

Accusative Object of Motion Unergative Verb in Japanese

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1 Introduction

The aims of this paper are to show that *o*-marked NPs, which introduces path or situation with motion verbs, are arguments, not adjuncts, discuss the way of introducing argument and claims that internal arguments are not introduced by verb, rather it is introduced as an external argument of function heads (cf, Wood 2014, Wood and Marantz 2017 among others).

2 O-marked NPs in Japanese

This section shows that some descriptive characteristics of *o*-marked NPs in Japanese. This section is devoted to providing some descriptive generalization of these NPs to set the bottom line of the following analysis.

The three types of *o*-marked NPs as shown in (1). In (1)a, *o*-marked NP functions as a theme NP of *yom*- ‘read’. In (1)b, *o*-marked NP functions as a Path NP of motion verb *arui*-‘walk’. In (1)c, *o*-marked NP functions as situation adverbial NP.

- (1) a. *Kazu-wa hon-o yon-da.* <theme-*o*>
Kazu-TOP book-ACC read-past
‘Kazu read a book.’
b. *Saku-wa michi-o arui-ta.* <path-*o*>
Saku-TOP street-ACC walk-past
‘Saku walk on the street.’
c. *Saku-wa ame-no-naka-o dekake-ta.* <situation-*o*>
Saku-TOP rain-GEN-middle-ACC go.out-past
‘Saku went out under the rain.’

The following examples in (2) and (3) show that only theme NP is compatible with the transitive predicate *yom*- and motion verb *aruk*- does not take theme NP. The motion verb takes both path NP and situation NP.

- (2) a. *Kazu-wa hon-o yon-da.* <theme-*o*>
Kazu-TOP book-ACC read-past
‘Kazu read a book.’
b.* *Kazu-wa michi-o yon-da.* <path-*o*>
Kazu-TOP street-ACC raed-past
‘Kazu read the street.’
c.* *Kazu-wa ame-no-naka-o yon-da.* <situation-*o*>

- Kazu-TOP rain-GEN-middle-ACC read-past
 ‘Kazu read under the rain.’
- (3) a. * Saku-wa hon-o arui-ta. <theme-o>
 Saku-TOP book-ACC walk-past
 ‘Saku walked a book.’
- b. Saku-wa michi-o arui-ta. <Path-o>
 Saku-TOP street-ACC walk-past
 ‘Saku walk on the street.’
- c. Saku-wa ame-no-naka-o arui-ta. <situation-o>
 Saku-TOP rain-GEN-middle-ACC walk-past
 ‘Saku walked under the rain.’

The motion verb is not limited to the ones like *aruk-*, which denote motion of subject, but also verbs denote motion of theme object. For instance, *hakob-* ‘carry’ denotes motion of its theme object as illustrated in (4).

- (4) a. Saku-wa arui-ta.
 Saku-TOP walk-past
 ‘Saku walked’
- b. Haru-wa hon-o hakon-da. <theme-o>
 Haru-TOP book-ACC carry-past
 ‘Haru carried book.’

The object motion verb *aruk-* can take path NP as in (5)a but the object motion verb *hakob-* ‘carry’ does not take both path NP and theme NP simultaneously as in (5)b (cf. Double o-Constraint, cf Harada 1973, Shibatani 1978, Hiraiwa 2002 among others).

- (5) a. Saku-wa michi-o arui-ta. <path-o>
 Saku-TOP street-ACC walk-past
 ‘Saku walked on the street.’
- b. * Haru-wa michi-o hon-o hakon-da <path-o+theme-o>
 Haru-TOP street-ACC book-ACC carry-past
 ‘Haru carried the book on the street.’

Moreover, the examples in (6) shows restrictions for the occurrence of two or more o-marked NP. Among three types of o-marked NPs, situation NP is compatible with any other types of o-marked NPs. This means that situation NP is not a target of DoC and therefore, it is not an argument.

- (6) a. Kazu-wa ame-no-naka-o hon-o yon-da. <situation-o + theme-o>
 Kazu-TOP rain-GEN-middle-ACC book-ACC read-past
 ‘Kazu read a book under the rain.’
- b. Saku-wa ame-no-naka-o michi-o arui-ta. <situation-o + path-o>
 Saku-TOP rain-GEN-middle-ACC street-ACC walk-past
 ‘Saku walked on the street under the rain.’
- c. Saku-wa ame-no-naka-o sakura-ga saku-tokoro-o arui-ta.
 <situation-o+situation-o>

- Saku-TOP rain-GEN-middle-ACC cherry.blossam-NOM bloom-place-ACC walk-past
 ‘Saku walks where cherry blossoms bloom under the rain.’
- d. Saku-wa ame-no-naka-o sakura-ga saku-tokoro-o michi-o arui-ta.
 <situation-o+situation-o+path-o>
 Saku-TOP rain-GEN-middle-ACC cherry.blossam-NOM bloom-place-ACC street-ACC
 walk-past
 ‘Saku walks on the street where cherry blossams bloom under the rain.’
- e. Haru-wa ame-no-naka-o hon-o hakon-da <situation-o+theme-o>
 Haru-TOP rain-GEN-middle-ACC book-ACC carry-past
 ‘Haru carried book under the rain.’

The fact that incompatibility of *o*-marked theme NP and *o*-marked path NP shows that they are in fact a target of structural case valuation and target of DoC. Therefore, they should be regarded as an argument. Next section will more closely look at argumenthood of each of *o*-marked NPs.

3 Diagnosing Argumenthood of NPs

3.1 Theme *o*-NP

This section looks at argumenthood of *o*-marked theme NPs. In Japanese, an argument is normally marked with structural case and it is realized as a morphological case. The argumenthood of NP is confirmed with morphological case marker drop (Mihara 1994), Scrambling (cf. Miyagawa 1989), Passive and Doble-*o* Constraint (Harada 1973, Shibatani 1973, Hiraiwa 2002, Poser 2002 among others), and Argument Ellipsis (Sakamoto 2019).

First, the morphological case can be dropped in the colloquial context, but it is not the case with inherent case or postposition as in (7).

(7) Case marker Drop

- a. Ano hon- $\{o/\phi\}$ doko oi-ta-no?
 That book-ACC where put-past-Q
 ‘Where did you put the book?’
- b. E, Tochigi-ken - $\{kara/*\phi\}$ ki-ta-tte?
 E. Tochigi-pref. -from come-past-te
 ‘Did you say you came from Tochigi pref.?’

If the *o* in *o*-marked theme NPs is a morphological case particle, its host NP is an argument. This is confirmed the examples in (8).

(8) Case marker Drop

- Kazu-wa hon- $\{o/\phi\}$ yon-da-tte.
 Kazu-TOP book-ACC read-past-tte
 ‘Did you know if Kazu read the book?’

Second, argument NP can be separated from the quantifier (=Quantifier Floating) if it is marked with the structural case, but not with the PP as illustrated in the contrast in (9).

- (9) a. Gakusei-ga san-bon-no biiru-o non-da.
 Gakusei-NOM three-CL-GEN beer-ACC drink-past

- b. Biiro-o gakusei-ga san-bon non-da.
 Beer-ACC student-NOM three-bottle drink-past
 ‘Students drunk three bottles of beer.’
- c. Gakusei-ga san-kasyo-no suupa-de hon-o kat-ta.
 Student-NOM three-CL-GEN supermarket-at book-ACC buy-past
- d. *Gakusei-ga suuper-de san-kasyo hon-o kat-ta.
 Student-NOM supermarket-at three-CL book-ACC buy-past
 ‘Students bought books at three bookstores.’

The *o*-marked theme NP allow Floating Quantifier as in (10)b and this also supports the claim that *o*-marked theme NP is an argument.

(10) Floating Quantifier

- a. Kazu-wa ni-satsu-no hon-o yon-da.
 Kazu-TOP two-CL-GEN book-ACC read-past
- b. Kazu-wa hon-o ni-satsu yon-da.
 Kazu-TOP book-ACC two-CL read-past
 ‘Kazu read two books.’

Third, in passive sentences, an *o*-marked NP is promoted to subject position and this is a prototypical A-movement. In (11), *o*-marked theme NP is promoted to the subject position and therefore, it is an argument.

(11) Passive

- a. Saku-wa Haru-o heya-e yon-da.
 Saku-TOP Haru-ACC room-to invite-past
 ‘Saku invited Haru to his room.’
- b. Haru-wa Saku-ni-yotte heya-e yob-are-ta.
 Haru-TOP Saku-by room-to invite-pass.-past
 ‘Haru was invited to Saku’s room by him’

Forth, in Double-*o* constraint is constraint of structural case, and thus it is a constraint of argument. As in (12), in causative construction causee argument is marked with either *ni* or *o*. However, if the predicate of the caused event clause has another morphological *o*-marked NP, the sentence turns to be ungrammatical due to DoC as in (12)c.

(12) Causative

- a. Saku-wa Kazu-*{ni/o}* gakko-e ik-ase-ta.
 Saku-TOP Kazu-*{DAT/ACC}* school-to come-caus-past
 ‘Saku had Kazu go to school.’
- b. Saku-wa Kazu-ni ice cream-o kaw-ase-ta.
 Saku-TOP Kazu-DAT ice cream-ACC buy-caus-past
- c. *Saku-wa Kazu-o ice cream-o kaw-ase-ta.
 Saku-TOP Kazu-ACC ice cream-ACC buy-caus-past
 ‘Saku had Kazu bought ice cream.’

The ungrammaticality from DoC is not recoverable with cleft construction as in (13). Hence, this is not surface double-*o*, but deep double-*o*. Thus, the *o*-marked theme NPs are an argument.

(13) Cleft

- a. * Saku-wa Kazu-o icecream-o kaw-ase-ta.
 Saku-top Kazu-acc icecream-acc buy-caus-past
 ‘Saku had Kazu buy icecream.’
- b. * Saku-ga icecream-o kaw-ase-ta no-wa Kazu-o da.
 Saku-nom icecream-acc buy-caus-past C-top Kazu-acc cop.
 ‘It is Kazu that Saku had buy icecream.’
- c. * Saku-ga Kazu-o kaw-ase-ta no-wa icecream-o da.
 Saku-nom Kazu-acc buy-caus-past C-top icecream-acc cop
 ‘It is icecream that Saku had Kazu buy’

Finally, argument ellipsis also exhibits the argument property of *o*-marked theme NP. According to Sakamoto (2019), elided argument via argument ellipsis yields, both E-type reading and quantificational reading.

- (14) a. Taro-wa [DP san-dai-no kuruma]-o arat-ta.
 Taro-TOP 3-CL-GEN car-ACC wash-past
 ‘Taro washed three cars.’
- b. Ziro-mo [DP ____] arat-ta.
 Ziro-also wash-past
 ‘Ziro also washed [DP them].’

(Sakamoto 2019)

In (14), with (14)a is an antecedent, whether the set of cars washed by Taro and the set of cars washed by Ziro can be either identical (E-type reading) or different (Quantificational Reading). The same types of readings are also available with the argument ellipsis with *o*-marked theme NPs as in (15).

(15) Argument Ellipsis

- a. Saku-ga jibun-no hey-a-sooji-si-ta. Haru-mo [DP ____] sooji-si-ta.
 Saku-NOM -self-GEN room-ACC clean-do-past Haru-also clean-do-past
 ‘Saku cleaned Saku’s room.’ ‘Haru also cleaned {Haru’s/Saku’s} room’
- b. Saku-ga san-satsu hon-o yon-da. Haru-mo [DP ____] yon-da.
 Saku-NOM three-CL book-ACC read-past Haru-also read-past
 ‘Saku read three books’ ‘Haru also read {same/different} three books.’

3.2 Path *o*-NP

This section examines the argumenthood of *o*-marked path NPs and claims that it is also an argument, just like *o*-marked theme NPs.

First, morphological case marker *-o* with path NP can be dropped as in (16). This shows the argument property of *o*-marked path NP in (16).

(16) Case marker Drop

- Saku-wa michi- $\{o/\emptyset\}$ arui-ta-tte.

Saku-TOP street-ACC walk-past-tte
 ‘Did you know Saku walked on the street?’

Second, as shown in (17), Quantifier floating from *o*-marked path NP is possible. Hence this is parallel to the *o*-marked theme NPs.

(17) Quantifier Floating

- a. Saku-wa ni-kasyo-no kooen-o arui-ta.
 Saku-TOP 2-CL-GEN park-ACC walk-past
 b. kooen-o Saku-wa ni-kasyo arui-ta.
 park-ACC Saku-TOP 2-CL walk-past
 ‘Saku walked in the two parks.’

Third, the *o*-marked path NP can be a subject of passive construction as in (18).

(18) Passive

- a. Saku-wa tachiiri kinshi-no michi-o arui-ta.
 Saku-TOP off-limit-GEN street-ACC walk-past.
 ‘Saku walked on off-limit street.’
 b. Tachiiri kinshi-no michi-ga Saku-niyotte aruk-are-ta.
 off-limit-GEN street-NOM Saku-by walk-pass.-ta
 ‘Saku walked on off-limit street.’

Forth, the *o*-marked path NP violates DoC, and cleft construction does not salvage from DoC. Thus, this also shows *o*-marked path NP is argument NP as in (19) and (20).

(19) Causative

- a. Haru-wa Saku-*{ni/o}* gakkō-e ik-ase-ta.
 Haru-TOP Saku-*{DAT/ACC}* school-to go-caus.-past
 ‘Haru had Saku go to school.’
 b. Haru-wa Saku-ni michi-o aruk-ase-ta.
 Haru-TOP Saku-DAT street-ACC walk-caus-past
 c. * Haru-wa Saku-o michi-o aruk-ase-ta.
 Haru-TOP Saku-ACC street-ACC walk-caus-past
 ‘Haru had Saku walk on the street.’

(20) Cleft

- a. * Haru-ga Saku-o rooka-o hasir-ase-ta.
 Haru-NOM Saku-ACC corridor-ACC run-caus-past
 ‘Haru had Saku run on the corridor.’
 b. * Haru-ga rooka-o hasir-ase-ta no-wa Saku-o da.
 Haru-NOM corridor-ACC walk-caus-past C-TOP Saku-ACC cop
 ‘It is Haru that had Saku run on the corridor.’
 c. * Haru-ga Saku-o hasir-ase-ta no-wa rooka-o da.
 Haru-NOM Saku-ACC run-caus-past C-TOP corridor-ACC cop
 ‘It is on the corridor that Haru had Saku run’

Finally, of course, Argument Ellipsis of the *o*-marked Path NP yields both E-type reading and Quantificational Reading. Therefore, Argument Ellipsis also shows the argumenthood of the *o*-marked Path NP.

(21) Argument Ellipsis

- a. Saku-wa jibun-no ruuto-o hasit-ta. Haru-mo [DP ____] hashit-ta.
 Saku-TOP -self-GEN route-ACC run-past Haru-also run-past
 ‘Saku ran Saku’s route.’ ‘Haru ran {Saku’s /Haru’s} route.’
- b. Saku-ga san-kasyo kooen-o hasit-ta. Haru-mo hashit-ta.
 Saku-NOM 3-CL park-ACC run-past Haru-also run-past
 ‘Saku ran in three parks.’ ‘Haru also run (same/different) three parks.’

4 Puzzle

The previous sections show *o*-marked theme argument and *o*-marked path argument behave similarly although the latter type of argument is only taken by unergative motion verb, *aruk-* ‘walk’, *hashir-* ‘run’, *oyog-* ‘swim’, and so. Moreover, normally the subject motion verb is converted into causative and the accusative argument is interpreted as a theme as in (22).

- (22)a. Saku walks in the park every day.
 b. Saku walks with his dog in the park every day.
 c. Saku walks his dog in the park every day.

However, Japanese does not have such an option as in (23)b. Japanese unergative motion verb does not have its causative counterpart.

- (23)a. Saku-wa arui-ta.
 Saku-TOP walk-past
 ‘Saku walked’
- b. *Saku-wa inu-o arui-ta.
 Saku-TOP dog-ACC walk-past
 ‘Saku take his dog with walk.’

Furthermore, this is not the case that the construction known as ‘*come the pub*¹’ (Myler 2013) from two points. First, the *o*-marked path NP is not a dialect dependent expression. This expression is standard in Japanese. Second, the path argument cannot be replaced by preposition.

- (24) a. John came to the pub with me.
 b. John came the pub with me.

- (25) Saku-wa michi- {*o*/**ni*/**e*/**de*} arui-ta.
 Saku-TOP street- {ACC /on/ to /at} walk-past

¹ This particular expression is accepted in at least South-West Lancashire, Merseyside, and Greater Manchester and the alternation can be replicated for many other motion verbs, such as *go*, *run*, *drive*, *jog*, *pop* etc. (Myler 2013)

‘Saku walked on the street.’

Thus, this does not seem to be the result of incorporation of functional projection (cf. Baker 1988).

5 Removing Argument from the Verb

The current problem is the fact that the apparent unergative verb optionally takes argument, which is presumably obligatory element. Moreover, this is not a result of causative-inchoative alternation. One solution of this problem may be to adopt the Neo-Davidsonian approach to Argument Structure (Lohndal 2014). For instance the example in (26)a has LF representation as in (26)b and it is roughly translated as in (26)c.

- (26)a. Jones buttered the toast.
 b. $\exists e$ [bettering (e, Jones, the toast)]
 c. There is an event of buttering of which Jones is the agent and the toast is the object
 (Lohndal 2014)

In his mechanisms, the thematic arguments could be separated or served from the verb and Lohdal (2014) claims thematic relation are two place predicates, where they are conjoined as in (27).

- (27) $\exists e$ [buttering (e) & Agent (e, Jones) & Theme (e, the toast)]
 (Lohndal 2014)

Next section looks at motivations to separate external argument from the verb (cf. Kratzer 1996).

5.1 Removing External Argument from the Verb

Kratzer (1996) claims that the external argument is, indeed, taken by VP, but it is introduced by Voice head, following Marantz (1984). Marantz provides following examples and points out the verb and its internal argument together yields idiomatic interpretation as illustrated in (28).

- (28)a. throw a baseball
 b. throw support behind a candidate
 c. throw a boxing match (i.e., take a dive)
 d. throw a fit

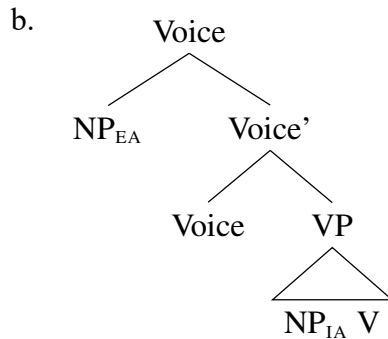
Moreover, as examples in (29) show, the verb and its external argument do not introduce idiomatic interpretations.

- (29)a. The policeman threw NP.
 b. The boxer threw NP.
 c. The social director threw NP.
 d. Throw NP!

Based on this asymmetric property, Kratzer (1996) claims that external argument needs to be separated from the VP and it is introduced by Voice head as illustrated in (30).

(30) Voice, which introduces the external arguments of verb phrases (often agents)
(Wood and Marantz 2017)

a. $[[\text{Voice}]] = \lambda x. \lambda x. \text{Agent}(x)(e)$



5.2 Removing Internal Argument from the Verb

Similarly, the current novel data set that *o*-marked path argument can be optionally introduced to unergative VP provides evidence that internal argument need to be separated by VP. Presumably, an argument that NP is generated by VP complement position is based on the example like (31), where *o*-marked theme argument is obligatory.

- (31)a. Kazu-wa hon-o yon-da
Kazu-TOP book-ACC read-past
'Kazu read a book.'
- b.* Kazu-wa yon-da.
Kazu-TOP read-past
'Kazu read a book.'

The LF of the sentence in (31)a is like (32) under the Neo-Davidsonian Argument Structure.

(32) $\exists e[\text{reading}(e) \ \& \ \text{Agent}(e, \text{Kazu}) \ \& \ \text{Theme}(e, \text{book})]$

On the other hand, the sentences including unergative motion verb is ones like (33) and its object is optional.

- (33)a. Saku-wa ari-ta
Saku-TOP walk-past
'Saku walked'
- b. Saku-wa michi-o arui-ta
Saku-TOP street-ACC walk-past
'Saku walked on the street.'

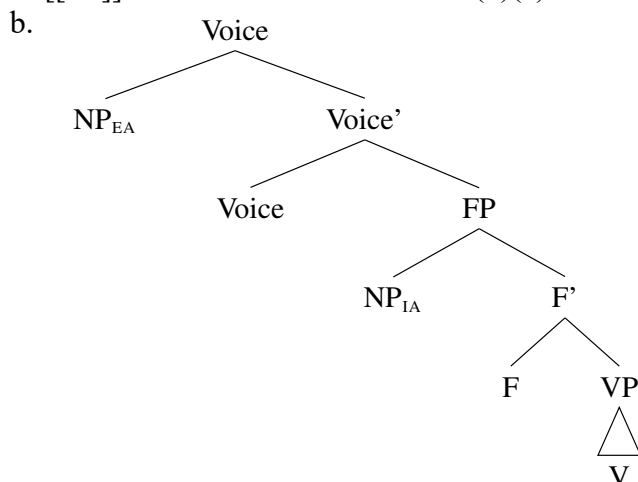
The LF of the sentence in (33) is like (34) and here the last conjunct, namely Path, is optional. If it is so, then the internal argument may be optional in certain circumstances, and moreover, unergative verb does not have an ability to take internal argument. Therefore, it should be

introduced by some other functional category, just like Voice for external argument.

(34) $\exists e[\text{walk}(e) \ \& \ \text{Agent}(e, \text{Saku}) \ \& \ \text{Path}(e, \text{michi})]$

The syntactic structure which yields LF interpretation in (34) should be (35)b, where FP is an internal argument introducer and it assigns its argument to appropriate theta role as in (35)

(35) a. $[[\text{FP}]] = \lambda x.\lambda x.\text{Path/Goal/Theme.}(x)(e)$



6 Conclusion: Removing Argument from the Verb

This paper claims that internal argument may be separated from VP, providing a novel analysis that internal argument may be separated from the VP with the data on argument taking unergative verb and proposes the following semantics for external argument introducing head, namely Voice head, and internal argument introducing head within the Neo-Davidsonian Argument Structure.

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