

On the Subject Orientation of Adverbs in Passives*

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1 Introduction

Researchers have examined the interpretation of Subject-Oriented (SO) adverbs in passives (see, inter alia, Ernst 2002, Jackendoff 1972, Kubota 2015, Matsuoka 2013, McConnell-Ginet 1982, Morzycki 2016, Wyner 1998). In passives, English SO adverbs (e.g. *stupidly*, *reluctantly*) can describe either the deep subject or the derived subject—a phenomenon that has been referred to as the ‘passive sensitivity’ of SO adverbs. Kubota (2015) observes that Japanese SO adverbs exhibit a split in passive sensitivity: Mental Attitude (MA) adverbs (e.g. *iyaiya*, *sibusibu* ‘reluctantly’, *yorokon-de* ‘happily’) can take either the deep or the derived subject as their antecedent, while the antecedent for Agent Oriented (AO) adverbs (e.g. *orokani-mo* ‘stupidly’, *kasikoku-mo* ‘wisely’) is restricted to the surface subject and cannot be the deep subject in passives. We illustrate this distinction in (1) to (3), where ‘EM’ stands for an emphatic particle. In the example sentences, where SO adverbs are boldfaced, ‘SS’ and ‘DS’ stand for ‘surface subject’ and ‘deep subject’, respectively.

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- (1) a. The doctor **wisely** examined the patient. = ✓Subj, *Obj
 b. The doctor **reluctantly** examined the patient. = ✓Subj, *Obj
- (2) a. The patient was **wisely** examined by the doctor. = ✓SS, ✓DS
 b. The patient was **reluctantly** examined by the doctor. = ✓SS, ✓DS
- (3) a. Mary-wa **orokani-mo** John-ni dakisime-rareta.
 Mary-TOP stupidly-EM John-DAT hug-PASS.PST
 ‘Stupidly Mary was hugged by John.’ = ✓SS, *DS
 b. Mary-wa **iyaiya** John-ni dakisime-rareta.
 Mary-TOP reluctantly John-DAT hug-PASS.PST
 ‘Mary was reluctantly hugged by John.’ = ✓SS, ✓DS

(1a) and (1b) are English active sentences containing an SO adverb. In (1a), the AO adverb *wisely* takes the subject *the doctor* as its antecedent, indicating that the doctor was wise in examining the patient. As such, the SO adverb never takes the object as its antecedent. (1b) makes the same point regarding the MA adverb *reluctantly*. In contrast, (2a) and (2b) are passive sentences. In (2a), the AO adverb describes the state of either the surface subject *the patient* or the deep subject *the doctor*. This means that either the patient or the doctor was careful in the examination. A similar ambiguity arises in (2b) with *reluctantly*.

As mentioned above, according to Kubota (2015), while Japanese MA adverbs are passive sensitive in the same way as English SO adverbs, AO adverbs are always SS oriented. The AO adverb *orokani-mo* in (3a) is associated only with the derived subject *Mary*, meaning that Mary was judged as foolish by being hugged by John. In contrast, the MA adverb *iyaiya* in (3b) may describe the mental state of the deep subject: Mary was reluctant to be hugged by John. Kubota proposed that the obligatory SS orientation of AO adverbs is due to *-mo*, the special emphatic particle found in them; see Sawada (1978).

A standard account of passive sensitivity runs as follows. First, the structural condition (4) is adopted as a generalization that regulates the interpretation of SO adverbs (Ernst 2002: 107, Kubota 2015). (‘Closeness’ is defined as follows: An NP α is closest to an adverb Adv if there is no NP β such that α c-commands β , and β c-commands Adv.)

(4) *Structural condition on subject-oriented interpretation*

The antecedent for a subject-oriented adverb (i.e. the NP in an A-position denoting the subject-oriented adverbs’ agentive argument) must c-command the adverb and must be the closest one when it is one of multiple c-commanding antecedents.

In line with this condition, we can hypothesize that an SO adverb can be merged to v’ or T’. In either position, the SO adverb is properly licensed in terms of its subject-oriented interpretation. (5a) is the structure for actives, and (5b) that for passives. (Head-complement order is irrelevant here; see below for a more articulated analysis of passive clauses.)

- (5) a. [TP Subj [T’ SO T [vP t_{Subj} [v’ SO v [VP V Obj]]]]]
 b. [TP SS [T’ SO T ... [vP DS [v’ SO v [VP V t_{SS}]]]]]

The structure in (5b) can account for the deep subject reading of SO adverbs found in (2a–b) and (3b). The availability of the DS reading in passives follows from (4) and the VP-Internal Subject Hypothesis (Fukui & Speas 1986, etc.): The deep subject is merged immediately above the SO adverb if the latter can be attached to *v'*.

Notice that the ambiguity disappears in English when the SO adverb is placed before the finite auxiliary. McConnell-Ginet (1982: 148) observed, citing (6), that the preauxiliary position of the adverb ‘requires the attribution of unwillingness to the surface subject’.

(6) The rock (#unwillingly) was (unwillingly) thrown by the hostages.

When the adverb is placed before the finite auxiliary, only an anomalous reading is possible: Rocks are not sentient entities and therefore cannot be agentive.

We now arrive at our research question: Can we identify a comparable data point in Japanese that demonstrates that the Passive Sensitivity of MA adverbs is linked to their syntactic position? The answer is not straightforward, as the finite verb or auxiliary element in an SOV language always appears in clause-final position, regardless of where the adverb is attached within the clause.

In what follows, we provide empirical evidence supporting Kubota’s (2015) generalization that MA adverbs are SS oriented when attached to a high position such as *T'*, and are DS oriented when attached to *v'*. Section 2 outlines our assumptions regarding the analysis of Passive Sensitivity. Section 3 introduces pseudoclefts, which we use to examine whether the interpretation of MA adverbs varies depending on their adjunction site. Section 4 briefly discusses data pertaining to Depictive Secondary Predicates, as the construction also involves subject orientation. In Section 5, we return to AO adverbs, which Kubota (2015) argued are always SS oriented, providing evidence that DS readings are possible in limited environments. Section 6 is a conclusion.

2 Subject-Oriented Adjuncts in Passives

We assume a passive clause involves the Pass head that projects PassP above *vP*, as in (7) (Ernst 2002, Matsuoka 2003, Collins 2005, Miura and Fujii 2020). Thus, (7) is a more articulated version of the analysis of the passive clause given in (5).

(7) [TP SS_i [T' (SO) T [PassP t_i [Pass' (SO) Pass [vP DS [v' (SO) v [VP V t_i]]]]]]]

The demoted argument occupies the Spec,*vP* position, the regular position for the agent in an active clause. The deep subject *c*-commands the SO adverb, allowing it to be interpreted as the agentive argument of the adverb. Additionally, the surface subject, which is moved from *vP* for Case, also *c*-commands the SO adverb located in *T'* or *Pass'* in (7), thereby giving rise to the SS reading of the adverb. The Japanese examples in (8) are derived through the structure shown in (9), where the MA adverb may be introduced in *T'*, *Pass'*, or *v'*. The versions in (8) exhibit ambiguity, allowing both the surface-subject and deep-subject readings.

- (8) a. **Iyaiya** Bart-wa Homer-ni oikake-rare-ta.
 b. Bart-wa **iyaiya** Homer-ni oikake-rare-ta.
 c. Bart-wa Homer-ni **iyaiya** oikake-rare-ta.
 reluct. B-TOP reluct. H-DAT reluct. chase-PASS-PST
 ‘Bart was reluctantly chased by Homer.’ = ✓SS, ✓DS

- (9) [TP SS_i [T' (MA) [PassP t_i [Pass' (MA) [vP DS [v' (MA) [VP t_i V] v]] Pass]] T]]

Noteworthy is that the MA adverb appears to precede Spec,TP in (8a), even though there is no structural description in (9) where the adverb precedes Spec,TP. It is also important to emphasize that (8c) permits an SS reading even though such a reading is not predicted by the analysis in (9). When the adverb appears right below the DS in Spec,vP, it should permit a DS reading only. These complications are most likely due to word order permutation operations, such as scrambling, which affect the placement of specifiers and adjunction sites. This issue will become relevant in the discussion of pseudocleft data in the following sections.

3 Subject Orientation in Passive Pseudoclefts

As we have mentioned in Section 1, the passive sensitivity of Japanese MA adverbs led Kubota (2015) to conclude that they may attach to either a higher position or a lower position in passive constructions. In this section, we test this claim using the pseudocleft construction, as named in Kishimoto (2015, 2024), as a probe. (10) represents a general schema in which a verb-phrase-like constituent of the underlying sentence occurs in the focus position.

- (10) [Presuppositional Clause ... *-no*]-wa [Focus ... *-ru-koto*]-da
 -COMP-TOP -PRS-COMP-COP

(11b) is a pseudocleft derived from (11a).¹

- (11)a. Homer-ga Bart-o oikake-ta.
 H-NOM B-ACC chase-PST
 ‘Homer chased Bart.’
 b. [Homer-ga si-ta-no]-wa [Bart-o oikake-ru koto]-da.
 H-NOM do-PST-COMP-TOP B-ACC chase-PRS COMP-COP
 ‘What Homer did is to chase Bart.’

On the assumption that constituents below T (i.e. vP, v', and VP) can in principle undergo pseudoclefting, the string of words in (11b) should be structurally ambiguous. In (12), the shaded constituents indicate constituents that undergo pseudoclefting. Three distinct constituents can undergo

¹ We describe pseudoclefting as a displacement operation in the text, though this is a simplification. For instance, the pseudocleft in (i) below suggests that *suru* ‘do’ functions as a full verb taking the dative argument *Bart-ni*. We leave for future research the task of reinterpreting the test used in the text within a more precise analysis.

- (i) [Homer-ga Bart-ni sita-no]-wa [kare-o oikakeru] koto-da.
 H-NOM B-DAT did-COMP-TOP him-ACC chase.PRS COMP-COP
 ‘What Homer did to Bart is chase him.’

pseudoclefting, while there are two available adjunction sites for an MA adverb. Six patterns of active pseudoclefts should be derivable.

- (12) a. [TP Subj_i [T' (i. MA) [vP t_i [v' (ii. MA) [VP Obj V] v]] T]] (vP-pseudoclefting)
 b. [TP Subj_i [T' (i. MA) [vP t_i [v' (ii. MA) [VP Obj V] v]] T]] (v'-pseudoclefting)
 c. [TP Subj_i [T' (i. MA) [vP t_i [v' (ii. MA) [VP Obj V] v]] T]] (VP-pseudoclefting)

(13) and (14) are the strings of words that are associated with these six structural descriptions. As indicated, when the MA adverb *iyaiya* 'reluctantly' occurs inside the presuppositional *no*-clause, the sentence can be assigned structures (12a-i), (12b-i) and (12c-i-ii). When the adverb occurs inside the focused constituent, the sentence can be assigned structures (12a-ii) and (12b-ii).

(13) *Sentence associated with the derivations given in (12a-i), (12b-i) and (12c-i-ii)*

[Homer-ga **iyaiya** si-ta-no]-wa [Bart-o oikake-ru koto]-da.
 H-NOM reluctantly do-PST-COMP-TOP B-ACC chase-PRS COMP-COP
 'What Homer reluctantly did is to chase Bart.'

(14) *Sentence associated with the derivations given in (12a-ii) and (12b-ii)*

[Homer-ga si-ta-no]-wa [**iyaiya** Bart-o oikakeru koto]-da.
 H-NOM do-PST-COMP-TOP reluctantly B-ACC chase-PRS COMP-COP
 'What Homer did is to reluctantly chase Bart.'

In (13) and (14), the adverb *iyaiya* is predicated to take *Homer* as its sole antecedent, as Spec,vP and Spec,TP are occupied by the same NP in the derivations of these sentences.

We now turn to pseudoclefts derived from passives. (15i-iii) are the structures of passives with an MA adverb that is adjoined to one of the three X'-level nodes.

- (15) [TP SS_i [T' (i. MA) [PassP t_i [Pass' (ii. MA) [vP DS [v' (iii. MA) [VP t_i V] v]] Pass]] T]]

As background information on passive pseudoclefts, we note a couple of basic properties. First of all, PassP-/Pass'-pseudoclefts are generally degraded. Consider (16a), which we assume to be derived by pseudoclefting the shaded constituent in (16b) or that in (16c).

(16) *PassP/Pass'-pseudoclefts generally degraded*

- a. ?[Bart-ga si-ta-no]-wa [Homer-ni oikake-**rare**-ru koto]-da.
 B-NOM do-PST-COMP-TOP H-DAT chase-PASS-PRS COMP-COP
 'What Bart did is to be chased by Homer.'
 b. [TP SS_i [T' [PassP t_i [Pass' [vP DS [v' [VP t_i V] v]] Pass]] T]]
 c. [TP SS_i [T' [PassP t_i [Pass' [vP DS [v' [VP t_i V] v]] Pass]] T]]

While we cannot fully investigate this issue here, this degradation is very likely related to the agentive nature of *suru* 'do' in the presuppositional clause. The reader is also referred to Footnote 1 for further discussion.

Next, a pseudocleft is judged much worse when the *by*-phrase appears in the presuppositional clause and the passive morpheme appears in the focused constituent, as in (17a).

(17) *Ungrammatical pseudoclefting of PassP/Pass' with the by-phrase stranded*

- a. *[Bart-ga **Homer-ni** si-ta-no]-wa [oikake-rare-ru koto]-da.
 B-NOM H-DAT do-PST-COMP-TOP chase-PASS-PRS COMP-COP
 '(Lit.) What Bart did by Homer is to be chased.'
- b. [TP SS_i [PassP t_i [vP DS [VP t_i V] v] Pass] T]
- c. [TP SS_i [PassP t_i [Pass' [vP DS [VP t_i V] v] Pass]] T]

This is correctly predicted by the current set of assumptions. When PassP or Pass' undergoes pseudoclefting, the affected constituent must contain the DS, as in (17b–c).

Additionally, pseudoclefting a vP that contains the DS results in severe unacceptability as in (18a), even though it should not in the current analysis, as shown in (18b).

(18) *Ungrammatical pseudoclefting of the vP that contains the by-phrases*

- a. *[Bart-ga s-are-ta-no]-wa [**Homer-ni** oikake-ru koto]-da.
 B-NOM do-PASS-PST-COMP-TOP H-DAT chase-PRS COMP-COP
 '(Lit.) What Bart was done is chase by Homer.'
- b. [TP SS_i [T' (MA) [PassP t_i [Pass' (MA) [vP DS [v' (MA) [VP t_i V] v]] Pass]] T]]

The status of (18a), though, may not be surprising given that theories of passives assume that there is a tight relationship between the *by*-phrase and the Pass head (e.g. Collins 2005). In (18b), this dependency is disrupted by the displacement operation.

That said, (19) lists the remaining possible derivations of pseudoclefts.

(19) *Possible targets of pseudoclefting with the MA adverb adjoined to different positions*

- a. [TP SS_i [T' (i. MA) [PassP t_i [Pass' (ii. MA) [vP DS [v' (iii. MA) [VP t_i V] v]] Pass]] T]]
- b. [TP SS_i [T' (i. MA) [PassP t_i [Pass' (ii. MA) [vP DS [v' (iii. MA) [VP t_i V] v]] Pass]] T]]
- c. [TP SS_i [T' (i. MA) [PassP t_i [Pass' (ii. MA) [vP DS [v' (iii. MA) [VP t_i V] v]] Pass]] T]]
- d. [TP SS_i [T' (i. MA) [PassP t_i [Pass' (ii. MA) [vP DS [v' (iii. MA) [VP t_i V] v]] Pass]] T]]

(19a) is a PassP-pseudocleft; (19b) is a Pass'-pseudocleft; (19c) is a v'-pseudocleft; and (19d) is a VP-pseudocleft, featuring three possible adjunction sites for an MA adverb, as indicated by the Roman numerals 'i' to 'iii'.

These structures lead to somewhat complicated but clear predictions regarding the subject orientation of the MA adverb. Let us take (19a) and (19b) first. (20a–c) are the pseudoclefts corresponding to the different derivations found in (19a–b). (19a-i, b-i) (i.e. the PassP-/Pass'-pseudocleft with the T'-adjoined MA adverb stranded in the presuppositional clause) would allow an SS interpretation only. (19a-ii, b-ii) (i.e. the PassP-/Pass'-pseudocleft with the Pass'-adjoined MA adverb) would allow an SS interpretation only. (19a-iii, b-iii) (i.e. the PassP-/Pass'-pseudocleft with the *by*-phrase and v'-adjoined MA adverb in the focused constituent) would allow a DS interpretation only. Both predictions largely align with the judgements shown in Table 1.

4 Subject-Oriented Depictive Secondary Predicates

Kishimoto (2024) discussed the adjunction sites of Subject-Oriented Depictive Secondary Predicates by employing the pseudocleft test. Here, we report the data concerning passive pseudoclefts with depictive adjuncts. In a nutshell, depictive predicates exhibit the same pattern as MA adverbs regarding passive sensitivity. We provide examples with *hadaka-de* ‘naked’.

(22) *PassP/Pass*-pseudoclefts with depictive secondary predicates

- a. ?[Bart-ga **hadaka-de** si-ta-no]-wa [Homer-ni oikake-rare-ru koto]-da.
 B-NOM naked-ADV do-PST-COMP-TOP H-DAT chase-PASS-PRS-COMP-COP
 ‘What Bart did naked is to be chased by Homer.’ = ✓SS, *DS
- b. ?[Bart-ga si-ta-no]-wa [**hadaka-de Homer-ni** oikake-rare-ru koto]-da.
 ‘What Bart did is to be chased by Homer naked.’ = ✓SS, (✓)DS
- c. ?[Bart-ga si-ta-no]-wa [**Homer-ni hadaka-de** oikake-rare-ru koto]-da.
 ‘What Bart did is to be chased by Homer naked.’ = (✓)SS, ✓DS

(23) *v/VP*-pseudoclefts with depictive secondary predicates

- a. [Bart-ga **Homer-ni hadaka-de** s-are-ta-no]-wa [oikake-ru koto]-da.
 B-NOM Homer-DAT naked-ADV do-PASS-PST-COMP-TOP chase-PRS-COMP-COP
 ‘(Lit.) What Bart was done to by Homer naked is chase.’ = (✓)SS, ✓DS
- b. [Bart-ga **Homer-ni** s-are-ta-no]-wa [**hadaka-de** oikake-ru koto]-da. [(19b-ii)]
 ‘(Lit.) What Bart was done by Homer is to chase naked.’ = *SS, ✓DS

Thus, depictive secondary predicates and MA adverbs do not appear to differ in passive sensitivity within pseudoclefts. Despite this similarity, do the two types of adjuncts belong to distinct adjunct classes? If so, how can they be distinguished empirically? These questions must be left for future investigation; see Kishimoto (2024) for further discussion.

5 AO Adverbs Revisited

Before concluding the paper, we return to AO adverbs. In Section 1, we referenced the examples in (3), citing Kubota’s (2015) observation that AO adverbs lack a DS readings in passives. According to Kubota, this is because such AO adverbs can only adjoin to a T-projection.

This section presents the results of our preliminary examination of the relevant pseudocleft examples. First, the examples in (24a–b) are active pseudoclefts with an AO adverb. Presumably due to the presence of the special morpheme *mo* (see Section 1), these examples may require greater processing effort. Our preliminary judgment is that the examples are acceptable although not as easy to comprehend as their MA adverb counterparts; see Kaga and Kishimoto (2024: 53) for different judgements.

- (24)a. [Homer-ga **orokani-mo** sita]-no-wa [Bart-o hihansuru koto]-da.
 H-NOM stupidly-EM did-COMP-TOP B-ACC criticize.PRS COMP-COP
 ‘[What Homer stupidly did] is [to criticize Bart].’
- b. [Homer-ga sita] no-wa [**orokani-mo** Bart-o hihansuru koto]-da.
 H-NOM did-COMP-TOP stupidly-EM B-ACC criticize.PRS COMP-COP
 ‘What Homer did is [to stupidly criticize Bart].’

Next, what happens in passive pseudoclefts? The paradigms comparable to (20) and (21) are too complicated for us to give stable judgements to. Instead, we have constructed a minimal pair in (25), where adverb-containing *v'* is pseudoclefted. The a-example contains the MA adverb *iyaiya* ‘reluctantly’ while the b-example features the AO adverb *namaikini-mo* ‘impudently’.

(25) *Pseudoclefting of v' with the v'-adjoined MA or AO adverb*

[Watasi-ga **sinnyuusyain-ni** sareta-no]-wa
 I-NOM new.recruit-DAT do.PASS.PST-COMP-TOP
 [{a. ?**iyaiya** , b. ***namaikini-mo**} sitomonsuru koto]-da.
 reluctantly impudently-EM question.PRS COMP-COP

‘(Lit.) What I was done by the new recruit is reluctantly/impudently ask a question.’

Our preliminary judgment is that the a-example, while not perfect, is better than the b-example. This aligns with Kubota’s (2015) claim that AO adverbs cannot occupy a vP-internal position.

However, this conclusion remains tentative and requires further investigation. Miura and Fujii (2020) cite the active-passive pair in (26a–b), arguing that an AO adverb can sometimes take a DS as its antecedent. In (26a–b), the stupidity of the event of constructing a new building in a rural area must be attributed to ‘the government’, rather than ‘the new building’, as the latter is not a sentient entity. If *orokani-mo* ‘stupidly’ could not adjoin to *v'*, (26b) would be ungrammatical. However, this is not the case: *seifu* ‘government’ serves as the antecedent for the AO adverb.

(26) a. Seihu-wa **orokani-mo** atarasii eki-o inakamati-ni tateta.
 government-TOP stupidly-EM new station-ACC rural.town-LOC construct.PST
 ‘The government stupidly constructed a new station in the rural town.’
 b. Atarasii eki-ga seihu-niyotte **orokani-mo** inakamati-ni taterareta.
 new station-NOM government-by stupidly-EM rural.town-LOC construct.PASS.PST
 ‘A new station has been stupidly constructed in the rural town by the government.’
 = *SS, ✓DS

Furthermore, a similar yet slightly different example can be constructed that allows a DS interpretation. Consider (27), where the AO adverb *sinsetuni-mo* ‘kindly’ is used.

(27) Watasi-wa (**sinsetuni-mo**) Homer-ni (**sinsetuni-mo**) miti-de taoreteiru
 I-TOP kindly-EM Homer-DAT kindly-EM street-on fallen
 tokoro-o tasuke-rareta.
 where-ACC help-PASS.PST
 ‘(Lit.) I was kindly helped by Homer when I had fallen on the street.’ = *SS, ✓DS

The thought conveyed by the SS reading is pragmatically unlikely; even if the speaker is a potential agent, it would be odd for the speaker to take responsibility for the kindness of the event of being helped. The facts in (26) and (27) suggest that AO adverbs are not necessarily exclusively SS oriented.

6 Conclusion

This paper examines the nature of passive sensitivity, focusing primarily on Japanese MA adverbs. We have aimed to test Kubota's (2015) claim that MA adverbs in Japanese can adjoin at either a high or low position in the structure, yielding both SS and DS interpretations in passives. Using pseudoclefts, we examined whether each reading can be obtained while controlling for the adverb's adjunction site. Our results provide empirical support for Kubota's (2015) proposal.

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