

Contextual Effects on Case in Japanese Copular Constructions¹

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1. Introduction

This paper examines a previously unobserved type of case connectivity effect in copular constructions, based on Japanese data. *Connectivity effect* is a descriptive term for a phenomenon where “an element is present or interpreted in a way that is normally associated with a certain syntactic configuration seemingly without that configuration obtaining” (Mikkelsen 2011, 14). The term *case connectivity effect* then refers to a phenomenon where some morphological case is available, contrary to how the sentence looks superficially in terms of the satisfaction of the case licensing condition. (1) provides an example of German case connectivity sentences, where XP1 and XP2 indicate the grammatical subject and its predicate, respectively.

- (1) [XP1 was Hans ___ essen wollte] war [XP2 **einen** Apfel]
what H eat wanted was an.Acc apple
‘[XP1 What Hans wanted to eat] was [XP2 an apple].’
(Iatridou and Varlokosta 1998, 6)

In (1), the nominal in XP2 is associated with the gap position in XP1 (i.e., “___”); semantically, the object of *essen* ‘eat’ in XP1 is *einen Apfel* ‘an apple’ in XP2. Also, the case associated with the nominal in XP2 corresponds to the case that would be assigned to the element in the gap position in XP1. But it is not obvious how to formalize the mechanism of the predicate accusative case assignment. In a standard case theory based on Chomsky’s (1995) Agree relation, which this paper adopts, roughly speaking, a transitive verb assigns accusative case to a nominal. However, *einen Apfel* does not appear in the local domain of *essen*. Note that even if one assumes copula is able to assign accusative case, there remains a question as to how to explain the relation between XP2 and the gap position in XP1.

There are two common approaches to connectivity puzzles. One of them, which I call the *semantic approach*, tries to solve connectivity puzzles by proposing that the supposedly syntactic phenomena in standard theories are indeed governed by semantic rules (e.g., Jacobson 1994; Sharvit 1999; Heller 2005). On the other hand, the other approach, which I call the *ellipsis approach*, tries to solve the puzzles by proposing that the relevant syntactic configuration (e.g., the one for accusative case assignment in (1)) is simply obscured by clausal ellipsis in XP2 (e.g. Ross 1972, den Dikken et al. 2000, Schlenker 2003).

¹ I would like to thank Luis Alonso-Ovalle, Scott AnderBois, Jessica Coon, Isaac Gould, Kyle Johnson, Aron Hirsch, Toru Ishii, Stefan Keine, Kenichi Namai, Andrew McKenzie, Keir Moulton, Shigeru Miyagawa, Myung-Kwan Park, Norvin Richards, Justin Royer, Mamoru Saito, Bernhard Schwarz, Junko Shimoyama, Satoshi Tomioka, Michael Wagner, Susi Wurmbrand, and participants in 2nd Crete Summer School, 12th TOM and 12th GLOW in Asia, for their valuable comments.

While some phenomena that are standardly assumed to be syntactic might be easier to explain as a by-product of the semantic composition, the case assignment seems more difficult to do so; it is shown that the attempts of attributing structural case assignment mechanism to the meanings of structural cases have fallen short (e.g., Pesetsky and Torrego 2011; Weir 2014; Baker 2015). Thus, the semantic approach is unlikely to explain the case connectivity sentences. On the other hand, the ellipsis approach can provide a solution. According to the ellipsis approach, XP1 in (1) denotes a question *what did Hans want to eat?* and XP2 is a propositional answer to the question, where some expressions are elided. Given that (1) means *einen Apfel* is the entity Hans wanted to eat, XP2 in (1) is considered to have the structure in (2), where the focused expression (i.e., expression with a new information) bears a focus feature *F*.

- (2) [_{XP2} ~~Hans~~ ~~wollte~~ [einen Apfel]_F ~~essen~~]
 H wanted an apple eat
 ‘[_{XP2} ~~Hans wanted to eat~~ [an apple]_F’]

It can be assumed that in (2), XP2 is a projection such as FocusP, whose head bears an [E]-feature to license ellipsis; that is, the feature instructs the PF component not to overtly realize the materials in the clausal complement of Focus⁰ except for the F-marked expression (e.g., Abe 2015). But if (2) involves a phonologically null materials, their meaning must be recoverable by the hearer (e.g., Fiengo and Lasnik 1972). So this paper assumes following Weir (2014) that the meaning of an elided clause can be recovered from the meaning of a wh-question which the elided clause answers. Then, the ellipsis in (2) satisfies the recoverability condition because XP1 in (1), which denotes a wh-question, can recover the meaning of XP2.²

Given a Hamblin/Karttunen semantics of questions, Dayal’s (1996) answer operator, and the idea that copula equates XP1 and XP2 (e.g., Sharvit 1999), (1) approximately means: *the strongest answer to the question “what did Hans want to eat?” is “Hans wanted to eat an apple”*. Note that in (2) *essen* assigns accusative case to the remnant phrase *einen Apfel*.

While the ellipsis approach can explain the availability of the predicate accusative case in (1), this paper investigates a typologically unobserved type of case connectivity sentences which the ellipsis approach cannot straightforwardly explain, let alone the semantic approach. Those sentences have the general schema in (3).

- (3) [_{XP1} $_$] [_{XP2} NP-Acc] Cop³

The case connectivity sentences with the schema in (3) have two unique properties. First, XP1 does not host any overt expression. The lack overt expression in XP1 challenges the ellipsis hypothesis; although clausal ellipsis requires a linguistic antecedent in general (e.g., Hankamer and Sag 1976), connectivity sentences with the schema in (3) do not seem to have a linguistic antecedent for the ellipsis of an accusative case assigner, unlike in (1). Second, the non-linguistic utterance context affects whether the predicate accusative case is available. Contextual variability in case is surprising because case assignment is generally considered to

² For the exact ellipsis licensing condition, see p. 322 in Weir 2014.

The standard licensing condition for clausal ellipsis makes reference to the syntactic structures of the elided clause and its antecedent as well as their meanings (e.g., Fox 1995; Chung 2013; Weir 2014). This paper follows Weir (2014) for the syntactic licensing condition as well, which is compatible with this paper’s proposal. For the syntactic condition, see p. 145 in Weir 2014.

³ Although this paper discusses only the predicate accusative case, there exist connectivity sentences with a predicate nominative or dative case, and the proposal in this paper can apply to those sentences as well.

be a morpho-syntactic phenomenon. In light of the second property, I call connectivity sentences with the schema in (3) *context-dependent case connectivity sentences*.

The goal of this paper is twofold. First, the paper proposes a descriptive generalization of when the predicate accusative case is available (Section 2). Second, I demonstrate that the ellipsis approach can indeed explain the context-dependent case connectivity effect (Section 3). In so doing, I propose that XP1 in context-dependent case connectivity sentences contains a covert free variable pronoun *pro* as a linguistic antecedent for the ellipsis in XP2.

2. Context-dependent case connectivity sentences

This section introduces an example of context-dependent case connectivity sentences, and puts forward a descriptive generalization as to when the predicate accusative case is available. First, (4) provides an example.

- (4) [Context: Ken is the father of Ai, and always cooks lunch for her. It is 6am now. Ai has just come to kitchen, and Ken says to Ai:]

kyoo-wa	[XP1 _]	[XP2 onigiri-(o)	mit-tu]-dayo
today-Top		rice.balls-Acc	3-CL-Cop

‘Today is three rice balls.’

XP2 in (4) can optionally show accusative case. The availability of the case is not trivial because superficially identical sentences sometimes cannot show the case, depending on the context where those sentences happen. For example, sentence (4) with an accusative case sounds degraded in context (5).

- (5) [Context: Ken and Ai have long been examining when different kinds of food they put in a showcase goes bad. Ken always checks which food and how many of them have gone bad. It is 10am. Ai has just come to the showcase. Looking at the food, Ken says to Ai:]

The difference in grammaticality between the superficially identical sentences uttered in the different contexts in (4-5) raise questions such as:

- (6) a. What kind of contexts allow the predicate accusative case?
 b. How can the predicate accusative case be licensed?
 c. How do contexts affect the availability of the predicate accusative case?

The rest of this section focuses on question (6a), and Section 3 will address the rest.

As an answer to the question in (6a), this paper submits (7).

(7) Distribution of the predicate accusative case

The predicate accusative case in a context-dependent case connectivity sentence is available only when the context supports accommodation of a question which:

- a. if expressed linguistically, contains an accusative case-marked *wh*-item, and
 b. clarifies the meaning of the context-dependent case connectivity sentence.

I call *wh*-questions satisfying the conditions in (7) *wh_{Acc}-question*.

I demonstrate that whereas the context in (4) accommodates a *wh_{Acc}*-question, the one in (5) does not, and thus only the context in (4) allows the predicate accusative case. First, consider a *wh_{Acc}*-question accommodated in (4) below.

- (8) Ken-wa **nani-o** tukutteiru-no?
 K-Top what-Acc is.making-Q
 ‘What is Ken making?’

The question with an accusative case-marked wh-item in (8) is contextually salient because Ken always cooks lunch for Ai every morning and (4) is uttered in the morning. Also, the question clarifies the meaning of (4); although the meaning of (4) is unclear without any utterance context, the accommodated question clarifies its meaning as (9).

- (9) kyoo-wa Ken-wa onigiri-o mit-tu tukutteiru
 today-Top K-Top rice.ball-Acc 3-CL is.making
 ‘As for today, Ken is making three rice balls.’

In contrast to (4), it is difficult to envision a wh_{Acc}-question in context (5); the most natural wh-question to accommodate in (5) that clarifies its meaning would be (10). But the question does not contain an accusative case-marked wh-item. Thus, (10) is not a wh_{Acc}-question.

- (10) **nani-ga/*o** kusaru-no?
 what-Nom/Acc go.bad-Q
 ‘What will go bad?’

To sum up, the availability of the predicate accusative case depends on the utterance context, and is governed by the conditions in (7).

3. Ellipsis approach and the case connectivity puzzle

This section demonstrates that the ellipsis approach can answer the questions in (6b-c).

Following the ellipsis approach, I assume that XP2 in context dependent case connectivity sentences is also a full clause obscured by a clausal ellipsis. Then, in (4) (i.e., Japanese counterpart of *today is three rice balls*), given that *three rice balls* is interpreted as entities Ken is making, XP2 is assumed to have the structure in (11).⁴

- (11) [_{XP2} ~~watasi-wa~~ [onigiri-o mit-tu]_F ~~tukutteiru~~]
 I-Top rice ball-Acc 3-CL is.making
 ‘[_{XP2} I am making [three rice balls]_F].’

Given (11), the question in (6b) is solved; *tukutteiru* assigns accusative case to the remnant.

The problem of extending the ellipsis approach to (4) is that clausal ellipsis in (11) does not seem to have a linguistic antecedent, with which the meaning of an elided materials in XP2 is recovered. However, I propose that XP1 in (4) contains a covert free pronoun *pro* as a linguistic antecedent, as shown in (12).

- (12) kyoo-wa [_{XP1} **pro**] [_{XP2} ~~...~~ [onigiri-o mit-tu]_F ~~...~~]-dayo
 today-Top rice.balls-Acc 3-CL Cop
 ‘As for today, the strongest true answer to the question “what is Ken making?” is the proposition “I am making three rice balls”.’

⁴ The clausal ellipsis in XP2 is obligatory as in other elliptical phenomena such as comparative deletion and fragment answers. (e.g., Napoli 1983, Merchant 2004).

kyoo-wa is an aboutness topic; it is “what the sentence is about” (Reinhart 1982). XP1 is a covert free pronoun of type <st,t> whose interpretation is determined by the contextual variable assignment⁵; in the context in (4), *pro* in (12) is assumed to bear an index such as *I* at LF, and the utterance context serves as fixing a partial function which maps the index *I* into the *wh*_{Acc}-question in (8) (i.e., Japanese counterpart of *what is Ken making?*). Then, adopting the idea that the meaning of an elided clause can be recovered from the meaning of a *wh*-question it answers (e.g., Weir 2014), I assume that the question-denoting *pro* can recover the meaning of elided materials in XP2. Note that for the ellipsis licensing, it can be assumed that XP2 is a FocusP, whose head bears an [E]-feature to license the ellipsis.

Given a Hamblin/Karttunen semantics of questions, Dayal’s (1996) answer operator, and the idea that the copula in connectivity sentences equates XP1 and XP2 (e.g., Sharvit 1999), (12) has an approximate meaning as shown in the translation. Note that the implementation of *pro*, together with the ellipsis approach, provides a solution to the question in (6c); the context supports accommodation of a *wh*_{Acc}-question, *pro* may take that question as its value, and the *pro* enables the ellipsis in XP2 that involves an accusative case assigner. In this way, assuming the covert structure in XP2 and *pro* in XP1 has theoretical motivations in that it enables to explain the predicate accusative case assignment and its contextual variability.

The rest of this section provides further supports for the covert structure of XP2 and the presence of *pro* in XP1 in turn, and demonstrates that the proposed analysis can, as a byproduct, provide a solution to a puzzle about Japanese fragment utterances.

First, the presence of the covert structure in XP2 can be supported by the distribution of postpositional phrases (hence, PP).⁶ The profile of the support is as follows; some PPs in Japanese can co-occur with an NP in XP2 of context-dependent case connectivity sentences. But those PPs adjoin on a clausal spine, and not on an NP. Thus, context-dependent case connectivity sentences with an PP + NP in XP2 suggest that XP2 is underlyingly a clause. This section employs the postposition *madeni* ‘by’ to show this point. Consider first the sentence with *madeni* in (13).

- (13) *watasitati-wa* ([_{PP} **11-zi-madeni**]) [[_{NP} *kuruma-o 50-dai*] *tuku-ru*]
 we-Top 11-o’clock-by car-Acc 50-CL make-NPst
 ‘We will make fifty cars by eleven o’clock.’

The sentence in (13) involves an optional PP *11-zi-madeni*, and it is parsed as adjoining on [[_{NP} *kuruma-o 50-dai*] *tukuru*] and not on [_{NP} *kuruma-o 50-dai*]. The fact that the PP is associated with [[_{NP} *kuruma-o 50-dai*] *tukuru*] can be supported by (14) as well.

- (14) *watasitati-wa* (*[_{PP} **11-zi-madeni**]) [[_{NP} *kuruma-o 50-dai*] *tuku-ttei-ru*]
 we-Top 11-o’clock-by car-Acc 50-CL make-Prog-NPst
 ‘We are making fifty cars by eleven o’clock.’

The sentence in (14) differs from (13) only in that the verb bears the progressive suffix *ttei*. Note that this difference makes (14) ungrammatical only when the PP is pronounced.⁷ Hence,

⁵ Note that pronouns, unlike ellipsis, do not require linguistic antecedents (e.g., Hankamer and Sag 1976).

⁶ This support is based on Hirsch’s (2017) supporting argument for the claim that XP2 in English pseudoclefts is underlyingly a clause.

⁷ *ttei* is ambiguous between progressive and perfective suffixes. When *ttei* is interpreted as a perfective suffix, the sentence is grammatical with the meaning: I will have made fifty cars by eleven o’clock.

(17) [Context: Ken told Ryo and Ai that one of their male friends plays a masked wrestler without telling who that is. Today, they came to a wrestling match. Seeing a masked wrestler whose face is mostly hidden, Ryo nods at it. So Ai asks Ryo the question:]

Ryo-san, {pro/*kare/ ano resuraa-ga dare-da-ka} wakarimasita-ka?
 R-Mr. him/ that wrestler-Nom who-Cop-Q recognized-Q
 ‘Mr. Ryo, did you recognize pro/who that wrestler is?’

The complement of *wakarimasita* can be either *pro* or an overt *wh*-question, but not *kare*, which is an overt individual-denoting pronoun that is intended to refer to the wrestler. Note that the overt *wh*-question is contextually salient. So the value for *pro* can be assumed to be set as the question *who is that wrestler?* by the contextual variable assignment.

Given that Japanese has a question-denoting *pro* in general, it is important to note that the copula in connectivity sentences is a two-place predicate (e.g., Sharvit 1999). In other words, the context-dependent case connectivity sentence as in (12) requires an argument besides XP2. But the argument should not be *kyoo-wa*; for one thing, the unstressed *-wa* of *kyoo-wa* makes the phrase look like an aboutness topic, which uniformly occur in TopP projection (e.g., Miyagawa 2017). For another, the assumption of *kyoo-wa* being an argument predicts that (12) is a predicational copular sentence at best; the propositional XP2 *Ken is making three rice balls* describes a property of *today* in the sense that the event of Ken making three rice balls is one of the events that happens today (e.g., Declerck 1988). But there are two problems with assuming (12) to be predicational sentence; first, the predicted meaning mentioned above seems to differ from the intended meaning of the sentence which is assumed to be the translation in (12). Second, predicational sentences are known *not* to show connectivity effects cross-linguistically (e.g., Higgins 1979). Thus, *kyoo-wa* is unlikely to be XP1. Then, since the lack of linguistic antecedent eliminates the possibility of XP1 being an elided phrase, it is reasonable to assume a question-denoting *pro* in XP1.

Moreover, the question-denoting *pro* in XP1 can sometimes be overtly realized (18).

(18) [Ken-ga nani-o tyuumonsita-ka] zutto kininateita-ga, [XP1 sore-ga/pro]
 K-Nom what-Acc ordered-Q long was.wondering-but it-Nom
 [XP2 onigiri-o mit-tu-da-to] wakatta
 rice.ball-Acc 3-CL-Cop-C found.out
 ‘I’ve long been wondering what Ken ordered, but I found out it was three rice balls.’

In (18), *pro* in XP1 can be overtly realized as *sore-ga* ‘it-Nom’, and it can be assumed to take as its antecedent the *wh*_{Acc}-question in the first clause (i.e., *what Ken ordered*). Hence, the example in (18) further supports the presence of a question-denoting *pro* in XP1.^{9,10}

⁹ Schlenker (2003) discusses French reflexive connectivity sentences whose XP1 involves *c* ‘it’ which takes an overt *wh*-question as its antecedent.

¹⁰ Interestingly, *pro* in (12) and (17) cannot be realized as *sore-ga*. At this moment, it is not exactly clear when question-denoting *pro* can be realized as *sore*, but one tendency is that the question-denoting *pro* cannot be substituted by *sore* when it does not have an overt antecedent.

Also, it should be noted that an overt *wh*-question cannot appear in XP1 in context-dependent case connectivity sentences. At this moment, it is not clear why, given that XP1 denotes a *wh*-question. But it is worth mentioning that some overt R-expressions can substitute the *pro* in XP1; in (15), an NP such as *gozen-no haisoubutu* ‘morning-Gen delivery’ or CP as in (i) can appear between *mazu* and *11-zi-madeni*.

Next, we turn to an English example which suggest English has a question-denoting *it* that corresponds to the question-denoting *pro* in Japanese. Thus, the construction may also support the presence of *pro* in context-dependent case connectivity sentences. The construction in question is given in (19).¹¹

- (19) [Context: John and Mary are watching a drama where two police officers are running after a suspect. Running into a dead-end, the suspect turns around, and gets his gun out of his pocket. Then, the episode ended with a sound of gunshot. John and Mary do not know who the suspect shot. But since Mary is a police officer, she is worried if the suspect shot a police officer. Looking at Mary being worried, John says:]

Maybe *([_{XP1} it] was) [_{XP2} himself/*him] (intended: *Maybe the suspect shot himself.*)

The example in (19) is a reflexive connectivity sentence; *himself* does not appear to be bound by its antecedent *the suspect*, and yet the sentence does not show the effect of violating Principle A of the Binding Theory. Given the availability of *himself* and unavailability of *him*, it is assumed that XP2 involves ellipsis of *suspect* that binds *himself/him*. Although there seems to be no linguistic antecedent for such an ellipsis, it can be assumed that *it* in XP1 serves as an antecedent; the value of *it* is set to be a contextually salient question *who did the suspect shoot?*, and it enables the ellipsis in XP2: ~~*the suspect shot*~~ [*himself/*him*]_F. Notably, this analysis is compatible with the fact that *it was* is obligatory in (19); since English does not have *pro*, *it (was)* is necessary to license the clausal ellipsis.¹²

Finally, this section ends with the following puzzle in (20). The puzzle is difficult to explain without assuming the existence of the proposed *pro*, but the implementation of the proposed *pro* and the ellipsis approach provide a solution.

- (20) [Context: Ken and Ai's parents are holding a party and they are looking forward to the things their relatives bring. One of the relatives Ryo has just come with a thing in a plastic bag. Ken nods at it, and Ai raises her eyebrows at Ken. Ken says:]

a. * zyuusu-o	b. zyuusu-o	ip-pon
juice-Acc	juice-Acc	1-CL
'juice.'	'one bottle of juice.'	

In both (20a) and (20b), it is easy to imagine that Ken is intended to mean *Ryo brought (one bottle of) juice*, and yet only (20b) is grammatical.

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- (i) [_{CP} watasitai-ga gozentyuu haitatusuru-no]-wa
 we-Nom in.the.morning deliver-C-Top
 'what we will deliver in the morning'

It should be noted that expressions as in (i) are proposed to be CPs when they appear in the position of *pro* in (15) although their sequences of words themselves can be used as NPs in some constructions (e.g., Hiraiwa and Ishihara 2012). Although it is not obvious that NP such as *gozen-no haisoubutu* 'morning-Gen delivery' or CP as in (i) denote a question as *pro* does, it is a possibility.

¹¹ The grammaticality of (19) is based on the interview with five monolingual English speakers; while one of them reported that the sentence does not sound natural whether *it was* is pronounced or not, four of them agreed with the judgment. It should be noted that the judgment of the sentence showed more individual difference among multilingual speakers, and they tend to dislike the sentence. At this moment it is not clear why.

¹² In (19), if Mary uttered an overt question *who did the suspect shoot?*, the utterance *maybe himself* that is said as a response to the question, is grammatical. This is also expected because the overt wh-question can serve as a linguistic antecedent to license the clausal ellipsis: *Maybe the suspect shot [himself/*him]_F*.

If context-dependent case connectivity sentences involve a question-denoting *pro* as proposed in this paper, the difference between (20a) and (20b) can be reduced to the fact that whereas (20b) can be parsed as a grammatical context-dependent case connectivity sentence (21b), (20a) cannot (21a).

(21) **Underlying structures of (20a-b)**

a. * _[XP1 pro] [_{XP2 zyuusu-o}]-da	b. [_{XP1 pro]} [_{XP2 zyuusu-o}	ip-pon]-da
juice-Acc-Cop	juice-Acc	1-CL-Cop
‘juice’	‘one bottle of juice’	

In Japanese, copula can often drop especially in casual conversations. Thus, it is possible that (20b) involves copula underlyingly as in (21b). Then, on the assumption that copula is a two-place predicate, (21b) has an argument in addition to XP2. Since the argument is unlikely to be an elided phrase due to the lack of a linguistic antecedent for such an ellipsis, it is reasonable to assume the argument to be *pro*. In the context in (20), there is a *wh*_{Acc}-question *what did Ryo bring?*. So it is assumed that *pro* takes that question as its value, and enables the ellipsis in XP2: ~~Ryo brought~~ [*one bottle of juice*]_F.

Unlike in (20b), (20a) cannot be parsed to involve a copula underlyingly, as the ungrammaticality of (21a) suggests. Thus, (20a) cannot be parsed to involve *pro* or any linguistic antecedent for the ellipsis of an accusative case licenser. Hence, (20a) is ungrammatical due to the lack of an accusative case licenser.¹³

To sum up, this section demonstrated that the ellipsis approach can solve the puzzles in context-dependent case connectivity sentences by proposing that XP1 in the construction involves a question-denoting *pro* that mediates between the non-linguistic utterance context and the ellipsis site in XP2.

4. Conclusion

This paper discussed a previously unobserved type of case connectivity sentences, where the availability of the predicate accusative case depends on the non-linguistic utterance context. I first proposed a descriptive generalization as to what type of contexts allow the predicate accusative case. Then I demonstrated how the predicate accusative case is licensed and the utterance context can affect its case licensing. Specifically, I argued that a line of analysis on connectivity effects, which I called the *ellipsis approach*, can solve the case licensing mechanism and its contextual variability even though it does not appear to at first glance. The key proposal that enables the ellipsis approach to solve the issues was that the case connectivity sentences discussed in this paper involve a covert free pronoun *pro* that mediates between the utterance context and the ellipsis site. Essentially, the implementation of such a pronoun enables ellipsis that does not seem to have a linguistic antecedent in general. Therefore, this paper not only supports the ellipsis approach of connectivity sentences but also yields insights into the study of so-called *antecedentless ellipsis*.

¹³ This analysis on the grammaticality of (20a-b) is compatible with the fact that the utterance *zyuusu* (i.e., (20a) without an accusative case) is grammatical; given that the utterance does not involve accusative case, it may not require an accusative case licenser or an elided clausal structure, and the utterance may pragmatically receive its intended meaning such as *Ryo brought juice*.

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