the pivot as well as the *pro*-like elements.²⁵ If C_{SR} is an SS marker as in (48), this creates a semantic interpretation roughly represented in (61).

²⁴(53) is only compatible with DS marking, if x and y are bound by DPs with distinct referents. However, as mentioned above, if the binder of x and the binder of y accidentally corefer with each other, SS marking is predicted to be allowed even if the two goals are linguistically contra-indexed and thus not co-bound.

²⁵While the example in (48) involves a referential DP, the same derivation applies when either one of the anti-pivot or the pivot is a quantified phrase and binds the other. Note that such variable binding can occur even without a (surface) c-command relationship between the binder and the bindee (Barker, 2012). I assume that, even in such cases, the semantic representation somehow allows the binder to be in a configuration to licitly bind the bindee, although I do not go into how exactly such an outcome is achieved.



(61) $\lambda x. x$ thinks that x is goodlooking and $x = x$

I have shown how the selection via Agree works in SR, using the SS-for= SR markers. In the next section, I show how this analysis can capture the typological variation.

5.4.2 Capturing the typological variation

In the previous section, I have shown how SR markers in SS-for= languages work: in SS-for= languages, the SS marker introduces the meaning that the referent of the downward goal and the referent of the upward goal are exactly the same, while the DS marker introduces the meaning that the referent of the downward goal and the referent of the upward goal are not exactly the same. However, exact equality and non-equality are not the only relationships semantic predicates can express and we can think of Cs with various meaning about the relationship between the referents of the two goals. I propose that the typological variation in the treatment of overlapping reference cases derives from this variety in the meaning encoded by Cs.

The series of SR markers that I propose to capture the cross-linguistic variation is shown in (62)–(65).

- (62) a. $C_{=SS}: \llbracket DP_{intF_1[]} \rrbracket = \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\neq DS}: \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$

- (63) a. $C_{\supseteq SS}: \llbracket DP_{intF_1[]} \rrbracket \supseteq \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\not\supseteq DS}: \llbracket DP_{intF_1[]} \rrbracket \not\supseteq \llbracket DP_{intF_2[]} \rrbracket$
- (64) a. $C_{\subseteq SS}: \llbracket DP_{intF_1[]} \rrbracket \subseteq \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\not\subseteq DS}: \llbracket DP_{intF_1[]} \rrbracket \not\subseteq \llbracket DP_{intF_2[]} \rrbracket$
- (65) a. $C_{overlapSS}: \llbracket DP_{intF_1[]} \rrbracket \cap \llbracket DP_{intF_2[]} \rrbracket \neq \emptyset$
 b. $C_{nooverlapDS}: \llbracket DP_{intF_1[]} \rrbracket \cap \llbracket DP_{intF_2[]} \rrbracket = \emptyset$

The lexical entries in (62-a) and (62-b) are the ones we already saw in (47-a) and (47-b) and they capture SS-for= \supseteq languages, where SS markers appear only when the two DPs are exactly co-referent. For SS-for-p \supseteq ap languages, which allow SS marking when the pivot includes the anti-pivot but not the other way around, I propose that the SS marker is as in (63-a). The SS marker in (63-a) introduces a meaning that the referent of the lower goal (the pivot) is equal to or includes the referent of the upper goal (the anti-pivot). Recall that SS-for-p \supseteq ap languages further fall into two types, the ones with obligatory SS marking in inclusive cases and the ones with optionality between DS and SS in inclusive cases. In the former type, the DS marker is like (63-b), which has the complementary meaning to (63-a). In the latter type, the DS marker is like (62-b) similarly to SS-for= \supseteq languages; then both (63-a) and (62-b) are compatible with the cases where the pivot includes the anti-pivot, hence the optionality. For SS-for-p \subseteq ap languages, where SS marking is allowed when the anti-pivot includes the pivot but not the other way around, the SS marker is like (64-a), which introduces a meaning that the referent of the upper goal (the anti-pivot) is equal to or includes the referent of the pivot. The optional / obligatory SS distinction in inclusive cases can be represented as a difference in the meaning of a DS marker, similarly to what I did for SS-for-p \supseteq ap languages. While no SS-for-p \subseteq ap languages in Table 1 clearly exhibit a pattern with optionality between DS and SS under inclusion, I would assume that this is due to the relative rarity of SS-for-p \subseteq ap languages. SS-for-overlap languages,

where SS marking is allowed in either direction of inclusion, the SS marker is like (65-a), which only requires overlap in reference between the two DPs. Again, the optional / obligatory SS marking distinction is attributed to the availability of either (65-b) or (62-b) as a DS marker. Thus, this system succeeds in deriving the relatively free typology about inclusive SR marking, while accounting for the observations that suggest pivot / anti-pivot selections are done via Agree.

Note that this account attributes the typological variation to differences in the lexical semantics of each SR marker. This means that the current analysis also naturally expects the intra-language variation. For example, we saw in Section 5.3.1 that, in Shipibo, different set of SR markers exhibit different behaviors with regard to overlapping reference. The pattern is repeated in (66).

(66)	a. previous-event-denoting dependent clause / intransitive Matrix clause				
	<table> <tr> <td>piv \supset anti-piv</td><td>SS (-<i>ax</i>)</td></tr> <tr> <td>piv \subset anti-piv</td><td>DS (-<i>ketian</i>)</td></tr> </table>	piv \supset anti-piv	SS (- <i>ax</i>)	piv \subset anti-piv	DS (- <i>ketian</i>)
piv \supset anti-piv	SS (- <i>ax</i>)				
piv \subset anti-piv	DS (- <i>ketian</i>)				
	b. following-event-denoting dependent clause / intransitive Matrix clause				
	<table> <tr> <td>piv \supset anti-piv</td><td>DS (-<i>non</i>)</td></tr> <tr> <td>piv \subset anti-piv</td><td>DS (-<i>non</i>)</td></tr> </table>	piv \supset anti-piv	DS (- <i>non</i>)	piv \subset anti-piv	DS (- <i>non</i>)
piv \supset anti-piv	DS (- <i>non</i>)				
piv \subset anti-piv	DS (- <i>non</i>)				
	(from Valenzuela (2003, 430, Table 9.2))				

Under the current account, in Shipibo, the previous-event-denoting SS C (-*ax*) has the meaning of the type represented in (63-a). On the other hand, the following-event-denoting SS C (*nonxon*) has the meaning of the type represented in (62-a) and hence is not compatible with any of the overlapping reference cases.

5.4.3 Restricting the typological predictions

The previous section showed that the current proposal can predict all the typological patterns. This is because the current proposal represents the relationship between the

referents of the two DPs in the lexical semantics of C using set-theoretic predicates, and one can easily think of relatively complex logical predicates. But this analysis in turn is in danger of overgeneration: the SR pattern is predicted to be freer than it actually is. For example, under the current analysis, it is entirely possible to consider Cs that introduce the meanings shown in (67). (67-a) states that the pivot *properly* includes the anti-pivot. (67-b) states that the anti-pivot properly includes the pivot. (67-c) states that the referents of the two DPs overlap but do not equal to each other. That is, they are markers of a proper inclusion or proper overlap relationship between the two DPs.

- (67) a. $C_{\supset}: \llbracket DP_{intF_1[]} \rrbracket \supset \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\subset}: \llbracket DP_{intF_1[]} \rrbracket \subset \llbracket DP_{intF_2[]} \rrbracket$
 c. $C_{proper-overlap}: \llbracket DP_{intF_1[]} \rrbracket \cap \llbracket DP_{intF_2[]} \rrbracket \neq \emptyset \wedge \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$

With these markers, languages with more complex SR patterns are predicted. For example, one can assume a language that has the SR markers like (67-c), (62-a) and (65-b). This is a tripartite system where exact equality, complete disjointness, and overlap without exact equality are each marked with different markers. No languages of this sort has been observed in the previous typological studies (Nonato, 2014; McKenzie, 2015).

The pressing question for the current approach, then, would be how this overgeneration can be prevented. I propose that the principle in (68) is at work. I assume that the “central” cases of the referential relationship between two DPs are the exactly equal relationship (canonical SS) or the completely disjoint relationship (canonical DS), especially given that that these are the only two relationships that can hold between two singular DPs. The principle in (68) says that each SR-C is compatible with one and only one of these relationships.²⁶

²⁶I consider the principle in (68) to be a case of a semantic universal, famously exemplified by

(68) *Include a central case*

A semantic predicate is valid as a part of the lexical semantics of SR-C only when one and only one of these central relationship satisfies the predicate:

- exactly equal relationship
- completely disjoint relationship

The examples of unattested SR-Cs in (67) are excluded because of this principle. They are all incompatible with both the exactly equal relationship and the completely disjoint relationship. Thus, following this principle, they are invalid as SR-Cs. This principle also rules out the SR-Cs defined by the negation of the semantic predicates in (67), like the ones in (69). The SR-Cs in (69) are all compatible with both the exactly equal relationship and the completely disjoint relationship.

- (69) a. $C_{\neq}: \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$
 b. $C_{\neq}: \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$
 c. $C_{nonoverlap}: \llbracket DP_{intF_1[]} \rrbracket \cap \llbracket DP_{intF_2[]} \rrbracket = \emptyset \vee \llbracket DP_{intF_1[]} \rrbracket \neq \llbracket DP_{intF_2[]} \rrbracket$

I conjecture that the restriction in (68) derives from learnability. Complex sentences with subjects in proper inclusive relationship are presumably considerably rarer than sentences with exactly the same subjects or disjoint subjects. Given the close relationship between topichood and subjecthood and the tendency to keep the topic constant (Givón, 1983), it is expected that the sentences with exactly the same subjects are common. In fact, a search over the Corpus of Contemporary American English (COCA) returns 2,850 cases for the string “When I VERB I” but only 351 cases for the string “when I VERB we” and only 77 cases for the string “when we

the restriction on possible meanings of quantifiers (Barwise and Cooper, 1981). Note that semantic universals have sometimes been accounted for from the point of view of learnability in the sense that the expressions that follow the universal principles are easier to learn (Steinert-Threlkeld and Szymanik, 2019), similarly to what I propose to account for the principle in (68) below.

VERB I'.²⁷ On the other hand, for the completely disjoint cases, there are multiple combinations of DPs that are in such relationship. Thus, the completely disjoint relationship is expected to be more common than the proper inclusion cases, the relationship which only a few combinations of DPs have. The relative rarity of sentences with subjects in an inclusive relationship would hinder the learners from acquiring the form that only appears in those rare contexts, leading to the lack of form specialized to inclusive patterns.²⁸

Note that the learners still have to learn whether a certain SR marker is allowed in properly inclusive cases. I suggest that the inclusive pattern is common enough to achieve the detailed adjustments for the meaning of SR markers whose forms are already learned, but not common enough to acquire a new form only for those cases.

5.4.4 Comparison with the PF approach of Arregi and Hanink (2021)

While I reviewed one proposal about the treatment of overlapping reference by Arregi and Hanink (2021) in Section 5.3.2 above, they in fact propose an alternative analysis of cases with overlapping reference. As their alternative analysis at first glance resembles to the current proposal, I compare it to the current proposal in this section.

As I reviewed in Section 5.3.2, for the cases with exact coreference / completely disjoint reference, they propose that the C head probes both downward and upward for index features [ID] resulting in two index features copied onto the embedded C. When the two DPs have different referential indices, two different index features are copied onto one C, resulting in a feature conflict on C. They assume that vocabulary insertion rules can be sensitive to such feature conflicts, as shown in (70).

²⁷This result was obtained on June 1st 2020.

²⁸This logic also correctly rules out the possibility of a language where the SS marker requires exact coreference, the DS marker requires completely disjoint reference, and an elsewhere marker appears in overlapping reference cases, which would generate the same undesirable tripartite pattern as the one generated by (67-c).

- (70) a. $[_{C} ID:i, ID:j] \leftrightarrow \text{DS-marker (where } i \neq j)$
 b. $[_{C}] \leftrightarrow \emptyset$ (elsewhere)

As a second potential account for SS marking in overlapping reference cases, they further propose vocabulary insertion rules like (71), which refer to a complex set-theoretic relationship between the pivot and the anti-pivot. The rule in (71), for example, says that when the two index features on C overlap in reference, insert \emptyset in C. That is, they let logical predicates select the result of Agree similarly to the current proposal, but at PF, not at LF.

- (71) $[_{C} ID:x, ID:y] \rightarrow \emptyset$ (where $x \cap y \neq \emptyset$)

Their account apparently resembles the current proposal in the sense that it feeds the results of Agree to complex set-theoretic predicates. Their account, however, crucially differs from the current one in terms of what the logical predicate predicates of. In A&H's approach, a predicate specifies the identity of the two index features, as PF can only refer to referents (or denotations) of DPs indirectly via index features. On the other hand, the current proposal, where the valued index features are sent to LF, can deal with the referents of the goal DPs directly. Thus, the logical predicates specify the identity of the denotation of the DPs that are indexed with the given index features, as repeated in (72) for example.

- (72) $C_{overlapSS}: \llbracket DP_{intF_1[]} \rrbracket \cap \llbracket DP_{intF_2[]} \rrbracket \neq \emptyset$

This difference has two consequences for the comparison of the current approach and the approach by A&H. First, as the PF approach can only refer to index features, and not the denotations of DPs, it has to assume a close correspondence between the index features and the referents, while the current approach does not have to. This results in the difference in the treatment of index features on plural DPs. Under the

PF approach by A&H, as the formula in (71) has to be true in overlapping reference cases, it needs to be assumed that a plural DP has a set of multiple index features in a parallel way to a plural DP having a set of multiple entities as its referent.²⁹ For example, in the sentence in (73) from Mparntwe Arrernte (Wilkins, 1988), an SS-for-p \supseteq ap language, the SS marker is used because the referent of the subject ‘that man’ in the matrix clause is a member of a group of people referred to by a plural embedded subject ‘those people’. For A&H, the embedded subject has to have complex indices which includes the index on the matrix subject (a singleton set) as a subset of it. Thus A&H’s claim at least requires some specific view on the index of plural nouns, although such a view is not unprecedented (Sportiche, 1985; Baker, 1992).

- (73) Artwe yanhe rlkert-irre-ke tyerrtye mape yanhe pmere
 man that sick-infh-pc person plural.group that camp
 arrpenhe-werne lhe-me-le
 another-all go-npp-SS
 ‘That man became sick, while those people were moving camp (he was one
 of the people moving camp).’ (Wilkins, 1988, 165, Mparntwe Arrernte)

On the other hand, under the current approach, the plural DP in (73) can have a non-complex index feature which is distinct from the one held by the singular DP in the matrix subject position as shown in (74), if these DPs are not co-bound. This results in the valuation of the probe as shown in (75). As Mparntwe Arrernte is an SS-for-p \supseteq ap language, its SS marker adds the meaning repeated in (76). The valuation in (75) then results in the meaning in (77). SS marking in the example in (73) is licensed, as the referent of “those people” (him and others) is a superset of the referent of the “the man”.

- (74) ‘The man_i became sick, while those people_j (including the man) were moving
 camp’

²⁹This is also true for the “pick-one” approach by Arregi and Hanink (2018, 2021) I discussed in 5.3.2.

$$(75) \quad \langle \text{int}F_1[j], \text{int}F_2[i] \rangle$$

$$(76) \quad C_{\supset SS}: \llbracket \text{DP}_{\text{int}F_1[\]} \rrbracket \supseteq \llbracket \text{DP}_{\text{int}F_2[\]} \rrbracket$$

$$(77) \quad \llbracket \text{DP}_{\text{int}F_1[j]} \rrbracket \supseteq \llbracket \text{DP}_{\text{int}F_2[i]} \rrbracket$$

$:=$ those people \supseteq the man

Another consequence of this difference is its extendability to other phenomena. In this dissertation, I have analysed Japanese Object Honorifics, Japanese Benefactives and (Japhug) Direct/Inverse constructions. All of them involved the semantic relationship among the referents of the DPs that the probe agrees with and not the relationship among the index features. For example, I proposed in Ch.2 that the head HON in the Object Honorific construction introduces a semantic honor relationship between the referent of the upper goal and the referent of the lower goal. This cannot be reduced to the relationship between the index features, as an honor relationship cannot hold between index features. Thus, the PF approach to SR-marking in the overlapping reference cases of A&H cannot be applied to other phenomena in this dissertation. This suggests that the mechanism of interpreting the Agree result at LF is necessary in general and the proposal in this chapter is a straightforward extension of this mechanism, in contrast with the proposal by A&H. That is, under the current proposal, the SR Cs that encode complex set-theoretic notions are natural and not at all unexpected innovations.

A clearer idea about what A&H consider to be index features might lead to further differences between the two approaches. For now, with the considerations above, I consider the current approach to be slightly more preferable.

5.5 Summary

In this chapter, I have proposed that the idea that a semantic predicate can select its argument via Agree is extendable to the analysis of Switch Reference. Although many previous studies on Switch Reference has proposed that pivot selection and anti-pivot selection are done via Agree, the typology regarding the overlapping reference cases has been problematic to those approaches. I have shown that the idea from Ch.2–4 that a semantic predicate can select its argument via Agree naturally provides a way to encode set-theoretic meanings on the SR marker, while retaining the view that pivot / anti-pivot selection is done via Agree. This makes it possible to account for the cross-linguistic / intra-linguistic variation of the possibility of SS marking in the overlapping reference cases.

At the same time, this extension of the idea to SR suggests that semantic predicates that select their arguments via Agree can occur around C. While the phenomena I have dealt with in the previous chapters involved heads around *v*, (Object Honorifics (Hon right below *v*); Benefactive Auxiliaries (v_{BEN}); Direct/Inverse systems (*v*)), the analysis of SR in the current chapter suggests that the use of Agree for the purpose of selection is not restricted to heads in the lower verbal domain.

Chapter 6

Discussion and Conclusion

In this chapter, I conclude the dissertation by discussing some theoretical implications of this dissertation. I specifically discuss three issues that the current proposal has consequences for: how Agree interacts with PF and LF, the mechanism of selection in general, and the direction of probing.

6.1 The general picture of the interaction between Agree and PF / LF

I have argued throughout this dissertation that the result of Agree applying to person-index features is sent to LF and affects interpretation. Note that this conclusion itself is not trivial, given that many researchers consider ϕ -agreement not to have an effect on the semantics. We saw in Ch.1 that such a view has led to the original definition of Agree motivated by the uninterpretability of a probing feature. The seeming lack of semantic effects of morphological agreement has also led to the view that reduces agreement to a PF operation (Marantz, 1991; Halle and Marantz, 1993; Bobaljik, 2008; Choi and Harley, 2019). The current work has shown that at least some instances of Agree feed LF and hence the operation Agree has to be a narrow-syntactic

operation that does not rely on the uninterpretability of the probe. Of course, this still leaves a question of whether there can be a purely morphological operation that derives morphological agreement in addition to Agree applying in the narrow syntax. This question has to be examined empirically. The literature on semantic agreement reports some cases where ϕ -agreement without reference to semantic information of the goal exhibit different characteristics from ϕ -agreement with reference to semantic information (Smith, 2017) (cf. Messick (2020)). If some cases of morphological agreement show a distinct pattern from the pattern that narrow-syntactic Agree derives, those cases can indicate that there is a purely morphological operation that derives agreement, in addition to Agree applying in the narrow syntax.

I have concluded that Agree over person-index features takes place in narrow syntax, not at LF. This is because I have presented a case where the result of Agree over person-index feature affects morphology as well as semantics. Recall that in Ch.4 I analyzed the Direct / Inverse system in Japhug using my proposal. As repeated in (1), the Direct / Inverse system in Japhug involves morphological ϕ -agreement in addition to the empathy meaning, similarly to other languages that have Direct / Inverse systems. In a Direct sentence as exemplified by (1-a), it is the subject that triggers ϕ -agreement, while it is the object that triggers ϕ -agreement in an Inverse sentence as exemplified in (1-b).

- | | |
|---|---|
| (1) a. Direct form / 2→3
puu- tuu- mtó -t
AOR- 2- see -PST
‘You saw him/her/it.’ | b. Inverse form / 3→2
puu- tuu- wy- mto
AOR- 2- INV- see
‘He/she/it saw you.’ |
|---|---|

I argued there that it is indeed the same person-index probe that triggers the morphological ϕ -agreement and the empathy meaning and hence proposed that the person-index feature on the probe is visible to PF as well as LF and triggers morphological ϕ -agreement. This observation suggests that the results of Agree in the current pro-

posals are visible to both PF and LF, not just LF. This indicates that Agree over index-features occurs in the narrow-syntax and not at LF.

But notice that, at the same time, the other phenomena that I examined did not exhibit morphological ϕ -agreement that goes with them. If other languages utilize the same mechanism as the Japhug Direct / Inverse system does, what is straightforwardly expected is that OH markers, benefactive auxiliaries and Switch Reference markers change their morphology depending on the person features of the goals, which is not what we observed. For Japanese phenomena, including both Object Honorifics and Benefactive auxiliaries, the lack of ϕ -agreement might not be so surprising, given that Japanese does not exhibit ϕ -agreement in general. I thus can claim either that Japanese simply lacks morphemes that realize ϕ -features or that it does not have further ϕ -featural distinctions among animate NPs and hence the morphological form of Hon or v_{BEN} is invariant. This issue is not trivial for Switch Reference, however. Many of the languages with Switch Reference exhibit morphological ϕ -agreement on the verb and nonetheless fail to show ϕ -morphology on the SR-marked C head. For example, in the Maricopa sentence in (2), the verb clearly exhibits morphological agreement with 2nd person (see also Gordon (1980)). However, the SR markers do not change their form depending on the person features of the goals: both the pivot and the anti-pivot are 3rd person in (2-a), and they are both 2nd person in (2-b). In spite of this difference in the ϕ -features on the goals, the DS marker is constantly *-m* in both examples.

- (2) a. Pam-sh nya-v-yem-m 'ayuu rav-k
 Pam-sj when-dem-go-DS s.t. hurt-asp
 'Whom Pam_i left, she_j was sick.'
- b. nya-m-kchiiv-m man-sh 'ayuu m-maa-uum
 when-2-return+pl-DS you-sj s.t. 2-eat-inc
 'When you (plural) return, will you (singular) eat?'

(Maricopa (Gordon, 1983, 85))

In fact, based on this pattern pervasive in Switch Reference languages, Baker and Camargo Souza (2020) and Camargo Souza (2020) propose that the visibility of the result of Agree at LF and at PF are incompatible with each other. More specifically, Baker and Camargo Souza (2020) and Camargo Souza (2020) claim that the SS-marker undergoes Agree-link with the pivot and the anti-pivot and the Agree-link between the two DPs mediated by the SS-marker is interpreted as referential dependency between the two. Crucially, they claim that, if Agree-Copy (i.e. the morphological realization of the result of Agree) occurs, that deletes the link and hence the link is no longer interpretable as referential dependency, deriving the complementarity of ϕ -morphology and the referential effect of Agree.

First of all, it is not totally clear if the complementarity between SR-interpretation and ϕ -agreement holds for all the SR languages. At least in some New Guinean languages, it has been reported that SR-markers change their forms depending on the ϕ -features of the pivot and the anti-pivot (Stirling, 1993; Roberts, 2017). But it is also true that SR markers do not exhibit morphological agreement with the pivot / anti-pivot in many of the SR languages. If the current account of the Japhug Direct / Inverse system is on the right track and a similar person-index probe is operative in Switch Reference systems across languages, there has to be some independent reason why morphological ϕ -agreement is not generally visible on SR-markers. I conjecture that it is morphological economy that derives this tendency. It has been repeatedly noted in the literature that multiple realizations of morphological agreement with the same element is avoided. For example, Kinyalolo (1991) and Carstens (2005) report that, in Bantu languages, subject agreement appears only once in a complex phonological word consisting of Asp, T and C as shown in (3), although each head can agree with the subject on its own. Oyharçabal (1993), McFadden (2020), Alok and Baker (2018) and Alok (2020a) report that addressee agreement cannot be realized when the sentential subject is second person and hence the addressee agreement

becomes redundant, as shown by the Magahi example in (4). Ortmann (2000) shows that redundant plural agreement in multiple positions inside an NP is avoided in Hungarian and other languages as shown in (5-a), although the adjective can bear a plural agreement when it does not occur in the same NP as a plural marked noun as shown in (5-b). Kilega agreement reduction is explicitly known to operate only inside a phonological word, while plural agreement reduction in Hungarian seems to occur across words.

(3) Kilega subject agreement

- a. pro Mú-ná-kúbul-íl-é mázi
2pl-MOD-pour-ASP-FV 6water
'You could have poured water.'
- b. Mu-na-(**mu*)-kubul-(**mu*)-il(**mu*)-é (Carstens, 2005, 255)

(4) Magahi addressee agreement

- a. Ham dauR-l-i-au
I run-PRF-1-NHS.NHA
'I ran (to a non-honorific addressee).'
 - b. Tu dauR-l-eN-(*au)
You.NH run-PRF-2.NHS-(NHA)
'You (a friend) ran.'
- (Alok, 2020a, (16a) (modified))
- (Alok, 2020a, (17a))

(5) Hungarian plural agreement

- a. gyors hajó-k
fast ship-PL
'fast ships'¹
 - b. A hajó-k gyors-ak
def ship-PL fast-PL
'The ships are fast.'
- (Ortmann, 2000, 251)

It is reasonable to consider that ϕ -morphology on C_{SR} is similarly prevented from

¹Ortmann (2000) gives a translation 'ships' to this example, but given the gloss and what he states about this example, I consider 'fast ships' to be what he intended as a correct translation.

surfacing to avoid redundant agreement. In the example from Maricopa in (2) above, the pivot and the anti-pivot are already morphologically agreed by the T heads, making realization of ϕ -features on C_{SR} redundant. This is in contrast with Japhug Direct / Inverse system, where the head that probes for index features happens to be *v*, a canonical head that shows ϕ -agreement cross-linguistically, and hence the morphological realization of the person-index feature does not result in morphological redundancy.

Attributing the lack of morphological agreement on C_{SR} to morphological economy is also compatible with the fact that some New Guinean languages are reported to have morphologically agreeing C_{SR} . The plural agreement reduction (Ortmann, 2000) is clearly not seen in other languages such as German as shown in (6), suggesting that morphological economy is not an absolute principle but is a preference.²

- (6) die drei griße-en Häus-er
 df.PL three huge-PL house-PL
 ‘the three huge houses’ (Ortmann, 2000, 250)

I suggest that this preference functionally motivates idiosyncratic reduction rules in some languages.

Thus, I claim that Agree over person index features generally affects both PF and LF. However, the effect on PF can become invisible because of other factors including morphological economy. For the cases at hand, I claimed that when the person-index probe is on a head which occurs with a head that exhibits ϕ -agreement, morphological economy can reduce the PF realization of the person-index probe, deriving the general trend that the Direct / Inverse probes affect morphology, while the Switch Reference probes do not.

²Ortmann (2000) analyzes this morphological economy in terms of a violable constraint in the Optimality Theory framework.

6.2 Implications for the mechanism of selection

Another issue that the current proposal relates to is the mechanism of selection in general. For the phenomena I have dealt with in this dissertation, I argued that a probing head is a semantic predicate and selects NPs / DPs which are already in the structure as its arguments via entering into Agree with them. For example, in the object honorific sentence in (7), I claimed that there is a head *Hon* right below *v* and this assigns an honorer role to its upward goal, the subject *Taroo*, and an honoree role to its downward goal, the object *butyoo* ‘the manager’ in addition to the theta-roles that they get from the verb or *v* in the canonical way.

- (7) Taroo-wa butyoo-o o-tasuke-si-ta.
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’

What this means is that an NP / DP gets semantically selected twice in this system: once by the main predicate and once by the semantic predicate on the head *Hon*. Thus, considering θ -role assignment to be identical to semantic selection, the current proposal seems to go against the classic θ -criterion, which bans one NP / DP from getting more than one θ -role.

In this respect, one might consider the current proposal to be similar to the Movement Theory of Control (MTC) by Hornstein (1999) and subsequent works (Boeckx and Hornstein, 2003; Boeckx et al., 2010, a.o.). Hornstein (1999) claims that one DP can get multiple θ -roles by moving from one θ -position to another, creating sentences well-known as having Obligatory Control as exemplified in (8-a). Under his account, what has traditionally been called PRO in (8-a) is in fact a trace. As shown in (8-b), *John* is first born in Spec vP of the embedded predicate and checks its *winner* θ -role as a syntactic feature there. However, in the course of cyclic movement to the case position (the matrix Spec TP), it merges into the matrix Spec vP as well and checks

its *expecter* θ -feature there.

- (8) a. John expects PRO to win
 b. [_{IP} John [_{vp} John [expects [_{IP} John to [_{vp} John win]]]]]

At first glance, the current proposal looks similar to the MTC in two respects. First, selection is done via an operation over syntactic features (θ -feature checking for MTC and Agree over person-index features for the current proposal). Second, one DP enters into selectional relationship with more than one semantic predicate.

The similarity becomes even more striking in works subsequent to Hornstein (1999) which claim that the checking of a θ -feature (or some correspondent of it) does not require merging with the θ -role assigner but can be done in a long-distant fashion via Agree (Funakoshi, 2009; Saab, 2015). Funakoshi (2009), for example, claims that some object control sentences in Japanese, as exemplified in (9), involve θ -role assignment at a long-distance. Following Hornstein (1999), Funakoshi assumes that PRO is the trace of the overt controller. However, he argues that, in (9), the overt NP *Hanako-ni* can move only half-way and stop at the embedded Spec FinP, based on scope evidence. He claims that it gets a θ -feature checked by the matrix verb via Agree, while staying in the embedded Spec FinP.³

- (9) Taroo-ga Hanako-ni Tokyo-e iku yooni meezi-ta
 Taroo-NOM Hanako-DAT Tokyo-to go C order-PAST
 ‘Taroo ordered Hanako to go to Tokyo.’

- (10) Taroo ordered [_{ForceP} C [_{FinP} Hanako Fin [_{TP} t go to Tokyo]]]

Saab (2015) makes a similar claim based on *se*-reflexive constructions in Spanish, although he considers Agree over D-features, instead of Agree over θ -features, to be involved in the θ -role assignment.

³Funakoshi claims that, as the dative case on *Hanako* is an inherent one, it is licensed once the θ -role is assigned to the Spec FinP.

Does the current proposal confirm the conclusions from these studies that an NP / DP can get semantically selected more than once and that semantic selection is done via Agree? There is a clear difference between the phenomena dealt with by these previous studies and the phenomena I deal with here. Notice that the obligatory control sentences like (8-a) or (9) involve two predicates each of which can introduce an overt DP once the case requirement is satisfied, as shown in (11)–(12). In this sense, control predicates are like normal verbs (or *v*).

- (11) a. John expects that Mary will win.
 b. John expects her to win.
- (12) a. Taroo-ga Hanako-ni kaonzyo/Ziroo-ga Tokyo-e iku yooni
 Taroo-NOM Hanako-DAT 3sg.f/Ziroo-NOM Tokyo-to go C
 meezi-ta
 order-PAST
 ‘Taroo ordered Hanako that she/Ziroo go to Tokyo.’
 b. Taroo-wa Hanako-ni kanozyo/Ziroo-no Tokyo-iki-o
 Taroo-TOP Hanako-DAT 3sg.f/Ziroo-GEN Tokyo-going-ACC
 meezi-ta
 order-PAST
 ‘Taroo ordered Hanako her/Ziroo’s going to Tokyo.’

In contrast, it is impossible for the HON head in Japanese Object Honorifics to introduce a new NP in addition to the canonical object of the main verb. For example, in (13), it is not possible to add an NP *sensei* ‘the professor’ as an honoree argument distinct from the verbal object *Hanako*. The same point can be made with an honorer. The ungrammaticality of (13) does not come from a case issue: the object argument selected by the main predicate *Hanako* is in the dative case and *v* should have the ability to assign an accusative case to the new NP, given Burzio’s generalization that a verb that assigns an agentive θ -role can assign an accusative case (Burzio, 1986, 184).

- (13) *Taroo-wa sensei-o/ni/Ø Hanako-ni go-aisatu-si-ta
 Taroo-TOP professor-ACC/DAT/Ø Hanako-DAT HON.PREF-greet-*do*-PAST
 ‘Intended: Taroo greeted Hanako showing honor toward the professor.’

Similar points can be made for Japanese benefactives: it is impossible to introduce *Ziroo* as a beneficiary and a less-empathized participant in addition to the canonical object of the predicate in (14).⁴

- (14) *Taroo-wa Ziroo-o/ni/Ø Hanako-ni aisatu-site-age-ta
 Taroo-TOP Ziroo-ACC/DAT/Ø Hanako-DAT -greet-*do*-BEN-PAST
 ‘Intended: Taroo greeted Hanako for Ziroo’s benefit’

Furthermore, I have not found any cases where $v_{Dir/Inv}$ or C_{SR} seem to introduce new DPs for empathy comparison or reference tracking, in addition to the canonical subject or object of the verbs involved. Thus, the phenomena I dealt with in this dissertation have to be distinguished from the phenomena which have been considered in light of MTC, although they both involve additional semantic selectors.

Then what does the current proposal imply for the theory of selection? The first conclusion from the observation so far is that, among semantic selectors, there are ones that have the ability to license an NP / DP to be externally merged with them as their arguments and those that do not. I call the former *primary selectors* and the latter *secondary selectors*. Heads such as lexical verbs (for internal arguments) and *v* (for external arguments) are primary selectors, including obligatory control predicates. On the other hand, the heads I discussed in this dissertation, *Hon*, v_{BEN} ,

⁴Although the literature has considered the possibility that an additional *ni*-marked NP becomes more easily available in the presence of the benefactive auxiliaries in examples like (i) (Okura, 2009; Hasegawa, 2018), I argued in Section 1.2 in Ch.3 that the *ni*-phrase in (i) is introduced independently of the benefactive auxiliaries.

- (i) Taroo-wa **kodomo-tati-ni** kukkii-o yaite-yar/age/kure-ta
 1sg-TOP child-PL-DAT cookie-ACC bake-BEN-PAST
 ‘Taroo baked cookies for the children’s benefit.’

$v_{Dir/Inv}$ and C_{SR} , are all secondary selectors.⁵ What I have shown in this dissertation is that an NP / DP can be selected by a secondary selector after being selected by a primary selector and that this kind of selection by a secondary selector involves Agree. These conclusions do not straightforwardly give a clue to the question whether a similar thing can be said about normal verbs and *v*. More specifically, the current proposal is independent of the answers to the following questions: (i) can one NP / DP get selected by more than one primary selector and (ii) can a primary selector select an NP / DP in a long-distant way via Agree, questions addressed by Hornstein (1999), Funakoshi (2009) or Saab (2015).

It is, however, worth asking whether the current proposal about secondary selection gives any implication to these questions regarding primary selection (i.e. the selection by verbs, *v* and any other elements that have been considered as canonical argument selectors). In the rest of this section, I show that it in fact suggests that the answers to both questions are “yes”.

Before trying to answer directly the questions above, let me start by considering what the distinction between primary selectors and secondary selectors really amounts to. A reasonable question to ask here is whether the distinction between a primary selector and a secondary selector can be reduced to the distinction between syntactic + semantic selection and semantic selection alone. I claim that such a reduction is not possible, at least not straightforwardly: what we have seen suggests that secondary

⁵Another potential instance of a secondary selector is a set of adverbs called subject-oriented adverbs, such as “reluctantly” (McConell-Ginet, 1982). Although it semantically selects the structural subject as an argument for the semantic predicate “(be) reluctant” as shown in (i), it cannot introduce a new DP by itself as shown in (ii), even if the new DP is in a position where it can get a case (Baker, p.c.).

- | | | |
|-----|---|-----------------------------|
| (i) | a. Reluctantly, Joan instructed Mary. | (int. Joan is reluctant) |
| | b. Reluctantly, Mary was instructed by Joan | (int. Mary is reluctant). |
| | | (McConell-Ginet, 1982, 145) |

- | | | |
|------|-------------------------------|---------------|
| (ii) | *John is reluctantly raining. | (Baker, p.c.) |
|------|-------------------------------|---------------|

selectors also syntactically *select* their semantic arguments by having syntactic probes, although they do not subcategorize for NPs / DPs in a traditional sense. What really differentiates primary selectors from secondary selectors is the ability to syntactically *license* their selectees, not the ability to syntactically *select* something, as defined in (15).

- (15) a. X syntactically licenses Y if X allows Y to externally merge with (a projection of) X
- b. X syntactically selects Y if X designates Y in narrow syntax as its semantic argument

Then the next question is how the primary selectors, but not secondary selectors, are equipped with the licensing ability in (15-a). The notion of syntactic selection (by primary selectors) has traditionally been identified with subcategorization (Grimshaw, 1979), which I define as shown in (16).

- (16) X subcategorizes for Y if X specifies Y as a syntactic category that has to co-occur with X

I claim that subcategorization in fact is the key to NP / DP-licensing by primary selectors. It has often been claimed that Merge is conditioned by the presence of category features (Chomsky, 2000; Collins et al., 2002; Adger, 2010; Bruening, 2019). That is, merger between two syntactic objects is possible only when a category feature of one of them is satisfied by the operation. Adger (2010) calls this type of Merge, *Sel-Merge* and formalizes it in the way that Sel-Merge between two syntactic objects is possible only when the category feature (but, crucially, not other kinds of features) of the two syntactic objects match and one of them is unvalued.⁶

⁶Adger (2010) claims that Sel-Merge is for merger between a lexical category and its argument, and proposes another kind of Merge (HoP-Merge) for merger of functional items. On the other hand, Bruening (2019) claims that Sel-Merge is the only kind of merge available in the human language.

Let me go over how this kind of system works in constructing the simple VP *help John*. For the purpose of exposition, I adopt the feature system proposed in Adger (2010). He claims that a category feature is a pair of a specific category label (e.g. D) and a numerical value. As the exact number in the value slot does not concern the discussion here, I simply represent it as *val* when it is valued.⁷ A DP *John* has a category feature $\langle D, \text{val} \rangle$ and a verb *help*, which subcategorizes for a DP, has an unvalued D feature $\langle D, \emptyset \rangle$, in addition to a category feature $\langle V, \text{val} \rangle$ representing its own category. As the categories of the features on *help* and *John* match ($\langle D, \text{val} \rangle$ / $\langle D, \emptyset \rangle$) and one of those features ($\langle D, \emptyset \rangle$) is unvalued, Sel-Merge can happen between *help* and *John* and hence *John* can be merged with *help*.

This line of thought suggests that syntactic licensing as defined in (15-a) is conditioned by subcategorization. That is, syntactic licensing is done via merger into the structure by subcategorization. Now I claim that what distinguishes primary selectors from secondary selectors is how they conduct syntactic selection: both semantically select arguments in the sense that they contain a semantic predicate with a variable in its argument position, and they both syntactically select their arguments by designating the phrase that serves as a semantic argument in the syntax in some way. However, a primary selector syntactically selects its argument by *subcategorizing* for it and hence allows introduction of a new NP / DP (or whatever category it subcategorizes for) into the structure. On the other hand, a secondary selector syntactically selects its argument via Agree over index features, which do not refer to the category of a semantic argument and hence do not subcategorize under the definition in (16).⁸

I do not go into this distinction, given that NP / DP selection falls into the domain of Sel-Merge in either way.

⁷The exact number in the value slot matters for HoP-Merge, another kind of Merge that Adger (2010) proposes, as mentioned in fn.6.

⁸This is similar to, but distinct from, what Saab (2015) assumes for θ -role assignment. Saab (2015) assumes that a head with a subcategorization (category) feature can have the ability to assign a theta-role and characterizes theta-role assignment as Agree over a subcategorization feature. The current proposal assumes that the primary selector assigns a theta role (i.e. chooses its semantic argument) via subcategorization feature checking (or Agree as argued below), similarly to Saab. However, the current proposal crucially rejects the assumption that a θ -role assigner has to have a

Given that an NP / DP is *licensed* to merge into the structure by being subcategorized, it straightforwardly follows that primary selectors can introduce new NPs / DPs, while secondary selectors cannot.

What is notable here is that many of these previous studies explicitly note that the category feature checking relationship is a kind of Agree, where the category feature on the subcategorizing head is a probe and the category feature on the selected NP / DP is a goal (Collins et al. (2002); Adger (2010); see also Chomsky (2000, 134) for a hint of this idea). If this is correct, then there is no reason why category feature checking has to occur in a sister position. That is, a subcategorizing head itself does not require what it subcategorizes for to occur in its sister position, as long as it can find the subcategorized element in its Agree domain. Note that, given how Sel-Merge works, it is still the case that a syntactic object needs to be merged into the sister position of a head that subcategorizes for it (or its projection), in order to get introduced into the structure. The point here is that the sisterhood is not demanded from the subcategorizer.

Now we can come back to the original question of whether we can learn anything about primary selection from what I proposed about secondary selection. Two specific questions remain to be answered regarding primary selection: (i) whether one NP / DP can get selected twice (MTC versus the θ -criterion) and (ii) whether primary selection can happen in a long-distant way via Agree or requires strictly local merge (Hornstein (1999) versus Funakoshi (2009) and Saab (2015)).

To start with the first question, given that one NP / DP can undergo secondary selection in addition to primary selection, there seems to be no restriction with regard to undergoing semantic selection twice. As I argued in Ch.2, the examples in (17) suggest that a secondary selector HON in Object Honorifics adds a semantic restriction on the (highest) object that it has to be an entity honored by the subject, and hence

subcategorization feature, given that a secondary selector selects its semantic argument (i.e. assigns its θ -role) without a subcategorization (or category) feature.

can be considered to semantically select the NP in the object position, which is already semantically selected by the main predicate.

- (17) a. Taroo-wa butyoo-o o-tasuke-si-ta.
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’
- b. #Taroo-wa Hanako-o o-tasuke-si-ta.
 Taroo-TOP Hanako-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) Hanako.’
- c. #syatyoo-wa butyoo-o o-tasuke-si-ta
 CEO-TOP manager-ACC HON.PREF-help-do-PAST
 ‘The CEO helped (OH) the manager.’

If semantic selection can target the same NP / DP more than once, primary selection should be able to target the same NP / DP more than once if subcategorization (i.e. the syntactic selection process in primary selection) can target the same NP / DP twice.

Can a single NP / DP satisfy subcategorization requirements of more than one syntactic head? Given that subcategorization is implemented as Agree over a category feature, as mentioned above, this boils down to a question about the activity condition on Agree over category feature: does a category feature on a selectee get deactivated once it is agreed with by a selector so that it can no longer feed an Agree relationship? Adger (2010) defines the activity condition for Agree over category features in a way such that only the activity of a probe (i.e. the unvaluedness of the probing category feature) matters. This seems to be a natural definition given that the literature suggests that activity of the goal does not seem to be a crucial component of Agree operation. For example, Baker (2008) argues that the sensitivity of ϕ -agreement to case-marking is in fact parameterized. It is also well known that the ϕ -feature on the same DP can trigger agreement on multiple heads, as shown in (18) (Chomsky, 2001). Carstens (2001) concludes from such examples that the DP does not get deactivated

for further Agree when it agrees with a probe without a case feature.

- (18) Juma a-li-kuwa a-me-pika chakula
 Juma 3sg.-PST-be 3sg.PERF-cook 7food
 ‘Juma had cooked food.’ (Carstens, 2001, 140: Swahili)

Thus, I consider Adger’s definition of activity condition to be well motivated. If so, a conceptually plausible assumption is that one NP / DP can get selected multiple times whether the selectors are primary selectors or secondary selectors. This is compatible with the MTC and the related works against the standard θ -criterion.

The next question is whether primary selection requires strict locality. Recall the argument above that, while local merge requires subcategorization, subcategorization does not require local merge because subcategorization is Agree over category features. Under this view, at least syntactically, nothing is wrong with long-distant primary selection. Of course, it has to be discussed what semantic mechanism is needed to put the semantic composition to work when long-distant primary selection occurs and whether such a mechanism is a valid thing to assume. The discussion so far suggests that, from a syntactic point of view, the null hypothesis is that primary selection should also be possible long-distantly, given what I have observed about secondary selection.

Note, however, that such a long-distant primary selection can only occur when the selectee is already in the structure. Under the assumption that Agree over a category feature involves a downward probe, a selector can only enter into a long-distant Agree relation if the selectee is already merged into the structure below it.⁹ If the selectee has to be already in the structure at the point of the merger of the selector, given the current assumption that an NP / DP can be merged into a structure only by a primary selector, there has to be another primary selector that has licensed the selectee into

⁹Pietraszko (2021) argues that c-selection in the Spec position (e.g. introduction of an external argument in Spec vP) can also be captured using a downward probe, by assuming that the c-feature projects and selection proceeds in a cyclic way (cf. Béjar and Rezac (2009)).

the structure. This means that long-distant primary selection can occur only in cases where an NP / DP gets more than one theta-role. This is compatible with the empirical data for long-distant θ -role assignment reported in Funakoshi (2009) and Saab (2015).¹⁰ This also accounts for why θ -role assignment is local in most ordinary cases.

In summary, I have shown that my proposal in this dissertation is about secondary selectors, and these have to be distinguished from primary selectors, such as verbs (including control verbs) and *v*'s (and any other elements that have been considered as canonical argument selectors).¹¹ However, I have argued that the existence of secondary selection and the distinction between primary and secondary selectors suggest that it is possible for one NP / DP to get selected by multiple primary selectors and that, when an NP / DP gets selected by more than one primary selectors, it can get selected in a long-distant way. The former half of the conclusion is compatible with the claim by Hornstein (1999) and other works, and the latter half is also compatible with the claim by Funakoshi (2009) and Saab (2015) in contrast with Hornstein

¹⁰Another empirical domain that can potentially be analyzed as long-distant θ -role assignment by primary selector is backward control, where the matrix subject is null (represented as Δ in (i)) and the complement of the control predicate involves an overt subject. The example in (i) is from Tsez.

- (i) $\Delta_{i/*}$ [kidbā_i ziya bišra] yoqsi
 girl.ERG cow.ABS feed.INF began
 'The girl began to feed the cow.' (Polinsky and Potsdam, 2002, 246)

This could potentially be analyzed as a case where the matrix predicate assigns a theta-role to the embedded subject in long-distance fashion, similarly to the Japanese object control we saw above. If so, this is another case where a primary selector assigns a θ -role long-distantly to an NP / DP that is already selected by a primary selector. But I leave it as a remaining question if such an approach to backward control is tenable, given the observations from Polinsky and Potsdam (2002) that there is a phonologically null DP in the matrix subject position and that backward control predicates do not license overt DP unlike what we saw for other primary selectors.

¹¹While I have treated verbs as canonical examples of primary selectors, there is no inherent reason why functional elements cannot be primary selectors or why verbs cannot be secondary selectors. The head *v* is a straightforward example of a functional head that is a primary selector. Applicative heads in general can be considered as another kind of examples of functional elements serving as primary selectors. Verbs that inherently serve as secondary selectors are theoretically not impossible, but are harder to recognize, given that, in order to use them, there always has to be an additional primary selector within the same phase, so that an NP / DP which serves as a goal for the verbs can be licensed into the structure.

(1999) or Sheehan et al. (2012). Of course, this does not necessarily mean that the specific constructions analyzed by these works, such as obligatory control or the reflexive *se* construction, have to involve multiple selection or long-distance selection. Such a claim for each individual construction has to be argued on empirical grounds independently of the conceptual discussion here.

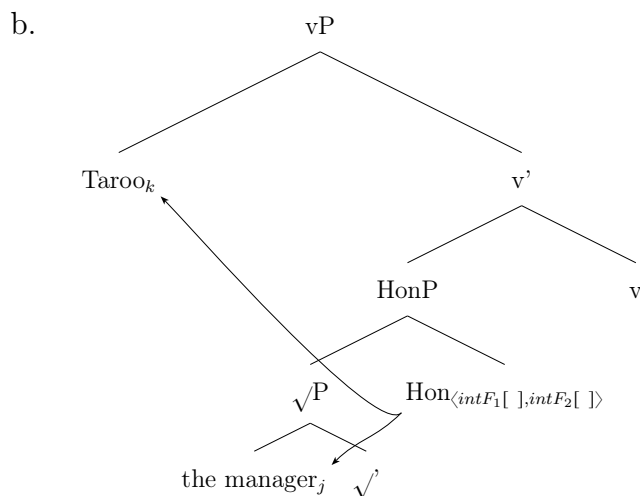
6.3 The Direction of probing

In this dissertation, I have posited both upward probing and downward probing and claimed that Agree in both directions is involved in all the phenomena I have mainly dealt with. Downward Agree was crucial in every phenomena and upward Agree was especially crucial for the account of Japanese Object Honorifics and Switch Reference systems, where the upward goal is located in a position at a distance from the probe and hence cannot be directly selected by the probe. The direction of Agree has been a controversial issue itself (Zeijlstra, 2012; Bjorkman and Zeijlstra, 2014; Bošković, 2007; Haegeman and Lohndal, 2010; Wurmbrand, 2012; Preminger, 2013). One might consider that positing only one direction of probing is attractive conceptually, as it captures all instances of Agree in a unified way. Then the question is whether the bi-directional probing that I have posited throughout the dissertation can be reduced to mono-directional probing. Trying to reduce all the probes in the current analysis to upward ones is not realistic, given that the downward probes nicely captured the intervention conditions in all the phenomena I dealt with. A more promising approach for the current data is the view that the probe inherently goes downward but can expand its search domain cyclically and end up agreeing with something higher than itself (Béjar and Rezac, 2009; Carstens, 2016; Clem, 2019). Although the detailed formulations differ among these studies, what they have in common is the proposal that when a downward probe is not satisfied by what is in its c-command domain, it

can look upward to some extent to find a goal. Then the question is whether I can reduce bi-directional Agree in the current analysis to mono-directional Agree along this line of analysis. In this section, however, I show that at least the data on Object Honorifics are not reducible to downward Agree + Cyclic expansion, and it has to be posited that some probes inherently search upward.

What does the current analysis look like, if I adopt downward probing plus cyclic expansion of the probing domain (*the cyclic expansion view* for short)? Let me take Object Honorifics, such as the example in (19), as an example, and consider a version of the analysis that assumes the cyclic expansion view. In Ch.2, I claimed that there are two probes on the head HON, $intF_1[]$ and $intF_2[]$. $intF_1[]$ gets valued by the downward goal and its goal is interpreted as honoree, while $intF_2[]$ is valued by the upward goal and its goal is interpreted as honorer.

- (19) a. Taroo-wa butyoo-o o-tasuke-si-ta
 Taroo-TOP manager-ACC HON.PREF-help-do-PAST
 ‘Taroo helped (OH) the manager.’



Recall that, for the current proposal, it is crucial that the probe that finds the upward goal is separate from the probe that finds the downward goal, so that LF can distinguish the two values. In other words, under my analysis for the phenomena I dealt with, it is not the case that one probe is valued by Multiple Agree with two

goals. Thus, what matters here is why the $intF_2[]$ goes upward.

If the $intF_2[]$ inherently goes downward and it is located on the same head as $intF_1[]$, the first question is why it does not agree with the object NP / DP in the same way as $intF_1[]$ does. The cyclic expansion version of the analysis would say that $intF_2[]$ first goes down and cannot find an appropriate goal and thus look upward to find the subject. One can try accounting for the fact that $intF_2[]$ does not find the object by claiming that (i) the two probes on HON are ordered with respect to each other so that $intF_1[]$ probes first and (ii) the index feature on the object is deactivated by Agree with $intF_i[]$ at the point $intF_2[]$ probes. Such a deactivated goal blocks the probe from looking farther down and hence the probe looks upward instead. However, there are two issues with this idea.

First, the idea that the index features on the object get deactivated is implausible. Recall that Japanese has benefactive auxiliaries *yar/age*, which also select their beneficiary via downward probing. A benefactive auxiliary *age* can cooccur with OH and, in such cases, the honoree indicated by the OH marker can at the same time be the beneficiary indicated by *age* as shown in (20) (although it does not have to be as I argued in Ch.3).

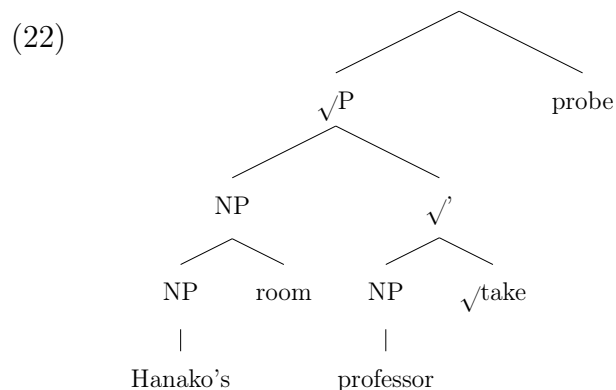
- (20) Taroo-wa okyakusan-ni otya-o o-dasi-site-age-ta
 Taroo-TOP guest-DAT tea-ACC HON.PREF-serve-do-BEN-PAST
 ‘Taroo served(OH)-BEN tea to the guest.’

In this case, both the downward probe from HON and the downward probe from v_{BEN} enter into Agree with the same object *okyakusan* ‘the guest’. The idea that the index feature on this object gets inactivated by undergoing Agree over the index feature once incorrectly predicts that the example in (20) is not possible.

Second, $intF_2[]$ goes upward even when there is an additional potential goal in its c-command domain. I argued in Ch.2–3 that the person-index probes in Japanese only target animate NPs and showed that there are two potential goals in examples

like (21): the two animate NPs are not in a c-command relationship to each other in this example, as can be seen in the structure in (22). Hence, neither of them intervenes between the probe and the other.

- (21) a. Taroo-wa Hanako-no heya-ni sensei-o
 Taroo-TOP Hanako-GEN room-DAT professor-ACC
o-ture-si-ta
 HON.PREF-take-do-PAST
 ‘Taroo took the professor to Hanako’s room.’
- b. Taroo-wa sensei-no heya-ni Hanako-o
 Taroo-TOP professor-GEN room-DAT Hanako-ACC
o-ture-si-ta
 HON.PREF-take-do-PAST
 ‘Taroo took Hanako to the professor’s room.’



In fact, I showed in Ch.3 that HON and v_{BEN} can select different NPs in such a configuration. The example is repeated in (23), where Hanako can be the beneficiary while the professor is the honoree.

- (23) a. ?Taroo-wa Hanako-no heya-ni sensei-no nimotu-o
 Taroo-TOP Hanako-GEN room-DAT professor-GEN baggage-ACC
 o-okuri-site-*yar/age*-ta
 HON.PREF-send-do-BEN-PAST
 ‘Taroo sent (OH) Professor’s baggage to Hanako’s room for Hanako’s benefit.’
- b. ?Taroo-wa sensei-no heya-ni Hanako-no nimotu-o
 Taroo-TOP professor-GEN room-DAT Hanako-GEN baggage-ACC
 o-okuri-site-*yar/age*-ta
 HON.PREF-take-do-BEN-PAST

‘Taroo took (OH) Hanako’s baggage to Professor’s room for Hanako’s benefit.’

Given this, for an example like (22), the cyclic expansion version of analysis would predict that the second probe, *intF*₂[], would find the animate NP in its c-command domain that was not found by the first probe *intF*₁[]. That is, the prediction would be that OH becomes available if the referent of one of the animate NPs around the object position is honored by the referent of the other animate NP around the object position, even if he/she is not honored by the subject referent. The examples in (24) show that this is not borne out: the manager is supposed to be honored by Hanako, but not by the CEO or the murderer who killed him/her. OH marking is not available here, suggesting that it is still honor from the subject that matters here.

- (24) a. #syatyoo-wa Hanako-no heya-ni butyoo-o
 CEO-TOP Hanako-GEN room-DAT manager-ACC
 o-ture-si-ta
 HON.PREF-take-do-PAST
 ‘CEO took the manager to Hanako’s room.’
- b. #hannin-wa Hanako-no heya-ni butyoo-o
 CEO-TOP Hanako-GEN room-DAT manager-ACC
 o-ture-si-te korosi-ta
 HON.PREF-take-do-and kill-PAST
 ‘The murderer took the manager to Hanako’s room and killed him.’

These data suggest that the probe *intF*₂[] does not start by going downward: it inherently goes upward.¹² Thus, this paradigm supports the view that (i) both upward probing and downward probing are allowed in human languages and (ii) each probe is inherently specified with respect to the direction it goes (Baker, 2008).

¹²It is not impossible to try protecting the cyclic expansion approach by claiming that (i) the two probes, *intF*₁[] and *intF*₂[], are in fact on distinct heads and (ii) there is a phase boundary between the two, blocking *intF*₂[], but not *intF*₁[] from going downward. However, such an analysis would have to split the meaning I attributed to HON into two heads and thus needs to consider issues such as how to assure that the two heads must appear together and how the meaning of the two heads can be combined.

Note that, although all the phenomena I analyzed involved bi-directional probes, I do not consider the bi-directional nature of the probe to be inherent to selection via Agree over person-index features. Rather I consider the apparent correlation here to be derived from the simple fact that semantic relationships between multiple NPs / DPs makes it easier for us to detect the presence of the semantic relationship.

6.4 Summary

In this dissertation, I have proposed that some heads are semantic predicates that find their arguments via Agree over an index-feature. I examined four distinct phenomena, Object Honorifics in Japanese, Benefactive auxiliaries in Japanese, the Direct / Inverse system in Japhug and the typology of Switch Reference. I showed that, in each of these phenomena, the head responsible for the derivation of the construction (HON, v_{BEN} , $v_{Dir/Inv}$, C_{SR}) introduces meanings that cannot be reduced to the meaning of a simple morpho-syntactic feature. At the same time, I showed that the meanings on these heads select one of the NPs / DPs in the clause as its argument and which NP / DP is selected suggests that these NPs / DPs are found via Agree by probes on these heads. These observations suggest that Agree can affect LF by providing arguments to some semantic predicates.

At an empirical level, I have examined each of the phenomena both in terms of its syntactic behavior and its effect on interpretation. In doing so, this dissertation has shed light on observations that have been ignored or considered problematic and set aside in many of the previous syntactic studies; the effect of the subject in Object Honorifics, Direct / Inverse contrasts in non-participant contexts, and overlapping reference in Switch Reference. I have shown that the current proposal can capture these observations without losing an account of the aspects of the phenomena that the literature has focused on.

At a theoretical level, this dissertation has contributed to the understanding of Agree, a central operation in Minimalist Syntax. The discussion in this dissertation suggests that the result of Agree is visible to LF as well as PF, a natural conclusion given that there is no inherent reason why uninterpretability and relationship with specific configurational characteristics have to be intertwined. This chapter has shown that there is further implication on Agree theory in terms of the direction of probing as well as implication on Selection theory.

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