

# What Japanese *-(Y)oo* and *-Tai* Suffixes Tell Us about *De Se*\*

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## 1 Introduction

The long-term goal of this research project is to grasp the syntactic nature behind the *de se* construal observed in a variety of languages and structures. As a step toward this goal, this particular study looks into the behaviors of the Japanese verbal suffixes *-(y)oo* and *-tai*, which are often mentioned in the

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literature discussing complement control phenomena (e.g. Fujii 2006, Matsuda 2019, Takano 2010). Very briefly, *-(y)oo* has two basic uses. In one use, it expresses one's intention or commitment to his/her future actions. This intentive *-(y)oo* appears mostly in monologues (Fujii 2006). In the other use, it expresses one's encouragement or exhortation to the addressee(s) to do something together in the future. The suffix *-tai* communicates one's hope or desire to do something in the future.

When *-(y)oo* appears suffixed to the verb in a complement clause under certain attitude or speech predicates such as *kimeru* 'decide,' *teiansuru* 'propose,' and *omou* 'think,' we observe subject or split control, as in examples (1) and (2). The suffix *-tai* on a complement verb brings about subject control, as in (3).

- (1) Minami<sub>i</sub>-wa [PRO<sub>i</sub> gakko-ni ik-oo-to] kime-ta.  
 Minami-Top school-to go-(Y)OO-C decide-Past  
 'Minami decided to go to school.'
- (2) Minami<sub>i</sub>-wa Takuya<sub>j</sub>-ni [PRO<sub>i+j</sub> gakko-ni ik-oo-to] teiansi-ta.  
 Minami-Top Takuya-Dat school-to go-(Y)OO-C propose-Past  
 'Minami proposed to Takuya to go to school (together).'
- (3) Minami<sub>i</sub>-wa [PRO<sub>i</sub> gakko-ni iki-tai-to] omot-ta.  
 Minami-Top school-to go-TAI-C think-Past  
 'Minami thought that she wanted to go to school.'<sup>1</sup>

Under obligatory control (OC) criteria, the above phenomena lead to the assumption that the null subject (PRO) of the embedded clause with a verb suffixed with *-(y)oo* or *-tai*, as in cases like (1) and (3), is obligatorily read *de se* (Hornstein 1999, Williams 1980). By extension, we expect cases like (2) with the exhortative *-(y)oo* to induce a *de se* plus *de te* reading. Although recent studies of control reveal that not all cases of complement control involve an obligatorily *de se* construal, it still seems to hold true that in English and many other languages, infinitival complements under attitude or speech predicates obligatorily bring about a *de se* reading of PRO (Landau 2015).

The first goal of the present study is to see if *-(y)oo* and *-tai* complements really give rise to an obligatorily *de se* or *de se+te* interpretation beyond the judgments of previous authors. For this purpose, six native speakers

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<sup>1</sup> Some may claim that data like (1)–(3) involve a direct quote. However, grammatical transparency tests suggested in previous literature (e.g. Kuno 1988, Oshima 2006) prove that they allow reported speech interpretations. For instance, a *wh*-phrase with a matrix scope may appear in these complements. Observe (i):

- (i) Minami-wa [doko-e ik-oo-to] kime-ta no?  
 Minami-Top where-to ik-(Y)OO-C decide-Past Q

of Japanese were interviewed to judge the truth value of some sentences under certain scenarios.

The second goal is to show that if the above assumption that the suffixes *-(y)oo* and *-tai* are firmly tied to the notion of *de se/te* holds true, its implication in understanding the nature of *de se/te* construal is nontrivial. The dominant view in the studies of *de se* maintains that the semantic structures of *de se* attitude reports correspond to those of properties, not to propositions (e.g. Chierchia 1990, Lewis 1979, Pearson 2013, Percus and Sauerland 2003). For instance, Chierchia (1990) posits an operator (Op) above an IP of the clausal complement, which denotes a proposition, and assumes that this Op abstracts over the subject under IP. This creates a property denoting structure, as in (4).

(4) John hopes [ $Op_i$  PRO<sub>*i*</sub> to win the election].

However, as discussed in detail in Landau (2018), there is at least one non-trivial deficiency in this line of approaches to *de se*. It does not provide a mechanism which assures that the matrix subject *John* co-refers with Op and in turn controls PRO. The picture seems simple enough when monotransitives such as *hope* appear as a matrix predicate, but in the cases of ditransitives such as *promise* and *order* (e.g., *John promised Mary to win the election*), the above system fails to predict which matrix argument controls PRO.

A question arises as to whether there are any mechanisms that ensure an obligatorily *de se* interpretation and controller identification. This paper suggests that the Op has a set of primitive person features such as *speaker* and *addressee*, which arise inside the complement clause. They arise from a modal element visible in Japanese via suffixes such as *-(y)oo* and *-tai* within the complement. The Op behaves like a free relative, such as *who* or *whoever*, with a certain primitive person feature. This feature contributes to both the identification of the semantic value of the Op and the interpretation *de se/te*.

## 2 Modality and Controller Constraints in Japanese OC

First, I will look into a set of Japanese sentences including (1) to (3) above, comparable to English attitude OC structures. We can see a control pattern contingent on the verbal suffixes appearing in the complement clause. For example, when the suffixes *-(y)oo* or *-tai* appear on the verb of the complement clause, we typically observe subject control, as in (1) and (3). The suffix *-(y)oo* used as an exhortative gives rise to split control, as in (2). These patterns are contrasted with, say, the *-e* imperative suffix on the complement verb, which brings about object control as shown in (5).

- (5) Minami-wa Takuya<sub>i</sub>-ni [PRO<sub>i</sub> gakkō-ni ik-e-to] meireisi-ta.  
 Minami-Top Takuya-Dat school-to go-E-C order-Past  
 ‘Minami ordered Takuya to go to school.’

Notably, in root environments, these suffixes impose person constraints on the subject. Let us focus on the suffixes *-(y)oo* and *-tai*. When the suffix *-(y)oo* appears on the verb in roots and is used as an intensitive in a monologue-like context, the subject most felicitously refers to the speaker of the utterance (Adachi 2002, Fujii 2006). Consider (6) adapted from Adachi (2002: 20).

- (6) Watasi/??Anata/??Kare-wa kaisha yame-yoo.  
 I/You/He-Top company quit-(Y)OO  
 ‘I/You/He will quit my/your/his job.’

When the same suffix appears on the verb and the sentence is uttered toward the addressee(s) as an exhortation, the subject most felicitously includes both the speaker and addressee(s), as in (7). *Watasitai* ‘we’ here is an inclusive first-person plural pronoun referring to the speaker and addressee(s).

- (7) Watasitai/??Anatatati/??Karera-wa kaisha yame-yoo.  
 We/You.PI/They-Top company quit-(Y)OO  
 ‘We/You/They will quit our/your/their job.’<sup>2</sup>

A similar constraint can be observed for *-tai*. In assertive sentences, when *-tai* appears on the verb, the subject refers to the speaker of the utterance (Kuno 1973, Nitta 1991).<sup>3</sup> Observe (8) based on Nitta (1991: 30).

- (8) Watasi/??Anata/??Kare-wa sake-ga nomi-tai.  
 I/You/He-Top sake-Nom drink-TAI  
 ‘I/You/He want(s) to drink sake.’<sup>4</sup>

<sup>2</sup> There are exceptional uses of the exhortative *-(y)oo*, as in (ii), adapted from Nitta (1991: 33), where the subject is understood to refer only to the addressees. In the context where a teacher utters (ii) to her students, the subject *minna* ‘everyone’ may refer only to her addressees (i.e. her students) exclusive of the speaker (i.e. the teacher).

(ii) Minna sizukani si-yoo.  
 Everyone quiet do-(Y)OO  
 ‘Everyone, let’s be quiet.’

The present paper does not delve into such exceptional cases. It seems that in cases like (ii), the action taken by the students will be mutually beneficial to both the students and the teacher. Such mutually beneficial contexts may be a key to allowing the exceptional use of *-(y)oo*.

<sup>3</sup> As is well known, in interrogatives, the subject refers to the addressee.

<sup>4</sup> Sentences like (6)–(8) sound most natural with a null subject. Even with a null subject, we would most naturally interpret the subject to refer to the speaker in (6) and (8) and the speaker

At first glance, in control complements (1)–(3), these constraints seem lifted. In (1), the subject of the complement verb with *-(y)oo* is obviously not the speaker of the entire utterance; it designates the referent of *Minami*, the matrix subject. In (2), the subject of the exhortative *-(y)oo* verb does not designate the speaker and addressee(s) of the utterance either; it designates *Minami* and *Takuya*. Similarly, in (3), the subject of the complement *-tai* verb is not the utterance speaker. Nevertheless, we could see the suffixes *-(y)oo* and *-tai* as behaving like shifted indexicals observed in languages such as Amharic (Schlenker 2003) and Zazaki (Anand and Nevins 2004).

Put differently, we could see these suffixes as imposing *shifted* person constraints on PRO. For instance, with the complement *-(y)oo* verb, PRO refers to the speaker or the attitude holder of the reported context, which is *Minami* in (1). When the exhortative *-(y)oo* appears on the verb, as in (2), PRO refers to a set of individuals inclusive of the speaker and addressee of the reported context, i.e. *Minami* and *Takuya*. In (3), the suffix *-tai* is on the complement verb. In this case, PRO refers to the speaker/attitude holder of the reported context, which is *Minami*. These observations reveal that modal elements, such as *-(y)oo* and *-tai*, contribute to controller identification via shifted person constraints.

It has often been assumed that shifted indexicals are the source of *de se/te*. Thus, we may be tempted to conclude that *-(y)oo* and *-tai* induce obligatorily *de se/te* readings because they are shifted indexicals. However, new evidence has shown that shifted indexicals are not necessarily construed *de se/te*. For instance, shifted indexicals in Dhaasanac (Nishiguchi 2017) and Amharic (Malamud 2006) have been reported to allow *de re* readings. Such evidence has led Grano (2021: 151) to say that ‘It is an open question whether shifted indexicals have an obligatory *de se* interpretation ....’ It seems crucial to have it empirically tested whether *-(y)oo* and *-tai* really induce obligatorily *de se/te* readings.

### 3 Do *-(Y)oo* and *-Tai* Induce Obligatorily *De Se* Readings?

In a preliminary test conducted in August 2022, I consulted with six native speakers of Japanese. The following two pairs of scenarios, A(1) and (2) and B(1) and (2), were included in the test. After showing each scenario with visual illustrations to my consultants, I showed and read out several sentences with *-(y)oo* and *-tai* clausal complements and asked them if each sentence correctly or incorrectly depicts the scenario. The scenarios are based on Morgan (1970) and Schlenker (2003).

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and addressee(s) in (7). The overt subjects with the *-wa* marker in these contexts bring about a contrastive reading; they are employed here for our expository purpose.

**Scenario A(1):** Misaki is a very famous Japanese singer in her teens. Her beautiful voice attracts many Japanese fans. One day, Misaki sees herself singing on YouTube and thinks she sings amazingly. She thinks to herself, ‘I should advance overseas.’

**Scenario A(2):** Misaki is a very famous Japanese singer in her teens. Her beautiful voice attracts many Japanese fans. But unfortunately, she gets into a car accident and becomes amnesic. She loses all her memories and does not even remember she is a singer. One day, while hospitalized, Misaki sees herself singing on YouTube. Since she is amnesic, she is not aware she is in fact watching herself but still thinks that she sings amazingly and tells her doctor, ‘She should advance overseas.’

My consultants, a to f, were asked to judge whether test sentences (9) and (10) correctly or incorrectly describe the scenarios. The results are shown in Table 1 for (9) with *-(y)oo* and Table 2 for (10) with *-tai*.

(9) Misaki-wa [kaigai-ni sinsyutusi-yoo-to] omot-tei-ru.  
 Misaki-Top overseas-to advance-(Y)OO-C think-Prog-Nonpast  
 ‘Misaki is thinking of advancing overseas.’

	a	b	c	d	e	F
A(1)	correct	correct	DK	DK	correct	incorrect
A(2)	incorrect	incorrect	incorrect	incorrect	incorrect	incorrect

Table 1. Results for (9) against scenarios A(1) and A(2)

(10) Misaki-wa [kaigai-ni sinsyutusi-tai-to] omot-tei-ru.  
 Misaki-Top overseas-to advance-TAI-C think-Prog-Nonpast  
 ‘Misaki is thinking that she wants to advance overseas.’<sup>5</sup>

	a	b	c	d	e	f
A(1)	correct	correct	correct	correct	correct	DK
A(2)	incorrect	incorrect	incorrect	incorrect	incorrect	incorrect

Table 2. Results for (10) against scenarios A(1) and A(2)

Three out of six consultants judged the sentence (9) ‘correct’ against scenario A(1), the aware version, and the rest were either incapable of judging it (said ‘don’t know’) or replied ‘incorrect.’ Focusing on those three who said

<sup>5</sup> For test sentences (9) and (10), consultants a and b judged each sentence with *no-da* ‘be-Cop’ at the end. For all consultants, when (9) and (10) were judged against A(2), one of the phrases *kiokusositudaga* ‘although amnesic’ or *sirazusirazunoutini* ‘unknowingly’ was inserted into each sentence to support the consultants’ understanding of the context.

‘correct,’ meeting the baseline for this test, all judged the same sentence (9) ‘incorrect’ against scenario A(2), the unaware version. At least for those three consultants, sentence (9) seems to induce an obligatorily *de se* reading. Regarding sentence (10) with the suffix *-tai*, five out of six consultants judged it ‘correct’ against scenario A(1), and all those five consultants judged it ‘incorrect’ against scenario A(2). For those five consultants, sentence (10) seems to give rise to an obligatorily *de se* construal.

Another set of scenarios, B(1) and (2), were presented to my consultants to judge sentence (11) with the exhortative *-(y)oo*. Table 3 shows the results.

**Scenario B(1):** Minami is a high school senior and president of the student council. One of the graduating students makes a speech at the graduation ceremony every year at her school. However, no students have volunteered to give the speech. Minami, who is in charge of deciding who is to give the speech, consults with the vice-president of the council, Takuya. She proposes to Takuya, ‘Why don’t we give the speech together?’

**Scenario B(2):** Minami is a high school senior and president of the student council. One of the graduating students makes a speech at the graduation ceremony every year at her school. However, no students have volunteered to give the speech. Minami, who is in charge of deciding who is to give the speech, consults with the vice-president of the council, Takuya. She proposes to Takuya, ‘What about two students who have the top-two final exam scores giving the speech together?’ Unbeknownst to Minami and Takuya, they have the top-two final exam scores.

(11) Minami-wa Takuya-ni [issyoni supiiti si-yoo-to] teiansi-ta.  
 Minami-Top Takuya-Dat together speech do-(Y)OO-C propose-Past  
 ‘Minami proposed to Takuya to give the speech together.’<sup>6</sup>

	a	b	c	d	e	f
B(1)	correct	correct	correct	correct	correct	correct
B(2)	incorrect	correct	incorrect	DK	correct	incorrect

Table 3. Results for (11) against scenarios B(1) and B(2)

The results are not so clear for the exhortative *-(y)oo*, as in (11). This is perhaps due to the somewhat complicated scenarios that consultants had to deal with. However, although all judged (11) correct against scenario B(1), three out of six judged it incorrect against B(2). At least for some speakers, the

<sup>6</sup> For test sentence (11), consultants a and b judged each sentence with *no-da* ‘be-Cop’ at the end. For consultants b to f, the phrase *hakarazumo* ‘unintentionally’ was inserted into sentence (11) to support the consultants’ understanding of the context when it was judged against B(2).

exhortative use of *-(y)oo* in the complement seems to induce an obligatorily *de se* and *de te* reading. Although more careful research is necessary in the future, the preliminary test reveals a set of promising data that modal elements such as *-(y)oo* and *-tai* in Japanese complement clauses play a key role in giving rise to obligatorily *de se/te* readings.

#### 4 Analysis and Implications

In Section 2, we saw that the suffixes *-(y)oo* and *-tai* bear speaker–addressee shifted indexicality, and the empirical test results reviewed in Section 3 suggest they give rise to an obligatorily *de se/te* construal in at least certain types of complement control in Japanese. It seems that the modal elements overtly observed by the Japanese suffixes *-(y)oo* and *-tai* are responsible for both the obligatorily *de se* nature of PRO and its controller determination. The present study proposes to extend a similar view to English complement control involving attitude and speech predicates where PRO is obligatorily construed *de se/te*. That is to say, in such English complements, covert modality and indexicality are also the source of *de se/te* and make possible the identification of the controller.<sup>7</sup>

There are a variety of ways to implement this view. For instance, in Japanese, we could posit that the suffixes *-(y)oo* and *-tai* originate with primitive indexical features such as speaker and addressee features. They are distinct from the traditional first- and second-person features observed in English-type languages. Rather, they are part of the hierarchical structural representations of the first- and second-person pronouns in the sense of Harley and Ritter (2002); hence, they are more primitive than the first- and second-person features.

These primitive speaker/addressee features on *-(y)oo* and *-tai* can be shared with PRO by agreement, as in (12) and (13). (12) represents the intensive *-(y)oo*; the exhortative *-(y)oo* would have both the speaker and the addressee features. Note that *-(y)oo* and *-tai* should be distinguished from sentence final particles, such as Japanese *-yo* and *-ne*, which involve the Speaker-Addressee or Commitment Phrase located high above the CP projection according to studies, including Miyagawa (2022). Both *-(y)oo* and *-tai* can be followed by the particles *-yo* or *-ne*; we often observe *-(y)oo-yo* or *-tai-ne* sequences. I temporarily assume that *-(y)oo* merges on the modal head M between T and C; I simply assume here that *-(y)oo* must be positioned above T because it lacks a past tense variant, while *-tai* is below T on the aspectual head Asp since it has the past tense variant, *-takatta*.

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<sup>7</sup> The notion of covert modality in nonfinite contexts is inspired by Bhatt (2006).



- (12) ...[<sub>CP</sub> OP<sub>speaker</sub> [<sub>MP</sub> PRO<sub>speaker</sub> [<sub>TP</sub> t<sub>PRO</sub> [<sub>vP</sub> t<sub>PRO</sub> kaigai-ni sinsyutusi]-T]-M(yoo<sub>speaker</sub>)]-C(to)]...
- (13) ...[<sub>CP</sub> OP<sub>speaker</sub> [<sub>TP</sub> PRO<sub>speaker</sub> [<sub>AspP</sub> t<sub>PRO</sub> [<sub>vP</sub> t<sub>PRO</sub> kaigai-ni sinsyutusi]-Asp(tai<sub>speaker</sub>)]-T]-C(to)]...

Following the property view of *de se*, the last step will be the  $\lambda$ -abstraction over the subject (PRO) by the operator in order to create a property denoting clausal structure. PRO moves up to the Op position with the speaker feature, as in (12) and (13). This, in effect, specifies that the property bearer is the speaker, or the attitude holder, of the relevant context. When the exhortative *-(y)oo* appears, the Op would end up with both the speaker and addressee features, specifying that both bear the property. The Op here behaves like a free relative, such as *who* or *whoever*, with certain primitive indexical features, thus restricting its domain to include the speaker or addressee or both. The present study in essence supports the view presented in previous research, including Schlenker (2003) and Anand and Nevins (2004), that PRO involves shifted indexicality. How the shift is implemented will be detailed in future research.

We could apply a similar syntactic derivation to English OC with attitude or speech predicates, such as (4). We could assume that there is a null modal or aspectual head which carries the speaker/addressee features. Then the Op can end up with these features, just as in (12) and (13). Note that, in English, the primitive speaker/addressee features can be realized in the traditional third-person agreement in a shifted context embedded under an attitude or speech verb. Thus, having PRO co-occurring with the third-person reflexive (e.g., *John told David to behave himself*) is compatible with the present proposal.

The Japanese suffixes *-(y)oo* and *-tai* allow us to see what is invisible in English. They suggest that certain types of modality associated with the primitive indexical features play a crucial role in a *de se/te* construal. Further detailed research into their behaviors may pave the way for a better understanding of the issues surrounding *de se/te*.

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