

The origin of dative subjects and psych predicate constructions in Japanese

Yuko Yanagida
University of Tsukuba

There is considerable literature on dative subject or non-canonical subject marking constructions in Japanese, and yet they have been studied mainly from a synchronic point of view. This paper investigates the diachronic dimension of non-canonical case marking constructions in Japanese. Following Yanagida & Whitman (2009), I assume that Old Japanese (700-800 A.D) displays split active alignment. This paper argues that dative subjects arose as a byproduct of a change occurring from active-inactive to accusative alignment. A factor triggering this change was the reanalysis of some particular object experiencer predicates as intransitives due to the loss of the vestigial causative suffix associated with the predicate. Synchronically, these constructions involve a voice alternation of the type identified as the psych causative alternation by Alexiadou & Iordăchioaia (2014): object experiencer verbs behave parallel to causative verbs whereas alternating subject experiencer verbs behave parallel to anticausative verbs.

Key words: alignment change, non-canonical case marking, dative subject, psych predicate, causative, voice alternation

1. Introduction

This paper discusses the diachronic dimensions of ergativity in Japanese, referring to case patterns wherein the subject of a transitive verb behaves differently from the subject of an intransitive verb. Modern Japanese is predominantly a nominative-accusative language: both transitive and intransitive subjects are marked with *ga*, and the object of a transitive verb is marked with *o*, as shown in (1).

(1) Modern Standard Japanese

a. *Taroo ga wain o nomu* (Transitive)

Taro NOM wine ACC drink
'Taro drink wine.'

b. *hana ga saite-iru* (Intransitive)

flower NOM bloom-be
'The flower is in a full bloom.'

Japanese also has non-canonical case marking constructions in which the subject is marked with the dative *ni* and the object is marked with the nominative *ga*. The predicates that allow dative subjects include psychological adjectives such as *kanasii* 'sad' and *uresii* 'pleased', the existential/possessive verb *iru/aru* 'be', and predicates formed with the potential suffix –(r)eru, as in *nom-eru* 'drink-can'. Verbs with the potential suffix –(r)eru, for example, appear in a dative-nominative pattern as in (2). Interestingly, the predicates that license a dative subject display an ergative pattern. When the subject is marked with the dative case, an accusative object is not allowed (2a). The subject of an intransitive verb (2b), on the other hand, must be marked with the nominative *ga* but not with the dative *ni*.

(2) Modern Standard Japanese

- a. *Taro ni (wa) wain ga/*o nom-eru* (Potential V-*eru*)
Taro DAT (TOP) wine NOM/ACC drink-can
'Taro can drink wine.'
- b. *Taro *ni (wa)/ga hasir-eru*
Taro DAT(TOP)/NOM run-can
'Taro can run.'

The psych adjectives also allow a dative subject only if the second NP is marked nominative (3a). If the second NP is absent, the subject must be marked with nominative (3b) (cf. Kuroda 1992).

(3) Modern Standard Japanese

- a. *buku ni (wa) haha no byoki ga kanasii* (psych adjectives)
I DAT (TOP) mother GEN illness NOM sad
'I am sad about my mother's illness.'
- b. **boku *ni (wa)/ga kanasii*
I DAT (TOP)/NOM sad
'I am sad.'

Although dative subjects in Japanese have been the topic of much discussion in the linguistic literature, little attention has been paid to the ergative pattern associated with dative subjects as illustrated by the (un)grammaticality of (2) and (3). This is because from a typological point of view, ergativity found in dative subject constructions appears to be somewhat accidental; other languages including South Asian languages display no ergative pattern (cf. Verma & Mohanan 1990, Shibatani & Pardeshi 2018). Sinhala, for example, is a predominantly accusative language, but dative subjects can appear in transitive clauses whose object is marked with accusative (4a) and in intransitive clauses as in (4a).

(4) Sinhala (Gair 1990)

- a. *matə horaa-wə penuna*
I.DAT thief-ACC see-PST
'I saw the thief.'
- b. *lal-tə nətuna*
Lal-DAT dance-PST
'I dance (by impulse)'
- c. *lal natənəwa*
Lal.NOM dance-PRS
'I dance.'

Gair (1990) indicates that in Sinhala, a dative case is assigned when the predicate has the non-volitional form, otherwise it is assigned nominative as in (4c).

Part of the problem is that dative subject or non-canonical subject marking constructions are typologically diverse, and yet they have been studied mainly from a synchronic point of view, and the diachronic dimension has often been neglected in the theoretical research. In this paper, I show that synchronic variation in the patterning of dative subject constructions is the result of variation in the diachronic processes involved, specifically, the syntactic environment where the constructions developed. This is a plausible assumption considering the fact that historically, dative subjects did not exist in earlier Japanese nor in South Asian

languages; as noted by Verma and Mohanan (1990), there is no evidence for dative subjects in Sanskrit.

In this paper, I assume that Old Japanese (700-800 A.D) displays split active alignment (Yanagida & Whitman 2009), and show that dative subjects in Japanese arose as a byproduct of a change occurring from active-inactive to accusative alignment. This paper aims to show that a factor that triggers this change is the reanalysis of a particular object experiencer predicate as intransitive. Synchronically, this construction involves a voice alternation of the type identified as the *psych causative alternation* by Alexiadou & Iordăchioaia (2014): object experiencer verbs behave parallel to causative verbs whereas alternating subject experiencer verbs behave parallel to anticausative verbs.

This paper is organized as follows: Section 2 discusses the basic properties of psych predicate constructions in Japanese. I discuss some of the controversial issues associated with a non-canonical case marking construction. Section 3 provides an overview of alignment change in Japanese. I argue that a reanalysis of a particular object experiencer construction as intransitive did not only lead to the later accusative system but also to the emergence of non-canonical case marking constructions.

2. The psych predicate construction in Modern Standard Japanese

2.1 Non-canonical case marking

There is considerable literature on non-canonical case marking constructions in Modern Japanese (cf. Kuno 1973, Shibatani 1999, Kishimoto 2004, 2016, Shibatani & Pardeshi 2001, 2018, Ura 2000, and many others). For expository purposes, the predicates that allow non-canonical case marking are roughly divided into two types. Type A predicates are intransitive, including non-psychological adjectives (5) and anticausative (or unaccusative) verbs (6), existential possessive verbs *iru/aru* (7). Type A allows double nominative constructions. Both the first and the second NP function as the subject of an intransitive predicate (i.e., double subject constructions).

Type A predicates

- (5) a. *Taroo ga me ga ookii* (Non-psych adjectives)
 Taroo NOM eye NOM big
 ‘Taroo’s eyes are big.’
 b. *boku ga atama ga itai*
 I NOM head NOM hurting
 I am hurting in the head
- (6) a. *kono heya ga doa ga koware-ta* (Anticausative/Unaccusative)
 This room NOM door NOM break-PST
 ‘This room, the door broke.’
 b. *Taroo ga otosan ga sin-da*
 Taroo NOM father NOM die-PST
 ‘Taroo’s father died.’
- (7) a. *Taroo ga kodomo ga iru* (Existential/Possessive)
 Taroo NOM child NOM be
 ‘Taroo has a child.’

- b. *Taroo ga kuruma ga aru*
 TarooNOM car NOM be
 ‘Taroo have a car.’

These constructions are called possessor-raising constructions; the first NP bears a possessor relation to the second NP.

Type B predicates are arguably transitive with a nominative object. The first NP is marked either with the dative *ni* or the nominative *ga*. These predicates include psychological verbs and adjectives (8-9), and verbs formed with the potential suffix *-(r)eru* (10).¹

Type B stative predicates

- (8) *boku ni (wa) /ga Ken no kimochi ga wakaru* (Psychological verb)
 I DAT(TOP)/NOM Ken GEN feeling NOM understand
 ‘I can understand Ken’s feeling’
- (9) *boku ni (wa)/ga Ken no byooki ga kanasii* (Psychological adjective)
 I DAT(TOP)/NOM Ken GEN illness NOM sad
 ‘I am sad about Ken’s illness.’
- (10) *boku ni (wa)/ga piano ga hik-eru* (Potential verb)
 I DAT(TOP)/NOM piano NOM play-can
 ‘I can play a piano.’

It is generally agreed that dative subjects function as grammatical subjects because they pass all the diagnostic tests utilized for identifying a subject in Japanese; these include reflexivization, subject honorification, and controlled PRO (Kuno 1973, Shibatani 1999, Kishimoto 2004, Koizumi 2008). However, there is an ongoing debate as to whether the second nominative NP is the subject of an intransitive (double subject) or the object of a transitive predicate (nominative object). In a series of works, Shibatani (1999, 2001) and Shibatani & Pardeshi (2001, 2018) argue that what I label Type B predicates are variants of Type A predicates; they are intransitive with a double subject structure. Kishimoto (2004) argues against Shibatani (1999, 2001) and Shibatani & Pardeshi (2001) that dative subject constructions as in (8-10) are transitive with a nominative object. For our present purposes, Kishimoto’s observation about the *no-koto* ‘Gen-thing’ expression is of particular interest with regard to the object status of the second NP (see also Koizumi 2008). (11a-c) are cited in Kishimoto (2004).

- (11) a. *John (*-no koto) ga Mary (no koto) o sika-tta*
 John GEN that NOM Mary GEN thing ACC scold-PST
 ‘Taroo scolded Hanako.’
- b. *John (*no koto) ni Mary (no koto) ga wakaru*
 John GEN thing DAT Mary GEN thing NOM understand
 ‘John understands Mary.’

¹ In double nominative constructions, the first NP marked with *ga* is necessarily focused. A non-focused topic NP is marked with the dative *ni*. Thus, dative subjects occurring with topic *wa* sound more natural than those without it. The subjects of existential/possessive verbs as in (7) can be marked with the dative *ni*, but I assume that these constructions are double subject constructions: the first NP bears a possessor-possessed relation with the second NP.

As shown in (11a), Kishimoto observes that NP *no-koto* only appears in the object position of a transitive clause, which in turn suggests that the second NPs marked with nominative *ga* in (11b) have the object status. Type A predicates are double subject constructions (intransitive); the second NPs in (12) fail to occur with *no-koto*.

- (12) a. *Taroo ga me (*no koto) ga ookii*
 Taroo NOM eye GEN thing NOM big
 ‘Taroo’s eyes are big.’
 b. *Taroo ni (wa) kodomo (*no koto) ga iru*
 Taroo DAT (TOP) child GEN thing NOM be
 ‘Taroo has a child.’

Responding to Kishimoto (2004, 2016), Shibatani & Pardeshi (2018:98) indicate that “NP *no koto* is dubious as an object test” because it “does not occur in the object of prototypical transitive verbs such as *korosu* ‘kill’ and *naguru* ‘hit’.”

A further problem with Kishimoto is that if *no-koto* denotes objecthood, we would expect that the second NP of potential verbs may occur with *no-koto*. Contrary to this prediction, the second NP with *no-koto* is unacceptable as in (13).²

- (13) *boku ni (wa) piano (*no koto) ga hik-eru* (Potential verb)
 I DAT TOP piano GEN thing NOM play-can
 ‘I can play a piano.’

The dative subject construction with the potential verb (13) is unlikely to be intransitive since the corresponding canonical pattern appears with the object marked with accusative *o* as in (14).

- (14) *boku ga piano (*no koto) o hik-eru*
 I NOM piano GEN thing ACC play-can
 ‘I can play a piano.’

A question then arises as to why the second nominative NP occurs with *no-koto* in (11b), but not in (13). In the following, I will discuss a characteristic property of the *no-koto* expression in a psych predicate construction.

2.2 Psych predicates

There is a considerable amount of literature on the psych predicate alternation in which an object experiencer (OE) alternates with a subject experiencer (SE) (henceforth the OE-SE alternation), as illustrated in English (15).

- (15) a. The dog frightened John. (OE verb)
 b. John feared the dog. (SE verb)

It is widely recognized that the OE-SE alternation possesses a number of peculiar properties across languages, which challenges standard assumptions of the syntactic theory—that is, backward binding, non-canonical case marking, theta role inversion, etc. Cheung & Larson (2015), however, argue that OE verbs do not simply alternate with SE verbs because SE verbs

² I am thankful to the reviewer for this observation.

differ crucially from OE verbs in that the former are semantically *intensional*; expressions that do not denote real objects do not lead to falsity. Examples (16a-b) could both be true even without an object that denotes a real object.

- (16) a. John loves vampires. (SE verb)
 b. Mary fears all levitators. (SE verb)

OE verbs are *extensional* in the same way as simple transitive verbs: non-denoting expressions in the object position yield falsity.

- (17) a. #The explosion scared a vampire. (OE verb)
 b. #The explosion shocked a levitator. (OE verb)

- (18) a. #John saw vampires.
 b. #Mary ran into a levitator with her car.
 c. #Mary gave a levitator ten dollars.

(17-18) are always false, because ‘vampires’ and ‘levitators’ do not exist in reality. Cheung & Larson adopt the so-called sententialist hypothesis, which claims that *intensionality* derives from the clause-type of complements of intensional verbs; all intentional transitive verbs involve covert clausal embedding (cf. McCawley 1974, Karttunen 1976, Larson 2002, Ross 1976, Dikken, Larson & Ludlow 2018). Following the sententialist hypothesis, Cheung & Larson propose that the intensional object of an SE verb (19a) is contained within a concealed clause with an unexpressed predicate (PRED) at the abstract level, as represented in (19b).

- (19) a. John fears vampires.
 b. John fears [_{CP} vampires PRED]

The analysis of Cheung & Larson provides a straightforward explanation for some peculiar properties of *no-koto* ‘Gen thing’. In Japanese, OE verbs are derived from SE verbs by adding the causative suffix *-se* (20a).

- (20) a. *Hanako ga Taroo (*no koto) o yorokoba-se-ta* (OE verb)
 Hanako NOM Taroo GEN thing ACC please-CAUS-PST
 ‘Hanako pleased Taroo.’
 b. *Taroo ga Hanako *(no koto) o yorokon-da* (SE verb)
 Taroo NOM Hanako GEN thing ACC please-PST
 ‘Taroo is pleased with Hanako.’

As shown in (20a) OE verbs may not appear with *no-koto*, whereas SE verbs must appear with *no-koto*. Note importantly that SE predicates in Japanese select an overt clausal complement headed by *koto* ‘thing’, while OE verbs do not. (21a) is a transitive SE verb, and (21b) is the SE adjective that selects a clausal complement marked with *ga*.

- (21) a. *Taroo ga [Hanako ga siken ni ukatta koto] o yorokon-da* (SE verb)
 Taroo NOM Hanako NOM exam DAT passed that ACC please-PST
 ‘Taroo is pleased that Hanako passed the exam.’

- b. *Taroo ni (wa) [Hanako ga siken ni ukatta koto] ga uresii* (SE adjective)
 Taroo DAT (TOP) Hanako NOM exam DAT passed that NOM happy
 ‘Taroo is happy that Hanako passed the exam.’

The reason why the NP *no-koto* expression is possible with SE predicates is because SE predicates are types of predicates that select a clausal complement headed by *koto* ‘thing’. Non-psych verbs such as *sikaru*, cited by Kishimoto (11a), repeated in (22a) can also take a clausal complement headed by *koto* ‘that’ (22b).

- (22) a. *Taroo ga [Hanako no koto] o sika-tta*
 Taroo NOM Hanako GEN thing ACC scold-PST
 ‘Taroo scolded Hanako (=what Hanako did).’
 b. *Taroo ga [Hanako ga hon o nusunda koto] o sika-tta*
 Taroo NOM Hanako GEN book ACC stole that ACC scold-PST
 ‘(Lit.) Taroo scolded that Hanako stole the book.’

(22a) is literally interpreted as ‘Taroo scolded the thing that Hanako did’. Neither (22a) nor (22b) asserts that Taroo scolded Hanako. It only implies that someone Taroo scolded is Hanako. The NP marked with the dative *ni* can thus be added when the object appears with (*no-*)*koto*, as shown in (23). (23a) is completely unacceptable without *no-koto*. Importantly, the NP *no-koto* expression in (23) specifies a CAUSE denoted by the verb and can be demoted to the oblique PP headed by *-de*.

- (23) a. *Taroo ga Jiroo ni [Hanako *(no koto)] o/de sika-tta*
 Taroo NOM Jiroo DAT Hanako GEN thing ACC/CAUS scold-PST
 ‘Taroo scolded Jiroo for what Hanako did.’
 b. *Taroo ga Jiroo ni [Hanako ga hon o nusunda koto] o sika-tta*
 Taroo NOM Jiroo DAT Hanako GEN book ACC stole that ACC scold-PST
 ‘Taroo scolded Jiroo for Hanako’s stealing the book.’

The above observation reveals that the *no-koto* expression occurs with predicates selecting a clausal complement headed by *koto* ‘that’. As suggested by Cheung & Larson (2015), SE verbs are *intensional* and select an implicit clausal complement, while OE verbs do not. This provides a straightforward account for why SE verbs take the NP *no-koto*, while OE verbs do not. In section 2.3, I argue that the *no-koto* expression provides further evidence that the OE-SE alternation in Japanese is a type of the causative alternation; the object with *no-koto* can be demoted to the oblique PP and behaves exactly in parallel with the anticausative variant in the causative alternation.

2.3 The OE-SE alternation as a voice alternation

The most empirically recognized voice alternation involves active-passives and causative-anticausatives. It is generally agreed that the causative (transitive variant) is taken to describe the causation of a *change-of-state*, while the anticausative (intransitive variant) describes an eventuality in which the theme undergoes a change of state. Alexiadou & Iordăchioaia (2014) and Alexiadou (2016) propose that languages like Greek, Romanian, and Polish employ what they label the *psych causative alternation*: the OE-SE alternation is a subtype of the causative alternation. OE verbs behave in parallel with causatives, and SE verbs behave in parallel with anticausatives. The psych causative alternation in Greek is illustrated in (24-25).

(24) Greek (Alexiadou & Iordăchioaia 2014:63)

a. *o Janis ekapse ti supa* (Causative)
 the John burnt.ACT the soup
 ‘John burnt the soup.’

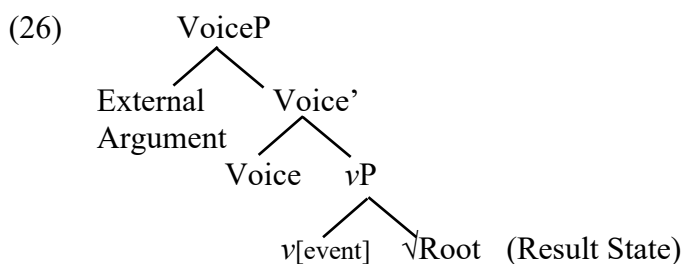
b. *i supa kaike me ti dinati fotia* (Anticausative)
 the soup burnt.NACT with the strong fire
 ‘The soup burnt from the strong fire.’

(25) Greek (Alexiadou & Iordăchioaia 2014:63)

a. *ta nea enohlisan ti Maria* (OE verb)
 the news annoyed.ACT the Mary.ACC
 ‘The news annoyed Mary.’

b. *i Maria enolithike me ta nea* (SE verb)
 the Mary annoyed.NACT with the news
 ‘Mary got annoyed with the news.’

According to Alexiadou and Iordăchioaia (2014) and Alexiadou (2016), Voice is spelled out with (non)-active morphology in Greek. The causative verb (24a) is marked by an active voice, while the anticausative (24b) is marked by a non-active voice. The OE-SE alternation (25) behaves exactly parallel to the causative alternation (24a-b). Importantly, the PPs headed by the preposition *me* ‘with’ in the anticausative (24b) and the SE verb (25b) signify a CAUSE and generate a change of state reading. Not all languages, however, possess the psych causative alternation. They argue that English lacks the psych causative alternation; subjects of OE verbs act as causers while objects of SE verbs are objects of emotion (in Pesetsky’s (1995:57) terms, ‘subject matter’ or ‘target of emotion’). Given that the psych causative alternation contains a causer element in both causatives and anticausatives, they propose that causatives and anticausatives involve the same event decomposition, but differ only with regard to the presence or absence of an external argument. The causative verb introduces an external argument (i.e., the causer), whereas the anticausative counterpart lacks it. Syntactically, they propose that CAUSE is encoded in the functional category Voice; it licenses a causer argument in Spec(Voice) and the PP causer in an anticausative; *v* is an eventive head that introduces an event and takes a category-neutral RootP as its complement; and RootP represents the result state of its causation. This is represented in (26).



Assuming that the psych causative construction has the structure (26), I will now turn to the causative alternation in Japanese. Although Japanese employs different morphological classes of the causative alternation, Voice is morphologically realized by a verbal suffix in a way similar to Greek. The causative verb *kowa*-‘break’, for example, takes the suffix *-si* (27a), and the anticausative (27b) and the passive (27c) take the same non-active voice *-re*.³

³ As is well known, there are other classes of causatively alternating verbs in Japanese,

- (27) a. *Taroo ga kabin o kowa-si-ta* (Causative)
 Taro NOM vase ACC break-CAUS-PST
 ‘Taroo broke the vase.’
- b. *kabin ga boo de kowa-re-ta* (Anticausative)
 vase NOM stick with break-NACT-PST
 ‘The vase broke with the stick.’
- c. *kabin ga boo de kowa-sa-re-ta* (Passive)
 vase NOM stick with break-CAUS-PASS-PST
 ‘The vase was broken by the stick.’

The subject of the causative verb serves as a causer (27a), but in the anticausative, the causer is realized by the PP headed by *de* ‘with’ (27b), which brings about a change of state. The psych predicate alternation (28) displays the same morphological pattern as that of the causative alternation. The OE verb takes the causative suffix *-se* (28a). The NP *no-koto* of the SE verb denotes a theme (or, as it is sometimes called, the stimulus) when marked with accusative *o* as in (28b), but crucially, it can be demoted to the oblique PP marked with *de* ‘with’ as in (28c), in which case, the PP is interpreted as a causer that triggers a *change of state* reading.

- (28) a. *Hanako ga Taroo o yorokoba-se-ta* (OE verb)
 Hanako NOM Taroo ACC please-CAUS-PST
 ‘Hanako pleased Taroo.’
- b. *Taroo ga [Hanako no koto] o yorokon-da* (SE verb)
 Taroo NOM Hanako GEN thing ACC please-PST
 ‘Taroo was pleased with Hanako.’
- c. *Taroo ga [Hanako no koto] de yorokon-da* (SE verb)
 Taroo NOM Hanako GEN thing with please-PST
 ‘Taroo was pleased with Hanako.’

The parallelism between (27) and (28) clearly shows that Japanese employs the psych causative alternation; OE verbs behave parallel to causative verbs, whereas SE verbs behave parallel to anticausatives.⁴

In section 3, I discuss the diachronic change of the psych causative alternation in Japanese, and argue that Japanese underwent a reanalysis of OE predicates as SE predicates due to the loss of the vestigial causative suffix. This reanalysis plays a crucial role in change from non-

which are associated with differences in stem shape (cf. Kageyama and Jacobsen 2016).

⁴ It is worth noting that psych predicates with the deadjectival verbalizing suffix *-garu* ‘act in an ADJ manner’ behave quite differently from the psych predicates discussed above. Japanese employs the morpheme *-garu* attached to both non-psych and psych stative adjectives, such as in *samui* ‘cold’ > *samu-garu*, *atui* ‘hot’ > *atu-garu*, and *kowai* ‘afraid’ > *kowa-garu*. The suffix *-garu* is a derivational morpheme that changes stative adjectives into eventive/active verbs. Note that SE verbs formed by *garu* fail to take the PP causer, as in (i). This indicates that the OE-SE verb pairs with *garu* do not instantiate a causative alternation; SE verbs are canonical transitive verbs that take a direct object.

(i) *Taroo ga Hanako (no koto) o/*de kowa-ga-tta*
 Taroo NOM Hanako (GEN thing) ACC/LOC fear-ACT-PST
 ‘Taroo feared Hanako.’

accusative to accusative alignment. The non-canonical case marking construction arose as a byproduct of this change.

3. The diachrony of the psych predicate construction

3.1 Introduction

From a cross-linguistic perspective, it is widely recognized that there is no language that is entirely ergative. Every language that has been identified as an ergative language has a split system that is typically conditioned by semantic factors, such as animacy, tense, aspect or syntactic factors, such as matrix vs. subordinate clauses (Comrie 1978 and Dixon 1979). Similarly, as shown in dative subject constructions in Japanese, predominantly accusative languages display ergativity in some areas in the grammar. Split ergativity or variable alignment is generally caused by a reanalysis of some particular valency-affecting constructions; that is, the reanalysis of a passive as a transitive construction leads to a shift from accusative to ergative (Anderson 1977, Pray 1976, Hook 1991 for Indo-Aryan and Cardona 1970, Payne 1980 for the related Iranian languages), and the reanalysis of antipassives leads to a shift from ergative to accusative (Harris & Campbell 1995 for Kartvelian languages and Aldridge 2011 for Austronesian languages). Aldridge & Yanagida (forthcoming) propose that reanalysis of nominalization goes in either direction, ergative or accusative, depending on the syntactic condition involved in the reanalysis. Creissels (2008) discusses two other possible constructions which serve as historical pathways leading to variable alignment patterns: (1) light verb constructions, and (2) transimpersonal constructions (cf. Malchukov 2008) which Creissels (2008:13) labels “P-ellipsis.”⁵ Both constructions are transitive having A and O arguments, but historically they are converted into intransitive constructions. The O-argument of a light verb becomes part of a single complex verb phrase. Transimpersonal predicates generally lack the overt O argument. Because of the absence of the object they are reanalyzed as intransitives. This transitive-to-intransitive reanalysis, however, does not affect the coding system in predominantly accusative language where A and S are coded alike. However, if the predominant alignment pattern is ergative or active, the marking of A may change to the nominative marking of an S after the reanalysis. (Creissels 2008:10-12 Section 1.2.2).

In the following sections, I show that Japanese underwent a change from an active-inactive alignment to predominantly accusative alignment. The triggering construction for this change is identified as *impersonal psych transitives* with an unexpressed object experiencer (Yanagida 2018, Aldridge & Yanagida [forthcoming]). They are typologically similar to the type of elliptical constructions discussed in Creissels (2008). I propose that this particular psych transitive construction was reinterpreted as an intransitive, and that this reanalysis not only triggered a change from active to accusative alignment but also led to the emergence of a dative subject as a byproduct of this change.

3.2. Alignment change: active > accusative

Modern Japanese nominative case *ga* was a genitive case in Old Japanese (OJ; the 8th century), marking the possessor of an NP. Genitive *ga* was used as an active case marking the subject of various types of embedded or nominalized clauses, represented by the adnominal form of predicates. While nominative *ga* in Modern Japanese marks both transitive and intransitive subjects as illustrated in (1), *ga* in OJ is sensitive to both the semantics of NPs

⁵ According to Malchukov (2008), the term ‘transimpersonal’ was originally coined by Haas (1941), which has the form like “it sleeps me > I sleep,” or “it seems to me > I think.”

and the semantics of predicates. Agent arguments higher on the animacy hierarchy are marked with *ga*, as in (29a-b), whereas non-human theme arguments lower on the animacy hierarchy are marked predominantly with *zero* or the other genitive *no*, as in (30a-b).⁶

(29) Old Japanese (MYS 3351;MYS 4357)

a. *kanasiki kworo ga ninwo Ø posaru kamo* (Transitive)
 beloved child AGT cloth dry.ADN Q
 ‘Is my beloved drying woven cloth?’

b. *wagimokwo ga ...naki-si so [o]mopayu* (Active Intransitive)
 my.wife AGT cry-PST.ADN FOC long.for
 ‘I long for my wife, who cries ...’

(30) Old Japanese (MYS 4066; MYS 1821)

a. [*paru kasumi Ø nagaru-ru*] *nape-ni*
 spring haze flow-ADN time-LOC
 ‘at the time when spring haze flows....’

b. *u no pana no saku tukwi* (Inactive Intransitive)
 utsugi GEN blossom GEN bloom.ADN month
 ‘the month when the utsugi blossom is in bloom.’

Yanagida & Whitman (2009) present a number of pieces of evidence showing that the alternation between *ga* and *zero* reflects an active-inactive paradigm (cf. Yanagida 2018, Yanagida [forthcoming]).⁷ Kikuta (2012) observes that there are a number of examples in which *ga* appears on non-agentive theme NPs, which are possible counterexamples to Yanagida & Whitman’s hypothesis. It is important to note that the binary classification of active and inactive displays considerable divergence across languages. In Guaraní, for example, the unaccusative verb ‘die’, which involves no intention or control, is classified as active, while it is classified as inactive in most fluid S languages. In OJ, the low volitionality verbs *ne-* ‘sleep’ and *wor-* ‘sit’ are, in fact, categorized as active since their subjects are marked with *ga* but never with *zero*. (Yanagida (forthcoming) provides quantitative data to show that the opposition between *ga* and *zero* divide predicates into an active-inactive paradigm.) Of a particular interest is Kikuta’s observation that *ga* appears on the non-agentive theme subjects of experiencer verbs, such as *wasur-* ‘forget’, *omop-* ‘think’, *mi* ‘see’ as in (31).

⁶ Old Japanese examples are taken from *Man’yōshū* (abbreviated as MYS), the oldest collection of Japanese verse compiled in the mid-8th century A.D. In OJ, while adnominal/nominalized clauses show an active-inactive pattern, a main declarative verb in the *conclusive* form employs a nominative-accusative pattern in that both transitive and intransitive subjects are morphologically *zero*-marked; that is, nominative/absolute case in OJ is *zero*. Transitivity does not affect the case marking in a main declarative clause (cf. Yanagida & Whitman 2009). The conclusive form was lost after the adnominal form was reanalyzed as the main predicate form.

⁷ *No* most frequently occurs with inactive verbs, but we find a number of examples in which it occurs with active verbs. This shows that *no* is independent of alignment. Kikuta (2012) suggests that the alternation between *ga* and *no* depends on the place of the NP in the animacy hierarchy. *Ga* occurs with personal pronouns, proper nouns and kinship terms such as “mother” and “child,” higher on the animacy hierarchy. The other genitive *no* occurs with common NPs, lower on the hierarchy.

(31) Old Japanese (MYS 3928, MYS 4407)

- a. [*ima no goto kopisiku kimi ga omopo-ye-ba*] *ikani kamo se-mu?*
now GEN like miss you GA think-GET-when how Q do-AUX
'What should I do when you come to my mind just like now?'
- b. *imo ga kopisiku wasura-ye-nu-kamo*
lover GA miss forget-GET-NEG-Q
'Did I miss my dear and cannot forget her?'

A further problematic case is the psych adjective that takes a clausal argument marked with *ga*.

(32) Old Japanese (MYS 556; MYS 1631)

- a. [*areburu kimi wo miru*] *ga kana-si sa*
distant you OBJ see.ADN CAUS sad-do NMLZ
'I am sad to see you feel distant from me.'
(To see you feel distant from me made me sad.)
- b. [*yowo no nagaki ni pitori nuru*] *ga kuru-si sa*
night GEN long LOC alone sleep.ADN CAUS painful-do NMLZ
'It is painful for me to sleep alone in the long night.'

If *ga* marks the agent argument of an active verb, how do we account for the non-agentive *ga* in psych predicates, as given in (31-32). In section 3.5, I will argue that NPs or clausal arguments marked with *ga* are the external arguments that signify the CAUSE OF EMOTION denoted by object experiencer predicates. They were reanalyzed as the internal theme argument of subject experiencer predicates in Early Modern Japanese.

Note that, cross-linguistically, the cause argument is located higher in the thematic hierarchy (33) and that the ergative that marks the agent often marks the cause argument of psych predicates as well.

(33) Thematic Hierarchy (Pesetsky 1995)

Agent > Cause > Experiencer > Theme/Subject Matter

For example, as cited by Woolford (2008), in Assamese, the object experiencer construction contains the light verb *korile* 'make/do'. The subject is the external argument of the light verb and thus is assigned ergative case, as shown in (34).

(34) Assamese (Eastern Indo-Aryan language)

- a. *gan-tu-e xap-tu-k khogal korile*
song-class-ERG snake-class-DAT anger made/did
'The song angered the snake.'
- b. *boroxun-e Ram-ok xant korile*
rain-ERG Ram-DAT calm made/did
'The rain calmed Ram.'

Ergative case marks agents which are typical external arguments. External arguments also include some other kinds of theta roles including a causer and experiencer, and the exact range of verbs that take an external argument is known to vary from language to language (cf. Woolford 2015). OJ is similar to Assamese (34) in that *ga* marks both the agent argument of a transitive and the cause argument of an OE psych verb. Under the present framework, the

cause arguments in (31-32) are the external arguments that appear in Spec(VoiceP). The head of VoiceP is morphologically marked by the vestigial causative suffix *ye* ‘get’ or *si* ‘do’. This particular construction plays a crucial role in alignment change in the history of Japanese.

Harris & Campbell (H&C, 1995: 258) discuss a possible scenario for a shift from active to accusative alignment through extension: An active case marking the subject of a transitive and an active intransitive verb is extended to mark the subject of an inactive intransitive verb. However, the diachronic data in Japanese do not support H&C’s hypothesis. Agentive case *ga* was once almost lost in Early Middle Japanese (EMJ) before it was reanalyzed as a nominative case. Using the Corpus of Historical Japanese (CHJ) produced by the National Institute of Japanese Language and Linguistics, Yanagida (2017) presents an extensive survey of the distribution of *ga* from OJ to Early Modern Japanese (EModJ). The result of the survey is represented in Table 1.⁸

Table 1: The NP subjects marked with *ga/no* +Verb (CHJ)

	OJ <i>Man’yōshū</i>	EMJ <i>Genji</i> (1010)	EModJ <i>Toraakirabon</i> (1642)
Subject <i>ga</i>	615(40%)	57 (4%)	1622 (76%)
Subject <i>no</i>	957(60%)	1361 (96%)	504 (24%)
Total	1572 (100%)	1418 (100%)	2126

Table 1 reveals that use of *ga* decreased drastically in its frequency in Early Middle Japanese (EMJ); we find only 4 % of *ga* in comparison to 96 % of *no* in contexts where one or the other is used, which suggests that agentive *ga* was almost lost in EMJ. Use of *ga* then came to be highly frequent in EModJ; 76% in comparison to 24% of *no*. The increased usage of *ga* in EModJ is predictable because, by this time, adnominal inflection had been reanalyzed as main clause inflection and *ga* was reanalyzed as a nominative case marking for the subject in both main and embedded clauses, while *no* remained as a genitive case.

Yamada (2000) examines the distribution of *ga*, *no*, and *zero* marking the subject of a main clause in the Late Middle Japanese text called *Amakusa Heike*, published in 1592.⁹ Yamada observes that, while *zero*-marked subjects occur irrespective of the type of verbs, *ga* appears predominantly with intransitives—in particular, unaccusative verbs—and rarely marks the subject of a transitive verb. Based on this fact, Yamada suggests that the nominative *ga* started out by marking the subject of unaccusative verbs. To verify Yamada’s observation, Yanagida (2017) examines the distribution of *ga* and *no* by using the *Toraakirabon Kyōgen*, a relatively colloquial collection of texts consisting of *kyōgen* (comic) plays, published a half century after *Amakusa Heike*. The result of the survey was consistent with Yamada’s observation. In this text, 80% of the occurrences of *ga* mark non-human S arguments of unaccusatives, many of which are variants of the existential verbs *iru/aru* ‘be’ as in (35a) and

⁸ For periodization, I follow Frellesvig (2010): Old Japanese (OJ) 700–800; Early Middle Japanese (EMJ) 800–1200; Late Middle Japanese (LMJ) 1200–1600; Early Modern Japanese (EModJ) 1600–1800. The quantitative study given in sections 3 is based on the data collected by Yanagida (2017), cited in Aldridge & Yanagida (Forthcoming), from the Corpus of Historical Japanese (CHJ) produced by the National Institute of Japanese Language and Linguistics, through OJ to EModJ. The CHJ has no grammatical markup; thus only string searches are possible. The data in Table 1 are limited to noun+*ga/no* immediately preceding the verb. It is therefore not precisely the total occurrence of verbs with subjects marked with *ga* and *no*.

⁹ *Amakusa Heike* is a romanized translated version of the tale of *Heike* published in 1592.

adjectives as in (35b-c). Only 10% mark the agent argument of a transitive verb as in (36) (for the quantitative data, see Aldridge & Yanagida [forthcoming]).

(35) Early Modern Japanese (*Toraakirabon Kyōgen* 1642)

- a. *soko ni furui taiko ga aru*
 there LOC old drum NOM be
- b. *te ga tumetai*
 hand NOM cold
- c. *mimi ga itai*
 ear NOM painful

(36) Early Modern Japanese (*Toraakibon Kyōgen* 1642)

- a. *are ga kane no ne o kipi-tara ba...*
 that NOM bell GEN sound ACC hear-AUX if
 ‘If that person hear the sound of the bell...’
- b. *sore ga ta pe mizu o ireteoku*
 that NOM field LOC water ACC put
 ‘That person put water into the field.’

The fluctuation of the frequency of *ga*, as shown in Table 1, reveals that *ga* was not simply extended to mark inactive intransitive subjects through extension. Agentive *ga* was almost lost and replaced by *no* in EMJ. The canonical nominative-accusative pattern, as found in EModJ (36) emerged only after intransitive subjects were fully marked with *ga*.

A question then arises as to why *ga*, rather than *no*, became a nominative case in Modern standard Japanese and why nominative *ga* started marking S arguments of unaccusatives/adjectives. The following sections argue that the reanalysis of the psych predicate plays a key role in the development of *ga* into the nominative case in the history of Japanese.

3.3. The causative alternation

In OJ, verbs and adjectives are divided into different classes of conjugational patterns. The distribution of the four main conjugational classes in OJ is given in Table 2. Quadrigrade verbs (QD) and lower bigrade (LB) verbs had the highest frequency.

Table 2: Four major conjugation classes in *Man'yōshū* (CHJ)

Quadrigrade (QD)	682
Lower bigrade (LB)	259
Upper bigrade (UB)	50
Upper monograde (UM)	9
Total:	1000

QD ends with four different inflectional affixes: /a/, /i/, /u/, and /e/, whereas bigrade verbs end with two: either /i/ or /u/ (upper bigrade [UB]) or /e/ or /u/ (lower bigrade [LB]). Upper monograde verbs (UM) end with the vowel /i/. I assume that these inflectional affixes are taken to realize *v*. Kuginuki (1996:239-250) demonstrates that there are three basic classes and a number of subclasses of verbs that form the transitivity alternation in OJ, and that the most frequent pattern occurred between QD intransitives and LB transitives. Whitman (2007, 2008) and Frellesvig & Whitman (2018:297) propose that the QD (intransitive) > LB (transitive) alternation originates from an acquisitive pattern involving the

grammaticalization of the verb **ye/e-* ‘get’.¹⁰ The transitive variant is derived from the intransitive one by root suffixation of **e* ‘get’, that is, suffixation of *-e* directly to the verb root. The basic point of departure for this insight is the fact that *yu/e-* ‘get’ and lower bigrade verb share exactly the same conjugational pattern. The transitivity alternation between QD and LB verbs is associated with six major inflectional paradigms, as shown in Table 3.

Table 3: The causative alternation in OJ

tat-‘rise/raise’	QD intransitive Anticausative	<i>e</i> ‘get’	LB transitive causative
Mizen ‘Irrealis’	<i>tat-a</i>	<i>e</i>	<i>tat-e</i>
Ren’yo ‘infinitive’	<i>tat-i</i>	<i>e</i>	<i>tat-e</i>
Shushi ‘conclusive’	<i>tat-u</i>	<i>u</i>	<i>tat-u</i>
Rentai ‘adnominal’	<i>tat-u</i>	<i>uru</i>	<i>tat-uru</i>
Izen ‘realis’	<i>tat-e</i>	<i>ure</i>	<i>tat-ure</i>
Meirei ‘imperative’	<i>tat-e</i>	<i>eyo</i>	<i>tat-eyo</i>

As shown in (37), the subject of a causative verb in embedded contexts is marked with *ga*, whereas the subject of an anticausative verb is marked with *zero* in OJ.

(37) Old Japanese (MYS 2652, MYS 4292)¹¹

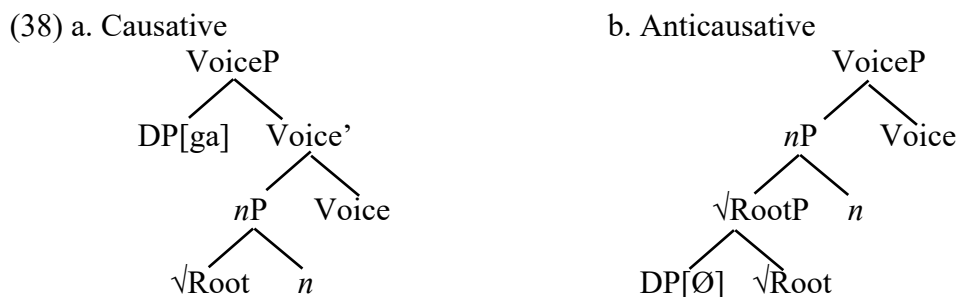
- a. *imo ga kami Ø age takapa no panati.gwoma* (Causative)
 lover AGT hair raise Takaha GEN released.horse
 ‘My lover does up her hair, (looking) like a horse released in Takaha.’
- b. *parupi ni pibari Ø agari kokoro Ø kanasi mo* (Anticausative)
 spring.day LOC lark rise heart sad FOC
 ‘In the spring day a lark goes up and my heart is sad.’

Whitman (2008) and Frellesvig & Whitman (2018) propose that *-e* ‘get’ is analyzed as an aspectual variant of ‘have’ and that it is decomposed into the aspectual predicate BECOME

¹⁰ As pointed out by the reviewer, the alternation involving *-e-* ‘get’ involves both transitivizing/causativizing and detransitivizing/decausativizing functions. Whitman (2008:170) indicates that all functions of **e* are compatible with well-known grammaticalization paths for ‘get’. Whitman notes that ‘the semantics of ‘get’ explains “the three lexical subtypes instantiated by lower bigrade (LB) verbs. ‘Get’> inchoative (change of state) as in **aka-* + *e-* > *ake-* ‘get red’ is widely attested in the grammaticalization literature (Hein and Kuteva 2004:144-145). Hein and Kuteva observe that “this process appears to be associated primarily with contexts where GET has adjectives and related words as complements” (2004:145). This is exactly what occurs in Japanese: inchoative bigrades result when the original complement of **e-* ‘get’ was an adjectival stem. Hein and Kuteva also present crosslinguistic evidence for the developments ‘get’ > passive (2004:145-147) and ‘get’ > permissive causative (2004:145-146) (Whitman 2008:170)”

¹¹ The reviewer points out that *imo ga kami* in (37a) may be the possessive ‘my lover’s hair’. But according to *Nihon koten bungaku zenshū* (Collection of Japanese classic literatures) which the CHJ is based on, *takapa* conveys both the meaning of ‘bundle the hair’ and the place named Takaha; that is, this is a case of haplology, or, more specifically, the poet taking advantage of haplology to preserve the meter. If this is the case, *ga* is used as the subject marker, not possessive.

and ‘have’. Although they do not use the term CAUSE, it is clear that the transitive variants of transitivity alternations contain a cause component. I follow Alexiadou and Iordăchioaia (2014) and Alexiadou (2016) and assume that CAUSE is introduced by the functional head Voice. The external argument (both agent and causer) originates in Spec(VoiceP) (see (26)):¹²



From an empirical point of view, Yanagida (2007) presents extensive survey on adnominal/nominalized clauses in OJ, indicating that the subject (S) of an intransitive verb and the object (O) of a transitive verb, both marked with *zero*, appear immediately adjacent to the verb. I adopt the uniformity of the theta-assignment hypothesis (UTAH) proposed by Baker (1988), which states that “identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure”(Baker 1988:46). Given the UTAH, the cause argument marked with *ga* in (37a) appears in the specifier position of VoiceP (38a), while the theme argument marked with *zero* in (37b) appears inside RootP (38b).

3.4. Impersonal psych transitives with an object experiencer

This section discusses the psych verbs that appear with the auxiliary verb *ye/ru* in the LB conjugation. *Yu* (stem *-ye*) is traditionally analyzed as the auxiliary verb that functions as passive, potential, and middle. A total of 51 out of 87 tokens of *ye* in the OJ corpus, however, appear with SE psych verbs in the QD conjugation; these include *wasur-* ‘forget’, *siru-* ‘know’, *omop-* ‘think/miss’, *itop-* ‘dislike’, and *nikum-* ‘hate’. Whitman (2007, 2008) attempts to reconstruct *ye* as the verb **e* ‘get’ in the same way as the causative verb in the LB conjugation. SE verbs in the QD conjugation alternate with OE variants with *ye* ‘get’, as shown in Table 4, which is morphologically parallel to the causative alternation (Table 3).

Table 4: The psych predicate alternation in OJ

<i>omop-</i> ‘miss/think’	QD SE verbs	LB auxiliary verb <i>yu</i> ‘get’	OE verbs
Mizen ‘irrealis’	<i>omop-a</i>	<i>ye</i>	<i>omopa-ye</i>
Ren’yō ‘infinitive’	<i>omop-i</i>	<i>ye</i>	<i>omopa-ye</i>
Shushi ‘conclusive’	<i>omop-u</i>	<i>yu</i>	<i>omopa-yu</i>
Rentai ‘adnominal’	<i>omop-u</i>	<i>yuru</i>	<i>omopa-yuru</i>
Izen ‘realis’	<i>omop-e</i>	<i>yure</i>	<i>omopa-yure</i>
Meirei ‘imperative’	<i>omop-e</i>	<i>yeyo</i>	<i>omopa-yeyo</i>

As shown in (39), OE verbs, in fact, have a causative structure; the subject marked with *ga* serves as a causer and the predicate with *ye* ‘get’ denotes causation. The sentences are

¹² Legate (2014) also proposes that Voice, not *v*, introduces the external theta-role and is the source of the accusative case.

literally interpreted as “you got me to think about you” and “my dear got me to forget her,” respectively.

(39) Old Japanese (MYS 3928, MYS 4407)

- a. [*ima no goto kopisiku kimi ga omopo-ye-ba*] *ikani kamo se-mu?*
 now GEN like miss you CAUS think-GET-when how Q do-AUX
 ‘What should I do when you come to my mind just like now?’
- b. *imo ga kopisiku wasura-ye-nu-kamo*
 lover CAUS miss forget-GET-NEG-Q
 ‘Did I miss my dear and cannot forget her?’

Importantly, after agentive *ga* was lost in EMJ, the cause argument of an OE psych predicate continued to appear with *ga*. In particular, adnominal clauses marked with *ga* as in (40) became widespread in EMJ, as pointed out by Ohno (1977,1978) and Yamada (2010). The data from the Corpus of Historical Japanese (CHJ) show that there are a total of 261 tokens of *ga*-marked clauses, 135 of which are followed by psych predicates.¹³

(40) Early Middle Japanese (*Genji, Wakana; Genji, Kocho*)

- a. [*tosigoro menare-tamaperu pito no oboroke nara-mu*] *ga ito kaku odoroka-ru beki ni mo ara-nu wo*
 long time accustomed-HON person GEN ordinary be-AUX CAUS very such
 astonish-AUX.ADN AUX LOC FOC be-NEG EXCL
 ‘A person who he was used to seeing being ordinally looking would not have made him so enamored of her.’
- b. [*yono supe ni kaku suki tamape-ru kokorobape wo miru*] *ga wokasiu mo apareni mo oboyu-ru kana*
 life last LOC such infatuated HON-ADN heart ACC see CAUS funny also
 pitiful also seem-AUX EXCL
 ‘Seeing him infatuated with a woman in his last years made me think him funny and pitiful.’

Yanagida (2018) identifies these particular OE verbs as *impersonal* in that a first person experiencer never surfaces in object position.

As illustrated in section 1, verbs with potential *-eru*, as in *nom-eru* ‘drink-can’ in (2) and psych adjectives such as *kanasii* ‘sad’ in (3) take non-canonical subjects and objects, which display an ergative pattern in ModJ. The potential *-eru* is obviously inherited from the auxiliary *-ye/ru*. It, however, differs from *-ye/ru* in many respects. First, ModJ *V-eru* allows only a potential reading, whereas the earlier form *-ye/ru* is used ambiguously as a passive, potential or middle. Second, ModJ *V-eru* is used productively with non-psych verbs, whereas *V-ye/ru* is most frequently used with psych verbs (51 out of 87 tokens of *ye* in the OJ corpus are psych verbs). Third, ModJ *V-eru* does not take a clausal argument; thus NP *no-koto* ‘Gen thing’ is impossible (see 14). In contrast, *V-ye/ru* most frequently takes a clausal argument (see Table 7). In traditional Japanese grammar, *V-eru* used in ModJ can only be traced back to Late Middle Japanese (cf. Aoki 1996, Miyake 2016). Due to the lack of data, we are unable to capture the full picture of how the potential verbs with *-eru* developed from the older form *-ye/ru*.

On the other hand, we can obtain solid data on psych adjectives in each historical stage. Section 3.5, therefore, focuses on a discussion of OE psych adjectives that share the same

¹³ The auxiliary *-yu* (stem *-ye*) attached to psych verbs is replaced by *-ru* in EMJ.

morphological behavior with psych verbs. More specifically, these object experiencer constructions have in common the following properties: First, the argument marked with *ga* is most frequently clausal and interpreted as a cause of emotion. Second, the predicate takes a vestigial causative morpheme. Third, they are semantically transitive but formally intransitive in that an overt experiencer object is systematically absent.

3.5. The psych adjective

Adjectives in OJ are traditionally divided into two classes: *ku*-adjectives and *siku*-adjectives. As shown in Table 5, non-psychological stative adjectives, such as ‘distant’, ‘high’, ‘steep’, and so on, belong to the *-ku* conjugation, while psychological adjectives, such as ‘sad’, ‘happy’, ‘regrettable’, and so on, belong to the *-siku* conjugation. (Kuginuki (1995) indicates that this distinction in OJ, however, was no longer transparent in EMJ.)

Table 5: The conjugation of two classes of adjectives in OJ (cf. Kuginuki 1995)

	Irrealis	Infinitive	Conclusive	Adnominal	Realis
Ku -adjective <i>taka</i> -‘high’	<i>-ke</i>	<i>-ku</i>	<i>-si</i>	<i>-ku</i>	<i>-ke</i>
Siku -adjective <i>kana</i> - ‘sad’	<i>-si-ke</i>	<i>-si-ku</i>	<i>-si</i>	<i>-si-ki</i>	<i>-si-ke</i>

The suffix *-si* appears in all conjugational forms of *siku*-adjectives, but it only appears in the conclusive form of *ku*-adjectives. The suffix *-si* attached to the adjective is homophonous with the infinitive form of the causative light verb *su* ‘do’. I hypothesize that the suffix *-si* has a verbal origin, which corresponds to the English verb ‘do’. Importantly, *siku*-adjectives are characterized as OE psych adjectives, and many of them have corresponding SE intransitive verbs in the UB conjugation, as shown in Table 6. The UB verbs include SE verbs and unaccusative verbs, which are categorized into the same type of intransitives without an agent.

Table 6: The psych predicate alternation in OJ

	OE psych adjectives Transitive	SE verbs UB Intransitive	Base
Class I	<i>atara-si</i> ‘regrettable’	<i>atara-si-bu</i> ‘regret’	Adjective
	<i>kana-si</i> ‘sad’	<i>kana-si-bu</i> ‘feel sad’	
	<i>kuru-si</i> ‘painful’	<i>kuru-si-bu</i> ‘feel pain’	
	<i>tomo-si</i> ‘beloved’	<i>tomo-si-bu</i> ‘love’	
	<i>ure-si</i> ‘joyful’	<i>ure-si-bu</i> ‘feel joy’	
Class II	<i>kop-o-si</i> ‘beloved’	<i>kop-u</i> ‘love’	Verb
	<i>kuy-a-si</i> ‘regretful’	<i>kuy-u</i> ‘regret’	
	<i>sab-u-si</i> ‘lonely’	<i>sab-u</i> ‘feel lonely’	
	<i>uram-e-si</i> ‘shameful’	<i>uram-u</i> ‘feel ashamed’	
	<i>wab-i-si</i> ‘sad’	<i>wab-u</i> ‘feel sad’	

Class I adjectives are the basic forms from which corresponding UB intransitive verb forms are derived. Class II adjectives are derived from UB verbs.

As shown in (41-42), OE adjectives in OJ are impersonal in that the cause argument is marked with *ga*, but a first person experiencer object is never overtly expressed.

(41) Old Japanese (MYS 3727)

[*omopi-wabu ramu*] **imo ga** *kana-si sa*
 feel-suffer may maiden CAUS sad-do NMLZ
 ‘The maiden who might be in pain made me sad.’

(42) Old Japanese (MYS 556; MYS 1631)

a. [*areburu kimi wo miru*] **ga** *kana-si sa*
 distant you OBJ see.ADN CAUS sad-do NMLZ
 ‘I am sad to see you feel distant from me.’
 (To see you feel distant from me made me sad.)

b. [*yowo no nagaki ni pitori nuru*] **ga** *kuru-si sa*
 night GEN long LOC alone sleep.ADN CAUS painful-do NMLZ
 ‘It is painful for me to sleep alone in the long night.’

Given that *ga* in OJ denotes a CAUSE and *-si* is a vestigial causative suffix, Yanagida (2018) and Aldridge & Yanagida (forthcoming) propose that *siku*-adjectives are *impersonal psych transitives* with an implicit object experiencer. *Siku*-adjectives as given in (41-42) developed into Type B adjectives with a clausal complement headed by *koto* ‘that’. A dative subject was an innovation after OE psych predicates were reanalyzed as SE psych predicates (see section 3.6 below).

Table 7 indicates the distribution of *ga*-marked subjects of non-psych and psych adjectives from OJ to EModJ.

Table 7: *Ga* (nominal/clausal arguments) with adjectives (CHJ)¹⁴

periodization	OJ (700-800)	EMJ (1010)	EModJ (1642)
Non-psych	0/0	1/1	318/98
Psych	4/32	4/77	18/17

The subject of a non-psych adjective is not marked with *ga* in OJ and EMJ. This is expected, since *ga* in this period marks only the agent argument of an active verb. Although agentive *ga* drastically declined in EMJ, the data in Table 7 show that cause arguments—most frequently, the adnominal clauses of OE psych adjectives as in (44)—continued to be marked with *ga* in EMJ.

(43) Early Middle Japanese (*Genji, Potaru*)

Gen ga ukari-si sama ni pa nazurapu-beki kepai nara-ne-do...
 Gen CAUS annoying-do thing LOC TOP compare-AUX.ADN appearance be not-though
 ‘Although I should not compare (it) with how much Gen was annoying
 (to me)...’

¹⁴ The data obtained from the Corpus of Historical Japanese (CHJ), cited in Yanagida (2018) and Aldridge & Yanagida (forthcoming) are limited to the occurrence of *ga* immediately preceding an adjective. They do not represent the total occurrences of adjectives with *ga*.

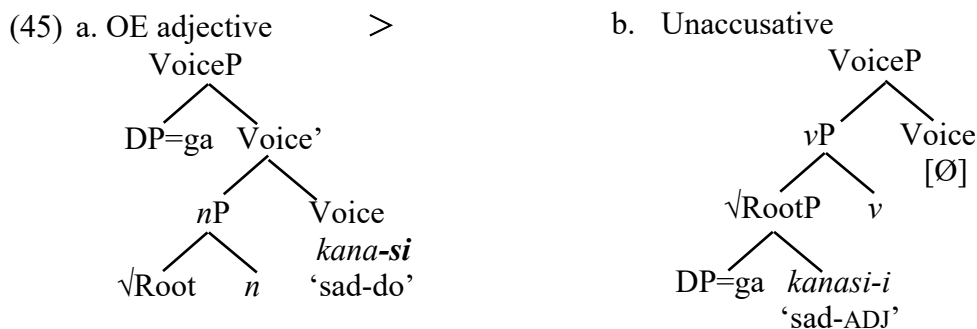
(44) Early Middle Japanese (*Genji, Aoi; Genji, Usugumo*)

- a. [*yosopito ni mi-tatemuri nasamu*] **ga** **wo-si-ki** *naru*
 outside.person DAT look-give.HON do.ADN CAUS sad-do-ADN be
 ‘I am sad that you treated me like a stranger.’
 (Your treating me like a stranger made me sad.)
- b. [*nani no tumi to mo siro-simesa-nu*] **ga** **wosoro-si-ki** *ni*
 what GEN sin that FOC know-HON-NEG CAUS fearful-do-ADN CONJ
 ‘It is frightening for me that you do not know what sin you committed.’
 (You not knowing what sin you committed made me frightened.)

(43-44) in EMJ have a causative structure parallel to (41-42) in OJ. Both NPs and clausal arguments marked with *ga* denote a cause of emotion, and adjectival predicates take the vestigial causative suffix *-si* ‘do’.

3.6. Reanalysis

As we discussed earlier, adnominal/nominalized clauses in OJ employ active alignment: genitive *ga* was used as active case marking for the subject of an active verb. After the loss of agentive *ga*, the cause argument of object experiencer constructions continued to be marked with *ga*. These object experiencer constructions are semantically transitive but syntactically intransitive. Because of this peculiar property of object experiencer predicates, they were reanalyzed as unaccusative with the sole argument marked with *ga*; that is, nominative. The two major factors that led to this change was (1) a reanalysis of nominalized predicates as main predicate forms and (2) the loss of the vestigial causative morpheme. The suffix *-si* was morphologically transparent in OJ and EMJ but became incorporated into the adjective in EModJ (for example, *kana-si-ki* ‘sad’ > *kanasi-i*) with the newly created adjective suffix *-i*. As a result, causation was no longer morphologically transparent. Following Aldridge & Yanagida [forthcoming], I assume that reanalysis of a nominalized clause as a finite verbal clause is explained by a categorial change of the nominal head *n* to the verbalizing head *v*. Syntactically, this reanalysis involves no intrinsic modification of the surface structure. As represented in (45), a cause argument marked with *ga* in Spec(VoiceP) came to mark the theme argument of an unaccusative verb inside $\sqrt{\text{RootP}}$.



Another important change that occurred in EModJ is that many of impersonal OE adjectives, such as *wosi* ‘sad’ in (46), came to take an experiencer marked with the dative *ni*.

- (46) Early Modern Japanese (EModJ) (*Toraakibon Kyōgen* 1642)
- a. *nani ga oyazya hito ni osikara-fu zo*
 what NOM father man DAT sad-AUX Q
 ‘What is father sad about? (What is regrettable to father?)’
- b. *onna ni nani ga osikara-fu*
 woman DAT what NOM sad-AUX
 What is the woman sad about? (What is regrettable to the woman?)

It is not clear whether dative experiencers at this stage of the language had the subject status. If (46a) is the basic structure, the dative experiencer may serve as the object of the psych adjective. However, object experiencer predicates in Japanese systematically contain a specific causative morpheme, as discussed earlier. It is unlikely that after the loss of the vestigial causative suffix *-si*, (46a) is interpreted as an object experiencer construction. If (46b) is the basic structure, the experiencer subject marked with *ni* is an innovation in EModJ.

Throughout the history, a dative case consistently marks the indirect object of an ditransitive verb as in (47), and the causee (or experiencer object) of a psych causative construction with the specific causative morpheme *-(s)ase* attached to the verbal stem as in (48).

- (47) Early Middle Japanese (Genji, Takekawa)
[kati tamapu] kata ni pana wo yosete-mu
 win HON person DAT flower ACC give-AUX
 ‘(I) will give a flower to the person who wins.’
- (48) Early Middle Japanese (EMJ) (*Genji, Makipasira*)
rei no mononoke no pito ni utoma-se-mu to suru
 that GEN evil spirit GEN people DAT disgust-CAUS-AUX that do
 ‘That evil spirit is trying to disgust people.’

As is widely discussed in the literature, the causee marked with dative *ni* differs crucially from the dative object of a ditransitive verb in that the former behaves as the subject with respect to the reflexive *zibun* ‘self’ (Kuroda 1965, Kuno 1973, Shibatani 1976 and many others). The reflexive *zibun* in Japanese can only take a subject as its antecedent. As shown in (49) in ModJ, the antecedent of *zibun* is the subject, but not the dative object of the ditransitive verb. In the psych causative construction (50), on the other hand, the interpretation of *zibun* is ambiguous; both the causer and the causee can be the antecedent of *zibun*.

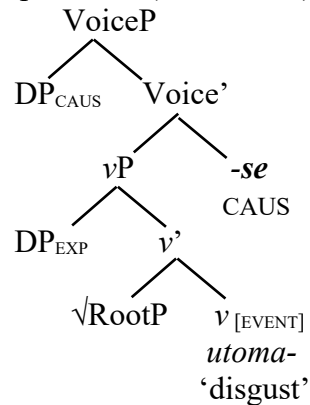
- (49) Modern Japanese (ditransitive)
Ken ga Naomi ni [zibun no hon] o ageta
 Ken NOM Naomi DAT self GEN book ACC gave
 ‘Ken gave his book to Naomi.’

(50) Modern Japanese (OE verb=causative)

Ken ga_i Naomi ni_j [zibun no_{ij} byouki no koto] o kanasima-se-ta
 Ken NOM Naomi DAT self-GEN illness GEN that ACC feel.sad-CAUS-PST
 ‘Ken made Naomi feel sad about his or her illness.’

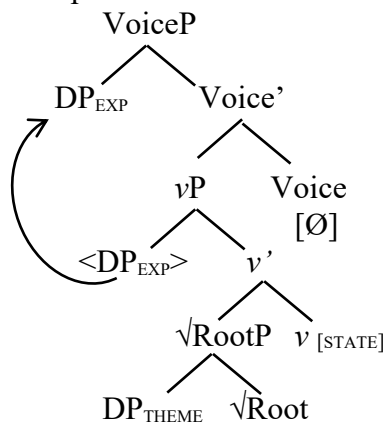
It is generally held that Japanese has two types of causatives; lexical causatives are monoclausal by all tests, and productive causatives with *-(s)ase* are biclausal, specifically, the causee in (50) is the subject of the psych verb embedded in the causative morpheme *-se* (cf. Kuroda 1965, Kuno 1973, Miyagawa 1989, 2012, Harley 2008). Murasugi & Hashimoto (2004) and Harley (2008) adopt the VP shell hypothesis (Hale & Keyser 1993, 2002) and propose that the causee is base generated in lower Spec(*v*P). Under the present framework in which Voice introduces an external argument, (48) and (50) have the structure given in (51).

(51) Object Experiencer (=Causative)



I suggest that the subject marked with dative *ni* in (46) was innovated in Spec(*v*P) on the basis of analogical extension from dative objects in object experiencer constructions. They moved to Spec(VoiceP), as represented in (52).

(52) Subject Experiencer



The historical development of OE verbs into SE verbs is well-attested across languages

(cf. Gelderen 2014) and it can be explained under the assumption that *v*, which was aspectually marked as [eventive], came to be marked [stative] due to the loss of the vestigial causative suffix *-si*.¹⁵ Recall that dative subject constructions require a nominative case to be assigned to S and O arguments, showing an ergative pattern (see section 1). I propose that ergativity associated with these particular psych predicate constructions is an epiphenomenon resulting from changes occurring from active to accusative alignment. What was used to be the cause argument was reanalyzed as the theme argument of SE predicates. Dative subjects are byproducts of this change.

Although use of a dative case for marking the subject is prevalent across languages, dative subjects are fairly unstable part of a language's grammar regarding the semantic classes of verbs they appear with and the coding of their arguments. Butt and Deo (2013) and Deo (2003) show that dative subjects were innovated at different stages of a language in the history of Indo-Aryan. If this is the case, it is quite plausible that peculiarities associated with dative subjects across languages are attributable to different historical sources from which dative subjects have emerged and developed over time.

4. Conclusion

This paper presents empirical data to show how genitive/active *ga* became a nominative case in the history of Japanese. Traditional linguists assume that genitive to nominative shifts occurred as a result of reanalysis of adnominal predicate forms as main predicate forms. This assumption, however, fails to explain why *ga* was chosen as a nominative case rather than the other genitive *no* and why the nominative case started out by marking unaccusative subjects.

In this paper, I argue that a reanalysis of psych predicates plays a crucial role in alignment change in Japanese. More specifically, the cause argument marked with *ga* in impersonal psych transitives was reanalyzed as the theme argument of an unaccusative. This impersonal psych predicate lacks an overt object and in this sense it is similar to what Creissels (2008:13) calls P-ellipsis, which he proposes to be a possible historical pathway leading to variable alignment patterns (see section 3.1). I show that impersonal psych predicates in earlier Japanese were realized by morphologically marked Voice. After the loss of causative morphology, the construction was no longer conceived of as transitive, which causes a reanalysis of this construction as (unaccusative) intransitive. After this reanalysis, *ga* was extended to mark all types of intransitive subjects. Dative subject or non-canonical case marking constructions, which were dated back to EModJ, emerged as byproducts of these changes.

Digitalized Text

The Corpus of Historical Japanese (CHJ), the National Institute of Japanese Language and Linguistics, <https://maro.ninjal.ac.jp/>

¹⁵ Gelderen (2014) proposes a similar analysis for the reanalysis of OE as SE verbs in the history of English.

References

- Aldridge, Edith. 2011. Antipassive in Austronesian alignment change. *Grammatical change: origins, nature, outcomes* ed. by Dianne Jonas, John Whitman & Andrew Garrett, 311-345. Oxford: Oxford University Press
- Aldridge, Edith & Yuko Yanagida. [Forthcoming]. Two types of alignment change in nominalizations: Austronesian and Japanese. *Diachronica*.
- Alexiadou, Artemis. 2016. English psych verbs and the causative alternation: A case study in the history of English. *Questions and Answers in Linguistics* 3(2).1-14.
- Alexiadou, Artemis & Gianina Iordăchioaia. 2014. The psych causative alternation. *Lingua* 148. 53-79.
- Anderson, Stephen R. 1977. On mechanisms by which languages become ergative. *Mechanisms of syntactic change* ed. by Charles N. Li, 317-363. Austin: University of Texas Press.
- Aoki, Hirofumi. 1996. *Kanoo dooshi no seiritu ni tsuite* [On the formation of potential verbs]. *Gobun kenkyu* 81:1-12. Kyushu University.
- Arad, Maya. 1998. Psych-notes. *UCL Working Papers in Linguistics* 10:203-223.
- Baker, Mark, C. 1988. *Incorporation*. Chicago: The University of Chicago Press.
- Butt, Miriam & Ashwini Deo. 2013. A historical perspective on dative subjects in Indo-Aryan. *Paper presented at the LFG13 Conference*, University of Debrecen, Hungary.
- Cardona, George. 1970. The Indo-Iranian construction Mana (Mama) Kriam. *Language* 46.1-12.
- Cheung, Candice C-H. & Larson, Richard K. 2015. Psych verbs in English and Mandarin. *Natural Language and Linguistic Theory*, 33.127-189.
- Comrie, Bernard. 1978. Ergativity. *Syntactic Typology* ed. by W.P. Lehman, 329-394. Austin, Texas: University of Texas Press.
- Creissels, Denis. 2008. Direct and indirect explanations of typological regularities: the case of alignment variations. *Folia Linguistica* 42(1).1-33.
- Dikken, Marcel den, Larson, Richard & Ludlow Peter. 2018. Intensional transitive verbs and abstract clausal complementation. *Non-Propositional Intentionality* ed. by Alex Grzankowski & Michelle Montague, 46-94. Oxford: Oxford University Press.
- Dixon, R. M. W. 1979. Ergativity. *Language*. 55.59-138.
- Deo, Ashwini. 2003. Valency change and case marking: Marathi dative experiencers. Handout from the Pioneer Workshop on case, valency and transitivity.
- Frellesvig, Bjarke. 2010. *A history of the Japanese language*. Cambridge: Cambridge University Press.
- Frellesvig, Bjarke & John Whitman. 2018. The historical source of the bigrade transitivity Alternations in Japanese. *Transitivity and valency alternations: Studies on Japanese and beyond* ed. by Taroo Kageyama & Wesley Jacobsen, 289-310. De Gruyter Mouton.
- Gair, James, W. 1990. Subjects, cases and Infl in Sinhala. *Experiencer subjects in South Asian languages* ed. by Mahendra K. Verma & K.P. Mohanan, 13-41. Stanford: CSLI publications.
- Gelderen, Elly van. 2014. Changes in psych-verbs: A reanalysis of little *v*. *Catalan Journal of Linguistics* 13. 99-122.

- Haas, Mary R. 1941. Tunica. *Handbook of American Indian languages* ed. by Franz Boas, 9-143. New York: Augustin.
- Hale, Ken & Samuel J. Keyser. 1993. On argument structure and the lexical expression of syntactic relations. *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger* ed. by Ken Hale & S. J. Keyser, 53-109. Cambridge, Mass: MIT Press.
- Hale, Ken & Samuel J. Keyser. 2002. *Prolegomena to a theory of argument structure*, Cambridge, Mass: MIT press
- Harley, Heidi. 2008. On the causative construction. *Oxford handbook of Japanese linguistics* ed. by Shigeru Miyagawa & Mamoru Saito, 20-53. New York: Oxford University Press.
- Harris, Alice, & Lyle Campbell. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.
- Heine, Bernd and Tania Kuteva. 2004. *World lexicon of grammaticalization*, Cambridge: Cambridge University Press.
- Hook, Peter. E. 1991. On identifying the conceptual restructuring of passive as ergative in Indo-Aryan. *Paninian studies* ed. by Madhav M. Deshpande & Soraja Bhate, 177–200. Center for South and Southeast Asian studies, University of Michigan.
- Kageyama, Taro, and Wesley M. Jacobsen. 2016. *Transitivity and valency alternations: Studies on Japanese and beyond*. De Gruyter Mouton.
- Karttunen, Lauri. 1976. Discourse referents. *Syntax and semantics, Volume 7: Notes from the linguistic underground* ed. by James D. McCawley, 363–385. New York: Academic Press.
- Kikuta, Chiharu. 2012. Jodai nihongo no ga-kaku nituite (On the case marker *ga* in Old Japanese) *Dosisha Daigaku Jinbun Gakkai* (The Literary Association), Doshisha University 89. 89-123.
- Kishimoto, Hideki. 2004. Non canonical-case marking of transitive predicates in Japanese. *Nihongo no bunseki to gengorukei* [Analysis of Japanese and linguistic typology] ed. by Taro Kageyama & Hideki Kishimoto, 57-74. Tokyo: Kuroshio Publishers.
- Kishimoto, Hideki. 2016. Stative and existential/possessive predicates. *Handbook of Japanese lexicon and word formation* ed. by Taro Kageyama & Hideki Kishimoto, 559-598. Berlin/Boston: De Gruyter Mouton.
- Koizumi, Masatoshi. 2008. Nominative object. *The Oxford handbook of Japanese linguistics* ed. by Shigeru Miyagawa & Mamoru Saito, 141-164. Oxford: Oxford University Press.
- Kuginuki, Toru. 1995. Kodai nihongo ni okeru keiyoooshi zoogohoo ni kansuru ichikoosatsu [A study of adjectives and their derivations in Old Japanese]. *Literature, Journal of the faculty of letters* 121.199 -214. Nagoya: Nagoya University.
- Kuginuki, Toru. 1996. *Kodai nihongo no keitai henka* [Morphological change in Old Japanese], Osaka: Izumi Shoin.
- Kuno, Susumu. 1973. *The structure of the Japanese language*. Cambridge, MA: MIT press.
- Kuroda, S.Y. 1965. Causative forms in Japanese. *Foundations of Language* 1. 30–50

- Kuroda, S.Y. 1992. Case marking, canonical sentence patterns, and counter-equi in Japanese. *Japanese syntax and semantics: Studies in natural language and linguistic theory* 27. 222-239.
- Larson, Richard K. 2002. The grammar of intensionality. *Logical form and language* ed. by Gerhard Preyer & George Peter, 228-262. Oxford: Oxford University Press.
- Legate, A Julie. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, Mass: The MIT Press.
- Malchukov, Andrej. 2008. Split intransitives, experiencer objects and transimpersonal constructions: (re-)establishing the connection. *The typology of semantic alignment* ed. by Mark Donohue & Søren Wichmann, 76-100. Oxford: Oxford University Press.
- McCawley, James D. 1974. On identifying the remains of deceased clauses. *Language Research* 9. 73-85.
- Miyagawa, Shigeru 1989. *Structure and case marking in Japanese*. *Syntax and semantics* 22. New York: Academic Press.
- Miyagawa, Shigeru 2012. *Case, argument structure and word order*. New York: Routledge.
- Miyake, Toshihiro. 2016. *Kanoo dooshi no seiritu* [The formation of potential verbs] *Nihongo no kenkyu* [A study of Japanese language] 12(2). 1-17.
- Murasugi, Keiko & Tomoko Hashimoto. 2004. Three pieces of acquisition evidence for the v-VP frame. *Nanzan Linguistics* 1.1-19.
- Ohno, Susumu. 1977. Shukaku joshi *ga* no seiritu [The development of the nominative case particle *ga*], *Bungaku* 45.102-117.
- Ohno, Susumu. 1978. *Bunpoo to goi* [Grammar and lexicon]. Tokyo: Iwanami Shoten.
- Payne, John R. 1980. The decay of ergativity in Pamir languages. *Lingua* 51.147-186.
- Pesetsky, David. 1995. *Zero syntax*. Cambridge, MA: The MIT press.
- Pray, Bruce R. 1976. From passive to ergative in Indo-Aryan. *The notion of subject in Indo-Aryan languages (South Asian studies, publication series 2)* ed. by Manindra K. Verma, 195-211. Madison, WI: University of Wisconsin.
- Ross, John. 1976. To have and to not have have. *Linguistic and literary studies in honor of Archibald Hill* ed. by Mohammad A. Jazayery, Edgar C. Polomé & Werner Winter, Vol. 1, 263-270. Lisse: Peter De Ridder Press.
- Shibatani, Masayoshi. 1976. The grammar of causative constructions: a conspectus. *The grammar of causative constructions: Syntax and semantics* 6 ed. by Masayoshi Shibatani, 1-42. New York: Academic Press.
- Shibatani, Masayoshi. 1999. Dative subject constructions twenty-two years later. *Studies in the Linguistic Sciences* 29. 45-76.
- Shibatani, Masayoshi. 2001. Non-canonical constructions in Japanese. *Non-canonical marking of subjects and objects* ed. by Alexandra, Y. Aikehenvald, R.M.W. Dixon, & Masayuki Onishi, 307-354. Amsterdam: John Benjamins.
- Shibatani, Masayoshi & Prashant Pardeshi. 2001. Dative subject constructions in South Asian languages. *The Yearbook of South Asian languages and linguistics* ed. by Peri Bhaskararao & K.V. Subbarao, 311-347. Delhi: Sage Publications.
- Shibatani, Masayoshi & Prashant Pardeshi. 2018. Non-canonical constructions in Japanese: A crosslinguistic perspective. *Handbook of Japanese contrastive linguistics* ed. by Pardeshi Prashant & Taro Kageyama, 57-107. Berlin/Boston: De Gruyter Mouton.

- Ura, Hiroyuki. 2000. *Checking theory and grammatical functions in Universal Grammar*. Oxford: Oxford University Press.
- Verma, Mahendra.K & K.P Mohanan. 1990. *Experiencer subjects in South Asian languages*. Stanford: CSLI publication.
- Whitman, John. 2007. The source of the bigrade conjugation and stem shape in pre-Old Japanese. *Paper given at the International Conference on East Asian Linguistics*, University of Toronto (2007 October).
- Whitman, John. 2008. The source of the bigrade conjugation and stem shape in pre-Old Japanese. *Proto-Japanese* ed. by Bjarke Frellesvig & John Whitman, 159-174. Amsterdam: John Benjamins.
- Woolford, Ellen. 2008. Differential subject marking at argument structure, syntax and PF. *Differential subject marking* ed. by Helen de Hoop & Peter de Swart, 17-40. Dordrecht: Springer.
- Woolford, Ellen. 2015. Ergativity and Transitivity. *Linguistic Inquiry* 46(3). 489-531
- Yamada, Masahiro. 2000. Shugo hyooji *ga* no seiryoku kakudai no yooso [The expansion of the use of the subject denotor *ga*: A comparison between the original text of the Tale of Heike and Amakusaban Heike]. *Kokugogaku* 51(1).1-14.
- Yamada, Masahiro. 2010. *Kakujoshi ga noTsuujiteki Kenkyu* [A diachronic study of the case particle *ga*]. Hituzi:Tokyo.
- Yanagida, Yuko. 2007. Joodaigo no nookakusei ni tsuite [Ergativity in Old Japanese], *Nihongo no Shubun Genshoo* [Main clause phenomena in Japanese] ed. by Nobuko Hasegawa, 147-188. Tokyo: Hituji Shobō.
- Yanagida, Yuko. 2017. Genitive/active to nominative case in Japanese: the role of complex experiencer constructions. Paper presented at *the 23rd International Conference on Historical Linguistics*, The university of Texas at San Antonio, San Antonio.
- Yanagida, Yuko. 2018. Differential subject marking and its demise in the history of Japanese. *Diachrony of differential argument marking* ed. by I. Seržant & A. Witzlack-Makarevich, 403–425. Berlin: Language Science Press.
- Yanagida, Yuko. [forthcoming]. Differential argument marking in Old Japanese: Morphology, semantics, and syntax. *Handbook of historical Japanese linguistics* ed. by Bjarke Frellesvig, Satoshi Kinsui & John Whitman, Berlin/Boston:De Gruyter Mouton.
- Yanagida, Yuko & John Whitman. 2009. Alignment and word order in Old Japanese. *Journal of East Asian Linguistics* 18. 101-144.