

ON SOME ASYMMETRIES BETWEEN HEAD-EXTERNAL RELATIVES AND CLEFTS IN JAPANESE*

Tomohiro Fujii and Yu Masuda
Yokohama National University

1. Introduction

It has always been a central issue in relative clause syntax literature what syntactic representations/derivations head-external relative clauses could have. Even when we limit our attention to the most typical type of head-external relative clause where a relative clause has a gap corresponding to the external head NP, distinct types of derivation have been proposed and/or attested on the one hand and it has still been unsettled which languages allow which types of representation/derivation and why, on the other. The present paper examines Japanese, for which it is still controversial exactly which types of derivation/representation are possible for its simple head-external relative clauses (Perlmutter 1972; Kuno 1973; Inoue 1978; Hoji 1985; Saito 1985; Murasugi 1991, 2000; Ishii 1991; Kaplan and Whitman 1995; Comrie 1996, 1998; Matsumoto 1997; Fukui and Takano 1999; Aoun and Li 2003; Hoshi 2004; Whitman 2012; Miyamoto, to appear, to name a few).

Let us first try to have in perspective the various derivations proposed for head-external relative clauses in the literature. We classify those derivations in terms of the following three factors: (i) whether or not some (lexical or pronominal/null) material coindexed with the surface external relative head NP undergoes movement; (ii) whether or not there is a base-generated external head; and (iii) whether or not there is a relative head inside the relative clause at any stage of its derivation. Then, at least five different derivations, ①-⑤ in (1) below, emerge, and they seem to cover the proposals that have actually been made in the literature. (The options labeled "N/A" in (1) appear to never yield a surface "head external" structure. So we ignore them. We also ignore other factors such as whether a relative clause is a complement or adjunct to the relative head; see Alexiadou et al. (2000), Bianchi (2002), and Bhatt (2002) for more detailed classifications of derivations and references.)

* The present paper is based on a talk given at One-day Workshop 2012 at Fuji Women's University, September 2012. We are grateful for the useful comments and criticisms from the audience members at the workshop including Yasuaki Abe, Yoshio Endo, Ken Hiraiwa, Richard Larson, Nobu Miyoshi, Kaori Miura, Etsuko Oishi and Satoshi Oku and for the helpful written comments on our work from Ken Hiraiwa and Hideaki Yamashita. Our special thanks go to Hiroko Yamakido, other faculty members and students at the English Language and Culture Department of Fuji Women's University for their hard work for running this great workshop.

(1) *Analyses of head-external relatives*

	\exists base-generated external head		No base-gen. external head	
	\exists internal head	No int. head	\exists internal head	No int. head
Movement	①: Matching +Movement	②: Operator Movement	③: Head Raising	N/A
No movement	④: Matching w/o Movement	⑤: Pro in-situ	N/A	N/A

Each of the strategies ①-⑤ is presented in (2) below with a sample derivation. Arrows indicate movement, indexes indicate identity among elements (whether established via movement or otherwise), and strikethroughs indicate deletion.

(2) *Movement derivations*

- ① Matching derivation [the _[NP] book]_i [~~book~~_{k_i} Peter bought t_i]]
↑
- ② Operator movement derivation [the _[NP] book]_i [{Op_i/which_i} Peter bought t_i]]
↑
- ③ Head raising derivation [the _[NP] book]_i [Peter bought t_i]]
↑
- Non-movement derivations*
- ④ 'Matching w/o movement' derivation [the _[NP] book]_i [Peter bought ~~book~~_{k_i}]]
- ⑤ Pro in-situ derivation [the _[NP] book]_i [Peter bought pro_i]]

The major goal of the present paper is to submit an empirical argument that Japanese head-external relatives do not involve head raising. The argument goes as follows: We first establish a difference that Japanese head-external relatives and clefts exhibit with respect to their compatibility with a certain construction. Then we show that the difference immediately follows if Japanese does not allow derivation type ③, given a certain existing analysis of Japanese clefts. We then show that the Op movement derivation and pro in-situ derivation are compatible with the fact. (For reasons of space, we have to leave the matching analyses untouched.)

The paper is structured as follows: Section 2 introduces the "Argument Doubling (AD)" construction the compatibility of which with relatives and clefts will be an issue. Section 3 uses the properties of AD to show that relatives involve different syntax than clefts: Head external relativization is not compatible with AD while clefting is. Section 4 shows that the relativization/clefting asymmetry follows if Japanese does not have the head raising strategy available. Section 5 adds one other relativization/clefting asymmetry that argues for the proposed view. Section 6 gives a preliminary discussion on relativization of idiom chunks in Japanese. Section 7 concludes the paper.

2. Argument Doubling

The target contrast that we are interested in has to do with the construction that we call "Argument Doubling (AD)". Examples (3)-(5) illustrate the construction in question.¹ The construction always has a "genitive" analogue, where the possessor NP is a genitive-marked subconstituent of the NP headed by the body-part N. The genitive analogues of (3), (4) and (5) are shown in (6), (7) and (8) respectively.

(3) *Accusative AD*

?Mari-ga	Ichiro-o	ude-o	butta.	
Mari-NOM	Ichiro-ACC	arm-ACC	hit	'Mari hit Ichiro's arm.'

(4) *Nominative AD*

Koma-ga	ziku-ga	kirei	da.	
spinning top-NOM	shaft-NOM	beautiful	is	'The spinning top's shaft is beautiful.'

(5) *Dative AD*

Mari-wa	Ichiro-ni	hoho-ni	kisusita.	
Mari-TOP	Ichiro-DAT	cheek-DAT	kissed	'Mari kissed Ichiro's cheek.'

(6) *Genitive counterpart of accusative AD*

Mari-ga	[Ichiro-no	ude]-o	butta.	
Mari-NOM	Ichiro-GEN	arm-ACC	hit	

(7) *Genitive counterpart of nominative AD*

[Koma-no	ziku]-ga	kirei	da.	
top-GEN	shaft-NOM	beautiful	is	

(8) *Genitive counterpart of dative AD*

Mari-wa	[Ichiro-no	hoho]-ni	kisusita.	
Mari-TOP	Ichiro-GEN	cheek]-DAT	kissed	

Descriptive speaking, AD is the process by which a genitive possessor undergoes "particle conversion" to obtain the case particle/postposition that its body-part NP has.

AD in Japanese has been closely examined by Kuroda (1978, 1988, 1999),² who observes that in AD, the two identically case-marked NPs share one argument role, so to speak. The observation made in Kuroda (1988) can be summarized as the following generalization:

¹ The less than perfect status of (3) (and perhaps that of (5) as well) is due to the so-called Double-*o* Constraint, which bars those two identically case-marked elements from appearing in a certain surface syntactic domain. Here it suffices to note that this "syntactic OCP" effect can be removed by, for example, moving one of the two NPs out of the domain; see Hiraiwa (2010) for various strategies to avoid a violation of this constraint.

² A similar construction in Korean has been discussed in Yoon (1990), Maling and Kim (1992), Kitahara (1993), Tomioka and Sim (2005), and Vermeulen (2009), among many others. We, though, remain agnostic about how those Korean constructions are to be analyzed.

- (9) AD successfully applies only if the possessor is able to satisfy the selection restriction of the predicate by itself. Schematically:

... $[X\text{-GEN } Y]\text{-}C_i$ V can successfully be converted to $[X]\text{-}C_i$ $[Y]\text{-}C_i$ V only if the selection restriction of V is respected in ... $[X]\text{-}C_i$ V , where X = the possessor of Y ; $C_i \in \{\text{Nom, Acc, Dat, Ablative, Comitative, ...}\}$

As an illustration of (9), consider the difference between (10) and (11). The phenomenon was first discussed by Kuroda (1988).³

- (10) a. Mari-ga [Ichiro-no yubi]-o otta.
 Mari-NOM Ichiro-GEN finger-ACC broke
 'Mari broke Ichiro's finger.'
- b. *Mari-ga ---_i yubi-o otta-no-wa Ichiro-o da.
 Mari-NOM finger-ACC broke-C-TOP Ichiro-ACC COP
 (intended) 'It is Ichiro that Mari broke (his) finger.'
- c. *Mari-ga Ichiro-o otta.
 Mari-NOM Ichiro-ACC broke
 'Mari broke Ichiro.'
- (11) a. Mari-ga [Ichiro-no hoho]-o butta.
 Mari-NOM Ichiro-GEN cheek-ACC hit
 'Mari hit Ichiro's cheek.'
- b. Mari-ga ---_i hoho-o butta-no-wa Ichiro-o da.
 Mari-NOM cheek-ACC hit-C-TOP Ichiro-ACC COP
 'It is Ichiro that Mari hit (his) cheek.'
- c. Mari-ga Ichiro-o butta.
 Mari-NOM Ichiro-ACC hit
 'Mari hit Ichiro.'

Whereas AD is barred with the verb *oru* 'break' as shown in (10b), it successfully applies with the verb *butu* 'hit' as shown in (11b). This contrast, as Kuroda shows, is correlated with the following fact: while *oru* 'break' cannot take an animate NP as its internal argument and instead requires a stick-shaped object like a finger (as suggested by the grammaticality of (10a) and the ungrammaticality of (10c)), *butu* 'hit' has no such selectional requirement on its object (as suggested by the grammaticality of (11a) and (11c)). The generalization in (9) thus can be taken to suggest that the accusative possessor NP in (10b)/(11b) is generated as the internal argument of the verb. Otherwise, the parallel of the b-examples with the c-examples is hard to capture.

³ The cleft construction is used in (10b) and (11b) just to avoid the examples violating the Double-*o* Constraint.

3. The Target Contrast

Now that we know what AD is at a descriptive level, let us introduce the target contrast of the present study. Namely, body-part NPs in the AD construction undergo clefting easily, but strongly resist relativization (see Yoon (1990) for data from Korean and other languages that are apparently related to the latter effect). Consider the example involving relativization given in (12) and the one involving clefting given in (13).

- (12) *Isya-wa [NP [Mari-ga Ichiro-o ___i butta] hoho_i]-o sinsatusita.
doctor-TOP Mari-NOM Ichiro-ACC hit] cheek-ACC examined

'The doctor examined the cheek on which Mari had hit Ichiro.'

- (13) [Mari-ga Ichiro-o ___i butta-no]-wa hoho-o_i da.
[Mari-NOM Ichiro-ACC hit-C]-TOP cheek-ACC COP

'It is on the cheek that Mari hit Ichiro.'

These examples share in common the property of the body-part NP 'cheek' being displaced out of the clause it originates in. Such displacement of the body-part NP, however, is allowed in the cleft construction but disallowed in the relative construction. We thus state as follows:⁴

- (14) AD blocks relativization of body-part NPs, but not clefting of them.

Further examples are added below.

- (15) a. *Akira-wa [Mari-ga Ichiro-ni ___i kiusita] hoho_i-o mitumeta.
Akira-TOP Mari-NOM Ichiro-DAT kissed] cheek-ACC stared

'Akira stared at Ichiro's cheek on which Mari kissed him.'

- b. [Mari-ga Ichiro-ni ___i kiusita-no]-wa hoho-ni_i da.
Mari-NOM Ichiro-DAT kissed-C]-TOP cheek-DAT COP

'It is on the cheek that Mari kissed Ichiro.'

- (16) a. *Eri-wa [koma-ga ___i kirei na] ziku_i-o mitumeta.
Eri-TOP top-NOM beautiful is] shaft-ACC stared

'Eri stared at the shaft such that the spinning top of that shaft was beautiful.'

⁴ Ken Hiraiwa (p.c.) observes that passive might improve the status of (12) (cf. *Ichiro-ga Mari-ni butareta hoho* 'the cheek on which Ichiro was hit by Mari'). It could be the case that the example is derived in the same way as *Ichiro-ga Mari-ni nusumareta baggu* 'the bag that Ichiro has stolen by Mari' is. Then it is possible for the passive version to have a non-AD source.

- b. (*)[Koma-ga ___i kirei na-no]-wa ziku-ga_i da.⁵
 top-NOM beautiful is-C-TOP shaft-NOM COP

'The top's shaft (not, e.g., its body) is beautiful.'

(15) involves dative AD and (16) nominative AD.

(14) can be given further justifications. It is actually AD that blocks relativization. First, when the possessor is marked with genitive (i.e., AD does not apply) and the whole object undergoes relativization, the outcome is grammatical. (17) and (18) are clearly better than (12) and (15a), respectively.

- (17) Isya-wa [[Mari-ga ___i butta] [Ichiro-no hoho]_i]-o sinsatusita.
 doctor-TOP Mari-NOM hit Ichiro-GEN cheek]_i-ACC examined

'The doctor examined Ichiro's cheek that Mari had hit.'

- (18) Akira-wa [[Mari-ga ___i kisu] [Ichiro-no hoho]_i]-o mitumeta.
 Akira-TOP Mari-NOM kissed Ichiro-GEN cheek]_i-ACC stared

'Akira stared at Ichiro's cheek that Mari had kissed.'

Second, when a body-part NP appears as an independent, "non-doubled" argument (i.e., AD does not apply), relativization becomes possible again. Given that *kegasuru* 'hurt' and *itameru* 'hurt' are both (inherently reflexive) transitive predicates (19a-c), the grammaticality of (20) tells us that relativization of body-part nouns per se is possible.

- (19) a. Ichiro-ga yubi-o kegasita/itameta.
 Ichiro-NOM finger-ACC hurt.PST

'Ichiro hurt his finger.'

- b. *[Ichiro-no yubi]-ga/o kegasita/itameta.
 Ichiro-GEN finger]-NOM/ACC hurt.PST

- c. *Ichiro-ga Mari-no yubi-o kegasita/itameta.
 Ichiro-NOM Mari-GEN finger-ACC hurt.PST

- (20) Isya-wa [[Ichiro-ga siai-de ___i kegasita/itameta] yubi]_i-o sinsatusita.
 doctor-TOP Ichiro-NOM game-in hurt] finger]-A examined

'The doctor examined the finger that Ichiro had hurt in the game.'

Hence the ungrammaticality of (12)/(15a)/(16a) should be attributed to the impossibility of relativizing *ADed* body-part NPs.

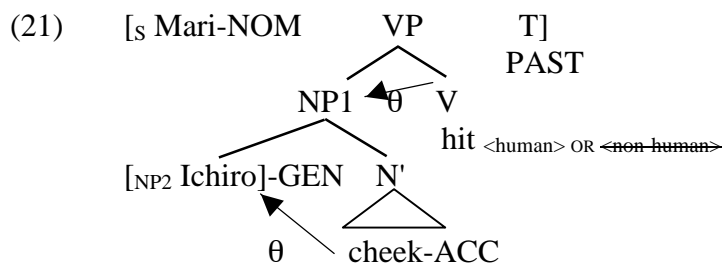
⁵ The example is unacceptable for a reason having nothing to do with AD. Japanese clefting generally does not allow a nominative focus to immediately be followed by the copula. The symbol "(*)" indicates this. To our ear, though, (16b) sounds much better than (16a).

4. Explaining the Asymmetry between Relatives and Clefts

This section attempts to explain the asymmetry between relativization and clefting with respect to their applicability to body-part NPs in AD.

4.1. Analysis of Argument Doubling

Let us first propose an analysis of AD. We follow Kuroda (1999) in assuming that in AD, the possessor NP and the body-part NP independently satisfy the selection restriction imposed by the verb. We assume an analysis of its genitive counterpart like the following (with English vocabulary).



Here the body-part N 'cheek' assigns a θ -role to the possessor NP and that the V assigns a Theme role to the NP headed by the body-part N. Crucially, we assume with Kuroda that the verb *butu* has a selectional feature of the sort that is represented as in (22a), which reads "the verb *butu* s-selects a human Obj or a non-human (including body-part) Obj." This is to capture the fact that *butu* allows as its Theme object either *Ichiro* or *Ichiro's cheek*. The same applies to *kisu-suru*, as in (22b). In this notation, the selectional properties of *oru* can be characterized as in (22), which is intended to capture the fact that *oru* allows as its Theme object *Ichiro's finger* (10a), but not *Ichiro* *(10c). *Kega-suru* 'hurt' can be notated with (22d) [(19a)]. (See Kuroda (1999) for a further discussion of s-selection and examples.)

(22)	Verb	S-selection restriction on Obj
a.	<i>butu</i> 'hit':	<human> OR <non-human (including human body-part)>
b.	<i>kisu-suru</i> 'kiss':	<human> OR <non-human (including human body-part)>
c.	<i>oru</i> 'break':	<non-human (including human body-part)>
d.	<i>kega-suru</i> 'hurt':	<human body-part>

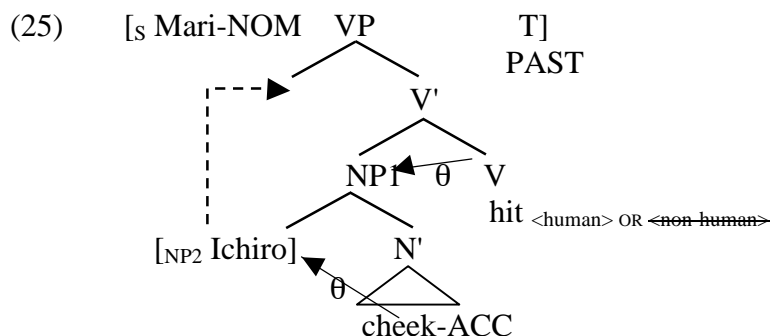
Given this, take a look at (21) again. The notation "<human> OR <non-human>" stands for the fact that *hit* successfully s-selects a non-human NP. The crucial assumptions about Merge and s-selection that we are making are:

- (23)
- i. Merge applies for a reason, e.g. for θ -role assignment, s-selection, etc.
 - ii. V s-selects XP through Merge.
 - iii. V successfully s-selects XP only if the lexical semantics of XP is compatible with V's s-selection restriction.

In these terms, we say that in (24) (=10c), *otta* 'break' can be merged with *Ichiro* for θ -role assignment but its s-selection requirement fails to be satisfied.

- (24) *Mari-ga Ichiro-o otta.
 Mari-NOM Ichiro-ACC broke
 'Mari broke Ichiro.'

Now let us propose the derivation of AD. If we adopt the proposal that Move is an "internal" kind of Merge (Chomsky 2008), we are led to propose that movement can be triggered by s-selection. The analysis goes as follows.



Internal merger of NP2 with V' is perfectly legitimate under the current theory since *hit* s-selects NP2. It then immediately follows from the lexical entry in (22c) and (23iii) that *oru* 'break' resists AD, as shown in (26) (=10b)).

- (26) *Mari-ga ---_i yubi-o otta-no-wa Ichiro-o_i da.
 Mari-NOM finger-ACC broke-C-TOP Ichiro-ACC COP
 (intended) 'It is Ichiro that Mari broke (his) finger.'

Suppose that 'break' replaces 'hit' in (25). Then the alleged merger of NP2 with a projection of 'break' would violate condition (23i) (i.e., that Merge must apply for a reason). The internal θ -role of the verb is already assigned to NP1, and 'break' never s-selects $[\text{NP2 } Ichiro]$. Hence there is no reason for *Ichiro* to move to Spec,VP in (26).

Summarizing, this subsection has proposed an account of why AD is possible when it is and why it is not when it is not. In the next subsection, we propose an account of the fact that AD and relativization of the body-part NP are not compatible.

4.2. Explaining Away the Target Contrast

Our account of the target contrast has the three major components listed below.

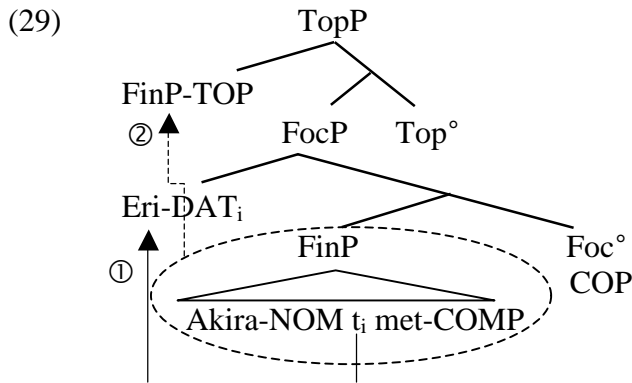
- (27) i. The analysis of AD proposed in section 4.1.
 ii. A Hiraiwa-Ishihara-style focus movement analysis of Japanese clefts (Hiraiwa and Ishihara 2012)
 iii. The assumption that the head raising strategy (strategy ③ in (1)/(2)) is not available for Japanese head-external relatives.

Let us begin with a brief review of the Hiraiwa-Ishihara-style analysis of Japanese clefts.

Hiraiwa and Ishihara (2012) (henceforth, H&I) propose that Japanese clefts are derived through Focus movement of the pivot followed by remnant topicalization.

- (28) [Akira-ga atta-no]-wa Eri-ni da.
 Akira-NOM met-COMP-TOP Eri-DAT COP

'It is Eri that Akira met.'

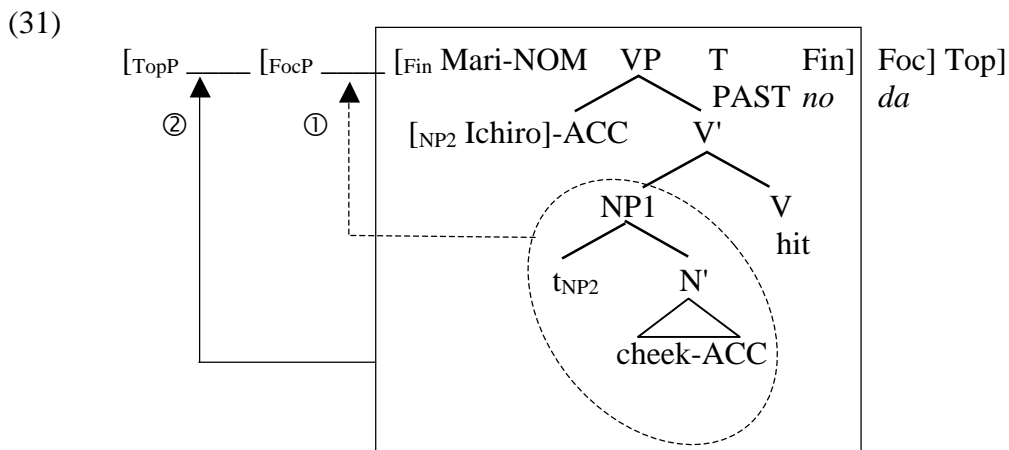


In this analysis, as shown in (29) (=the derivation of (28)), the pivot *Eri-DAT* first undergoes A-bar movement to Spec,FocP and then the remnant FinP is topicalized to Spec,TopP. One initial virtue of this analysis is to make it possible for us to capture two sets of facts at one time: (i) the properties of A-bar movement that the construction exhibits (e.g., long distance movement is possible but not when an island is involved; see Hoji (1990), Murasugi (1991), and (ii) various connectivity effects such as case connectivity found with the pivot (e.g., in (28), the dative on the object NP is determined by the verb *au* 'meet').

Given this analysis, and the analysis of AD proposed in 4.1, the derivation for (13) (= (30)) proceeds as diagramed in (31).

- (30) [Mari-ga Ichiro-o ___i butta-no]-wa hoho-o_i da.
 [Mari-NOM Ichiro-ACC hit-C]-TOP cheek-ACC COP

'It is on the cheek that Mari hit Ichiro.'



After the operation yielding AD (i.e., the possessor's movement to Spec,VP to get s-selected by V), NP1, which contains t_{NP2} , undergoes focus movement. The surface word order in example (30) then is derived after the *no*-clause, [_{FinP} *Mari-NOM Ichiro-ACC* t_{NP1} *hit-T-Fin*], moves to Spec,TopP. This derivation looks legitimate under the standard assumptions in

syntax. Notice that given that the possessor's movement is A-movement in our analysis, it is not clear that focus A-bar movement of the NP1 containing t_{NP2} should cause a PBC violation (cf. Kitahara 1993). If it doesn't, we can make it follow that body-part NPs can undergo clefting in AD constructions.

Now turn to the ungrammaticality of the relative clause counterpart of (30), namely (12) (= (32)).

(32) *Isya-wa [NP [Mari-ga Ichiro-o ---_i butta] hoho]_i-o sinsatusita.
 doctor-TOP Mari-NOM Ichiro-ACC hit] cheek-ACC examined

'The doctor examined the cheek on which Mari had hit Ichiro.'

The impossibility of relativization of body-part NPs, put together with the H&I-style analysis of clefts and our analysis of AD, leads us to conclude, following Murasugi (2000) and contra Hoshi (2004), that Japanese does not have a head raising strategy for relativization. The logic is clear: If head raising were available in Japanese, it should not be a problem to A-bar move the body-part NP containing an A-trace to the CP domain, as it is not in clefting. The relevant derivation would be something like the one in (33) (see Kayne 1994, Murasugi 2000).

(33) *Putative head raising derivation*

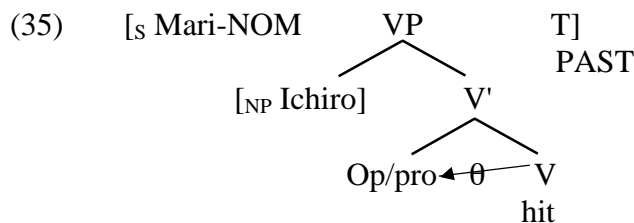
[DP [TP Mari-NOM [NP₂ Ichiro]-ACC_i t_j hit-T]_k D [CP [NP₁ t_i cheek]_j C t_k]

Thus sentences like (32) would be overgenerated under the head raising analysis.

It should be noted here that the available data do not exclude other strategies than head raising. It is clear enough that the operator movement analysis (② in (1)/(2)) and the pro in-situ analysis (⑤ in (1)/(2)) straightforwardly capture the relative/cleft asymmetry. Consider (34). (We omit movement of the operator from the diagram.)

(34) [NP [Relative clause Mari-NOM [NP Ichiro]-ACC Op_i/pro_i hit-T] [NP cheek]_i]

Our analysis of AD makes an immediate prediction that (34) is barred. Given the standard assumption that Op/pro cannot assign a θ -role, the possessor cannot be merged with it. The possessor can be merged with V' since V s-selects the possessor. Then the derivation would involve two base-generated objects at the VP level, as shown in (35).



Notice now that in (35), *Ichiro* clearly fails to receive a θ -role, violating the θ -Criterion. *Butu* 'hit' assigns one and only one internal θ -role to Op/pro. The status of (32) is explained.

In sum, the head raising analysis wrongly predicts that relativization of the body-part NP in AD is possible. Hence the analysis should not be available in Japanese.

5. Another Asymmetry

This section quickly adds a further asymmetry between relatives and clefts that enhances the conclusion reached above, i.e., that Japanese does not have head raising relatives.

Hoshi (2004) observes that Japanese head external relatives, unlike ones in other languages like English, do not show a quantifier-scope reconstruction effect of the sort illustrated by (36); see also Bianchi (1999), Aoun and Li (2003).

(36) I phoned the two patients that every doctor will examine tomorrow. ($\checkmark \forall > 2$)

(36) can be accepted in a " $\forall > 2$ " scenario where different doctors are paired with different sets of two patients. The surface external head *two patients* can interact with the relative-clause-internal element *every doctor*, as is readily expected under the head raising analysis proposed for these languages. In contrast, the Japanese analogue cannot be accepted under the same scenario (37), as Hoshi discovered.

(37) Watasi-wa [[asu dono isya-mo sinsatsusuru koto-ni natteiru]
 1SG-TOP tomorrow every doctor examine is sheduled to
 hutari-no dansei kanzya]-ni denwasita.
 two male patients-DAT phoned

'I phoned the two male patients that every doctor is scheduled to examine tomorrow.'
 (* $\forall > 2$)

cf. Asu dono isya-mo hutari-no dansei kanzya-o sinsatsusuru.
 tomorrow every doctor two male patients-ACC examine
 koto-ni natteiru.
 is scheduled to

'Every doctor is scheduled to examine two male patients tomorrow.' ($\checkmark \forall > 2$)

The lack of the " $\forall > 2$ " reading in Japanese is readily accounted for if our conclusion about Japanese relativization is correct. Furthermore, let us note that clefts allow reconstruction of this sort, as shown in (38).

(38) Asu dono isya-mo sinsatsusuru koto-ni natteiru-no-wa
 tomorrow every doctor examine is scheduled to-C-TOP
 hutari-no dansei kanzya-o da.
 two male patients-ACC COP

'It is two male patients that every doctor is scheduled to examine tomorrow.'
 (\checkmark distributive)

The contrast between (37) and (38) is exactly what we expect from the way in which we agree the derivations of relatives and of clefts differ.

6. Notes on Relativization with Idioms

There are still many diagnostic tests for a head raising analysis that can be conducted or has already been conducted for Japanese. They include those based on: idiom reconstruction (Inoue 1978, Hoshi 2004; cf. Schachter 1973), binding reconstruction (Hoji 1985, Ishii 1991; cf. Safir 1999, among others), *first-NP* reconstruction (Davis 2006; cf. Bhatt 2002), the availability of amount readings (cf. Carlson 1977), and so on. This section examines the argument based on idioms, trying to determine whether the data argue for or against the head raising analysis of Japanese head external relatives.

The English examples given in (39) are presented in Schachter (1973). The b-example shows that the lexical item *headway* needs to appear as the object of *make*. The acceptability of the c-example therefore suggests that *headway* occupies the complement position of *made* at a stage of derivation. Such a derivation is made available by the head raising analysis.

- (39) a. We made headway.
b. *(The) headway was satisfactory.
c. The headway that we made was satisfactory.

Furthermore, as Vergnaud (1974: 181) and Kayne (1994: 115) note, the fact that nonrestrictive relativization is never allowed with idioms (e.g. **the headway, which we made*) is also instructive, since there is ample evidence that nonrestrictive relative heads are not base-generated relative-clause internally. As for Japanese, little study seems to have been done. Inoue (1978: 214) and Hoshi (2004) are the few exceptions that we have found, although the number of idioms examined there is quite small.

As a next step towards a more comprehensive study of idiom relativization in Japanese, we looked at 25 Obj-Verb "common phrases" and examined the acceptability judgments of the relativized versions of them.⁶ As shown below, 16 out of 25 are categorized as "non-idioms" even though they allow relativization (called Class I), 4 as idioms that potentially allow relativization (called Class II), and 3 as idioms that resist relativization (called Class III). Each class is exemplified below. (There are two expressions where the two native speakers' judgments vary, which are *kao-o tubusu* 'to bring shame on s.o.' and *ageasi-o toru* 'to find faults with s.o.')

Class I: "Non-idioms" that allow relativization

- (40) a. Taro-wa mitikusa-o kutta.
Taro-TOP weed-ACC ate 'Taro loitered on his way.'
- b. [(Taro-no) mitikusa]-wa tanosisoo datta.
Taro-GEN weed-TOP looked.like.fun
- c. [[Taro-ga kutta] mitikusa]-wa tanosisoo datta.
Taro-NOM ate weed-TOP looked.like.fun
'Taro loitered on his way. He appeared to have had fun.'

⁶ The judgments are the two authors'. When collecting these 25 expressions, we consulted *Syôgakusei no Manga Kanyôku Ziten* (Grade School Students' Manga Dictionary of Common Phrases), supervised by Hideho Kindaichi, Gakken, Tokyo, 2005.

(41) 15 other phrases of Class I

a.	<i>sewa-o yaku</i> 'to take a great care of s.o.'	{ <i>Taro-ga yaita, sono</i> } <i>sewa-ga yakunitatta</i> 'The care (that Taro took) helped me a lot.'
b.	<i>sente-o utu</i> 'to make a preemptive move'	{ <i>Taro-ga utta, sono</i> } <i>sente-ga tiimu-o sukutta</i> 'The preemptive move (Taro made) saved the team.'
c.	<i>tyatya-o ireru</i> 'to interrupt s.t.'	{ <i>Taro-ga ireta, Taro-no</i> } <i>tyatya-de minna-ga meiwakusita</i> 'Taro interrupting the conversation annoyed everyone.'
d.	<i>zibara-o kiru</i> 'to pay out of one's pocket'	{ <i>Taro-ga kitta, Taro-no</i> } <i>zibara-ga koogaku sugita</i> 'Taro paid too much out of his pocket.'
e.	<i>nirami-o kikaseru</i> 'to cast a glare'	{ <i>Tora-ga kikaseta, tora-no</i> } <i>nirami-ni raion-ga hirunda</i> 'The lion got scared to death with the glare the tiger cast to him.'
f.	<i>aizuti-o utu</i> 'to give s.o. a nod'	{ <i>Taro-ga utta, Taro-no</i> } <i>aizuti-de Hanako-wa ansinsita</i> 'His agreement with Hanako that Taro expressed relieved her.'
g.	<i>mune-o nadeorosu</i> 'to feel relieved'	{ <i>Taro-ga nadeorosita, Taro-no</i> } <i>mune-ni hutatabi huanga yogitta yooda</i> 'He once felt relieved, but he got anxious again.'
h.	<i>ooburusiki-o hirogeru</i> 'to blow one's own horn'	{ <i>Taro-ga hirogeta, Taro-no</i> } <i>ooburosiki-ni minna-ga odorogita</i> 'Everyone got shocked at Taro blowing his own horn.'
i.	(<i>X-toyuu</i>) <i>rakuin-o osu</i> 'to label s.o. or s.t. X (negatively)'	{ <i>Tamada-san-ga Taro-ni osita, sono</i> } <i>rakuin-ga hito-o odorokaseta</i> 'The negative label that Mr. Yamada gave Taro shocked people.'
j.	<i>yokoguruma-o osu</i> 'to do s.t. by brute force'	{ <i>Taro-no osita, Taro-no</i> } <i>yokoguruma-ni minna-ga meiwakusita</i> 'Everyone was annoyed by Taro doing things by brute force.'
k.	<i>nureginu-o kiseru</i> 'to make a false charge against s.o.'	{ <i>Taro-ga Hanako-ni kiseta, sono</i> } <i>nureginu-ni minna-ga kizuiteiru</i> 'People has noticed the false charge (that Taro made against Hanako).'
l.	<i>aori-o kuu</i> 'to suffer from s.t.'	{ <i>Waga sya-ga kutta, sono</i> } <i>aori-wa ookii</i> 'Our company suffered a lot from that.'
m.	<i>goma-o suru</i> 'to flatter s.o.'	{ <i>Taro-no suru, Taro-no</i> } <i>goma-wa zyoosi-ni yoku kiku</i> 'The flattery that Taro used works well for his boss.'
n.	<i>saba-o yomu</i> 'to fudge the count'	{ <i>Taro-ga yonda, Taro-no</i> } <i>saba-ga minna-ni bareta</i> 'Taro's fudging the count has been out of the closet.'
o.	(<i>oya-no</i>) <i>sune-o kaziru</i> 'to live off one's parents'	<i>Taro-wa (kazitta) oya-no sune-o mudanisiteiru</i> 'Taro is wasting the money that his parents helped him with.'

Class II: Idioms that potentially allow relativization

- (42) a. Taro-ga debana-o kuziita.
Taro-NOM edge.of.nose-ACC broke
'Taro intercepted (a project) at its outset.'

- b. *Debana-de minna-ga komatteita.
- c. ??Taro-ga kuziita debana-de minna-ga komatteita.
Taro-NOM broke nose-with e.o.-NOM was.annoyed

'Everyone was annoyed with Taro intercepting (the project) at its outset.'

(43) 3 other phrases of Class II

a.	<i>hanasi-no kosi-o oru</i> 'to interrupt a conversation'	{?Taro-ga otta, *sono} <i>hanasi-no kosi-ni minna-ga meiwakusita</i> 'Everyone was annoyed by Taro interrupting the conversation.'
b.	<i>sippo-o dasu</i> 'to show one's true colors' (cf. Hoshi 2004, footnote 10)	<i>Taro-wa</i> {?dasita, *sono} <i>sippo-ga medatanai yoo hurumatta</i> 'Taro behaved in a way that hides the true colors that he showed.'
c.	<i>taka-o kukuru</i> 'to underestimate s.t.'	{?Taro-ga kukutta, *sono} <i>taka-ga purojekuto-o ikizumaraseteiru</i> 'The underestimation (Taro made) caused trouble for our project.'

Class III: Idioms that resist relativization

- (44) a. Taro-wa ware-o wasureta.
Taro-TOP self-ACC forgot 'Taro panicked'
- b. *Taro-wa ware-no tame-ni ziko-ni kizukanakatta.
- c. *Taro_i-wa [[e_i wasureta] ware]-no tame-ni ziko-ni kizukanakatta.
-because.of accident-DAT didn't notice

'Taro didn't notice the accident happen because he panicked.'

(45) 2 other phrases of Class III

a.	<i>otya-o nigosu</i> 'to fudge one's answer'	{*?Taro-ga nigosita, *sono} <i>otya-ga minna-o iradataseta</i> 'Everyone was annoyed with Taro fudging his answer.'
b.	<i>asi-o hipparu</i> 'to cause trouble'	{*?Taro-ga hippatta, *sono} <i>asi-ga mondaini natta</i> 'The trouble Taro caused became an issue.'

We interpret the data as follows: Phrases of Class I are irrelevant to the present test, because Obj, to begin with, does not need to be combined with Verb to have the relevant interpretation. They are not idioms but more like *collocations* in the terms discussed in Larson (2012). The behavior of phrases of Class III is one we expect from the conclusion that Japanese has no head raising, whereas the behavior of the phrases of Class II potentially counter-argues it. All the relative clause examples in (42) and (43), however, seem to both of us not to be perfect. So we cannot draw a definitive conclusion from these data.

7. Conclusions

In summary, the present study has shown: (i) that the body-part NP of AD constructions cannot be relativized but can be focalized in clefting; (ii) that this asymmetry requires, under the "possessor movement" analysis of AD, that head raising not be possible for Japanese

head-external relatives; (iii) that the same conclusion follows from a scope reconstruction asymmetry; and (iv) that the available idiom data do not provide clear evidence for or against the head raising analysis of Japanese relatives.

Many questions remain and, in our view, the following two are particularly important. First, ①, ②, ④ and ⑤ in (1)/(2) might all be compatible with the two asymmetries we have established. Is each of these needed in Japanese grammar? Second, why does the language not allow for head raising (as well as whatever other strategies that the language does not employ)? We have to leave these intriguing questions for future investigations.

References

- Alexiadou, A., P. Law, A. Meinunger and C. Wilder (2000) "Introduction." In A. Alexiadou, P. Law, A. Meinunger and C. Wilder, eds., *The Syntax of Relative Clauses*, John Benjamins, Amsterdam/Philadelphia, 1-51.
- Aoun, J. and Y.-H. A. Li (2003) *Essays on the Representational and Derivational Nature of Grammar*, MIT Press, Cambridge, MA.
- Bhatt, R. (2002) "The Raising Analysis of Relative Clauses: Evidence from Adjectival Modification," *Natural Language Semantics* 10, 43-90.
- Bianchi, V. (1999) *Consequences of Antisymmetry: Headed Relative Clauses*. Mouton de Gruyter, Berlin.
- Bianchi, V. (2002) "Headed Relative Clauses in Generative Syntax – Part I," *Glott International* 6, 197-204.
- Carlson, G. (1977) "Amount Relatives," *Language* 53, 520-542.
- Chomsky, N. (2008) "On Phrases." In R. Freidin, C. P. Otero, and M. L. Zubizarreta, eds., *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, MIT Press, Cambridge, MA, 133-166.
- Comrie, B. (1996) "The Unity of Noun Modifying Clauses in Asian Languages," *Pan-Asiatic Linguistics: Proceedings of the Fourth International Symposium on Languages and Linguistics*, vol. 3, Salaya, Thailand: Institute of Language and Culture for Rural Development, Mahidol University at Salaya, 1077-1088.
- Comrie, B. (1998) "Rethinking the Typology of Relative Clauses," *Language Design* 1, 29-45.
- Davis, C. (2006) "Evidence against Movement in Japanese Relative Clauses," paper presented at the *ECO5 Conference*, MIT, April 2006.
- Fukui, N. and Y. Takano (1999) "Nominal Structure: An Extension of the Symmetry Principle." In P. Svenonius, ed., *The Derivation of VO and OV*, John Benjamins, Amsterdam/Philadelphia, 219-254.
- Hiraiwa, K. (2010) "Spelling Out the Double-o Constraint," *Natural Language & Linguistic Theory* 28, 723-770.
- Hiraiwa, K. and S. Ishihara (2012) "Syntactic Metamorphosis: Clefts, Sluicing, and in-situ Focus in Japanese," *Syntax* 15, 142-180.
- Hoji, H. (1985) *Logical Form Constraints and Configurational Structures in Japanese*, Ph.D. dissertation, University of Washington.
- Hoji, H. (1990) "Theories of Anaphora and Japanese Syntax," unpublished ms., University of Southern California.
- Hoshi, K. (2004) "Parameterization of the External D-system in Relativization," *Language, Culture and Communication* 33, 1-50.
- Inoue, K. (1978) *Henkei Bunpo to Nihongo [Transformational Grammar and Japanese]*, Taishukan, Tokyo.
- Ishii, Y. (1991) *Operators and Empty Categories in Japanese*, Ph.D. dissertation, University of Connecticut.
- Kaplan, T. I. and J. Whitman (1995) "The Categor of Relative Clauses in Japanese, with Reference to Korean," *Journal of East Asian Linguistics* 4, 29-58.
- Kayne, R. S. (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.

- Kitahara, H. (1993) "Inalienable Possession Constructions in Korean: Scrambling, the Proper Binding Condition, and Case Percolation." In P. M. Clancy, ed., *Japanese/Korean Linguistics 2*, CSLI, Stanford, CA, 394-408.
- Kuno, S. (1973) *The Structure of the Japanese Language*, MIT Press, Cambridge, MA.
- Kuroda, S.-Y. (1978) "Case Marking, Canonical Sentence Pattern, and Counter Equi in Japanese." In J. Hinds and I. Howard, eds., *Problems in Japanese Syntax and Semantics*, Kaitakusha, Tokyo, 30-51.
- Kuroda, S.-Y. (1988) "Whether We Agree or Not," *Linguisticae Investigationes* 12, 1-47.
- Kuroda, S.-Y. (1999) "Tokoro Setsu [Tokoro Clauses]." In S.-Y. Kuroda and M. Nakamura, eds., *Kotoba no Kaku to Shuhen - Nihongo to Eigo no Aida*, Kuroshio, Tokyo, 105-162.
- Larson, R. (2012) "On 'Dative Idioms' in English," paper presented at *One-day Workshop on Syntax and Semantics 2012*, Fuji Women's University, Sapporo, September 2012.
- Maling, J. and S. Kim (1992) "Case Assignment in the Inalienable Possession Construction in Korean," *Journal of East Asian Linguistics* 1, 37-68.
- Matsumoto, Y. (1997) *Noun-modifying Constructions in Japanese: A Frame Semantic Approach*, John Benjamins, Amsterdam.
- Miyamoto, Y. (to appear) "On Chinese and Japanese Relative Clauses and NP-ellipsis." In M. Saito, ed., *Japanese Syntax in Comparative Perspective*, Oxford University Press, Oxford, UK.
- Murasugi, K. (1991) *Noun Phrases in Japanese and English: A Study in Syntax, Learnability and Acquisition*, Ph.D. dissertation, University of Connecticut.
- Murasugi, K. (2000) "Japanese Complex Noun Phrases and the Antisymmetry Theory." In R. Martin, D. Michaels and J. Uriagereka, eds., *Step by Step*, MIT Press, Cambridge, MA, 261-295.
- Perlmutter, D. M. (1972) "Evidence for Shadow Pronouns in French Relativization." In P. M. Peranteau, J. N. Levi and G. C. Phares, eds., *The Chicago Which Hunt, Papers from the Relative Clause Festival*, Chicago Linguistic Society, Chicago, 73-105.
- Safir, K. (1999) "Vehicle Change and Reconstruction in A'-chains," *Linguistic Inquiry* 30, 587-620.
- Saito, M. (1985) *Some Asymmetries in Japanese and Their Theoretical Implications*, Ph.D. dissertation, MIT.
- Schacter, P. (1973) "Focus and Relativization," *Language* 49, 19-46.
- Tomioka, S. and C.-Y. Sim (2005) "Event Structure of Inalienable Possession in Korean." In S. Arunachalam, T. Scheffler, S. Sundaresan and J. Tauberer, eds., *Proceedings of the 28th Annual Penn Linguistics Colloquium*, Penn Working Papers in Linguistics, Philadelphia, 279-292.
- Vergnaud, J.-R. (1974) *French Relative Clauses*, Ph.D. dissertation, MIT.
- Vermeulen, R. (2009) "On the Syntax of External Possession in Korean." In Y. Takubo, T. Kinuhata, S. Grzelak and K. Nagai, eds., *Japanese/Korean Linguistics 16*, CSLI, Stanford, CA, 422-436.
- Whitman, J. (2012) "The Relative Clause Problem," paper presented at *Workshop on Altaic Formal Linguistics 8*, University of Stuttgart, May 2012.
- Yoon, J. H.-S. (1990) "Theta-theory and the Grammar of Inalienable Possession Constructions." In J. Carter, R.-M. Déchaine, W. Philip, T. D. Sherer, eds., *Proceedings of NELS 20*, GSLA, Amherst, MA, 502-516.