Chapter 14

Differential subject marking and its demise in the history of Japanese

Yuko Yanagida
University of Tsukuba

The subject of various types of subordinate or nominalized clauses in Old Japanese (700–800) is marked in one of three different ways: with the postpositional particle *ga*, *no* or zero. This paper argues that the opposition between case marked and unmarked subjects fit into cross-linguistically well attested patterns of differential subject marking (DSM). Following Woolford (2008), it shows that the syntactic and semantic characteristics of these case marking patterns reveal thatOJ displays two kinds of DSM effects which are associated with distinct grammatical levels. This paper also examines three possible scenarios for the loss of DSM, which occurred in Early Middle Japanese (EMJ 800–1200). TheOJ and EMJ data suggest that case systems do not simply shift from one alignment pattern to another, as sometimes assumed (cf. Harris & Campbell 1995: 258). Instead, the morphological features of individual case markers change incrementally over time, ultimately giving rise to global changes in the overall system.

1 Introduction

Modern Japanese (ModJ) displays a straightforward nominative-accusative system. Transitivity does not affect the case marking on the subject (1).

(1) Modern Japanese

a. *Taroo* ***ga*** *sake* ***o*** *non-da* *koto* (transitive)
Taroo NOM sake ACC drink-PST that
'that Taroo drank sake'

b. *sakura* ***ga*** *sai-ta* *koto* (intransitive)
cherry.blossom NOM bloom-PST that
'that Cherry blossoms bloomed'

In ModJ the case markers *ga* and *o* mark the subject and object respectively as grammatical case markers; these particles display no semantic effects.

Yuko Yanagida. Differential subject marking and its demise in the history of Japanese. In Ilja A. Seržant & Alena Witzlack-Makarevich (eds.), *Diachrony of differential argument marking*, 401–422. Berlin: Language Science Press. DOI:10.5281/zenodo.1228269

In Old Japanese (OJ; 8th century), *ga* is a genitive case marker. *Ga* marks the possessor of noun phrases (2) and the subject of various types of subordinate or nominalized clauses (3). Personal pronouns and human nouns intimate to the speaker as in *seko* 'lover' and *kimi* 'lord' are obligatorily marked by *ga*, while non-human animate and inanimate NPs are predominantly marked by the other genitive *no* or by zero.[1]

(2) Old Japanese (MYS 4303; MYS 4191)

a. *[wa* ***ga*** *sekwo* ***ga*** *yadwo]*
I GEN lover GEN house
'my lover's house'

b. *[**ayu*** ***no*** *si ga pata]*
sweetfish GEN it GEN fin
'sweetfish's fins'

(3) Old Japanese (MYS 2926; MYS 3837; MYS 925)

a. *[wa ga sekwo* ***ga*** *motomu-**ru**] omo ni ika-masi mono wo*
I GEN lord AGT ask-ADN nurse DAT go-AUX thing EXCL
'I would go as the wet nurse that my lord asks for.'

b. *[mizu* ***no*** *tama ni nita-**ru**] mimu*
water GEN pearl DAT resemble-ADN see
'(I) see water resembles a pearl.'

c. *[pisaki* $\emptyset_S$ *opu-**ru**] kiyoki kapara-ni*
catalpa grow-ADN clear riverbank-on
'on the banks of the clear river where catalpas grow'

A number of researchers argue that adnominal verb ending *-ru* (with a different set of endings on adjectives and auxiliaries) as in (3a–3c) had nominalizing functions (see Miyagawa 1989; Yanagida & Whitman 2009; Robbeets 2015).[2] The subject of a nominalized verb is marked in one of three ways. The semantic difference between *ga* and *no* has been treated in the literature (cf. Ohno 1977; Nomura 1993), but bare subjects as in (3c) have not been integrated into this discussion; they are generally set aside as instances of stylistic case drop. Below I show that the alternation between case-marked and unmarked arguments inOJ fits into cross-linguistically attested patterns of differential subject marking (DSM). Under this approach, unmarked arguments cannot be viewed as mere stylistic case drop, but they have both syntactic and semantic significance.

[1] OJ data in this study are taken from the *Man'yōshū* (MYS, compiled in mid-8th century), the earliest written record of OJ, comprising 4516 long (*chōka*) and short (*tanka*) poems. The data is taken from electronic text "*Man'yōshū Search System*" (Yamaguchi University, Japan) as well as the Oxford Corpus of Old Japanese (University of Oxford). For periodization, I follow Frellesvig (2010). Old Japanese (abbreviated 'OJ,' approximately 700–800), Early Middle Japanese ('EMJ' 800–1200), Late Middle Japanese ('LMJ' 1200–1600), Early Modern Japanese ('EModJ' 1600–1800).

[2] Robbeets (2015) suggests that the adnominal form *-ru* has undergone a grammaticalization from deverbal noun suffix to clausal nominalizer to relativizer and, finally, to finite form.

The paper is organized as follows. §2 briefly discusses the general approach to DSM which I adopt: DSM is realized through the interaction of three distinct levels: (i) argument structure, (ii) syntax and (iii) PF (morphological spell-out), as proposed by Woolford (2008). In §3, I argue that *ga* and *no*, – each functioning in opposition to the zero form – are associated with different levels of DSM: *ga* is a morphological realization of active case assigned to an external argument within the *v*P phase. It follows independently motivated PF constraints relatable to Silverstein's (1976) nominal hierarchy. Genitive *no* is assigned to any NPs in the CP phase, where they receive specific interpretations. §4 examines three possible scenarios for the loss of DSM, which occurred in Early Middle Japanese (EMJ; 800–1200). I argue that the development of nominative *ga* results from the reanalysis of psych transitive predicates as intransitive taking a single theme argument. The present study suggests that the loss of DSM cannot be interpreted as a simple, one-step shift in alignment or case marking, as such changes are sometimes presented in work on diachronic syntax (cf. Harris & Campbell 1995). Instead, the morphological features of individual case markers change incrementally over time, only after time giving rise to global changes in the overall system.

2 Differential Subject Marking (DSM)

I assume with Woolford (2008) that DSM effects are associated with three distinct grammatical levels. The first level of DSM is closely linked to θ role assignment (canonically, Agent) to subjects, and to contexts where inherent (or non-structural) Case is assigned to external arguments. This level of DSM is identified as the argument structure (or *v*P phase), which corresponds to the representational level of D-structure in the government-binding theory of Chomsky (1981). The second level of DSM is associated with syntax above *v*P. It behaves in parallel to differential object marking (DOM) in that case alternation depends on the syntactic position of the subject: often, subject or object arguments which move outside *v*P are morphologically marked (by an affix or by triggering agreement) and assigned language particular interpretative properties, such as specificity, definiteness, animacy, etc. (cf. Diesing 1992, Chomsky 2001). The third level of DSM involves post-syntactic PF constraints; this is the level at which abstract case features are spelled out morphologically. According to Woolford (2008), DSM at this level involves markedness, which she defines in relation to Silverstein's (1976) 1976 nominal hierarchy. Cases at the more marked end of the hierarchy are more likely to be morphologically marked.

In both the typological and theoretical literature, active alignment is often classified as a subtype of ergative (cf. Comrie 1973; 1978; Silverstein 1976; Bittner & Hale 1996). Active, however, differs crucially from ergative alignment in that transitivity plays no role. In Hindi, for example, the case marker *-ne* appears on the agent subject of both transitive (4a) and unergative intransitive verbs (4b), while the theme subject of unaccusatives (4c) is unmarked:

(4) Hindi (Indo-Aryan; Mohanan 1994: 71, 107)

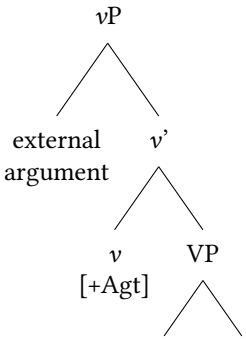
a. *raam-ne* *lakdii* *kaatii*
Ram-ERG wood.NOM cut.PERF.F
'Ram cut wood.'

b. *raam-ne* *nahaayaa*
Ram-ERG bath.PERF
'Ram bathed.'

c. *raam* *(*-ne)* *giraa*
Ram (*-ERG) fall.PERF
'Ram fell.'

According to Woolford (1997; 2008), DSM effects in Hindi are determined at argument structure. The external argument (AGENT) is θ-marked and at the same time inherently case-assigned by *v* in a *v*P projection above VP, as represented in (5).[3]

(5) *DSM at argument structure*



The analysis of ergative (or active) as inherent case assigned to the external argument in the specifier position of *v*P originates with Woolford (1997) and is shared by many researchers such as Legate (2002; 2008); Aldridge (2004; 2008) and Anand & Nevins (2006). I maintain that while ergative is assigned to the external argument in the specifier position of [+transitive] *v*, active is assigned to the external argument in the specifier of [+Agent]*v* (Yanagida & Whitman 2009).

[3]The descriptive generalization that supports the view that ergative is an inherent case comes from the fact that ergative subjects in some instances occur in non-finite clauses while structural nominative subjects cannot (cf. Legate 2002; Aldridge 2004). Derived subjects are never ergative; that is, no language promotes objects to ergative through operations such as raising or passive. A reviewer points out that this fact may have a functional explanation, but the structural consequence remains the same: ergatives are assigned inherent case.

3 Two Types of DSM in OJ

3.1 DSM: *ga vs. zero*

Yanagida (2007) and Yanagida & Whitman (2009) argue that while inOJ main declarative clauses have a nominative-accusative pattern: the subjects of both transitive and intransitive verbs are morphologically unmarked. Various types of embedded or nominalized clauses, exemplified by the adnominal clauses (3) and (6), show active alignment.[4]

(6) Adnominal clauses: Old Japanese (MYS 868; MYS 3443; MYS 925)

a. *[Saywopimye* *no* *kwo* ***ga*** *pire* *Ø* *puri-si]* *yama*
Sayohime GEN child AGT scarf wave-PST.ADN mountain
'the mountain where the child Sayohime waved her scarf'

b. *[wa* ***ga*** *yuku]* *miti* *ni*
1P AGT go.ADN road LOC
'…on the road I travel.'

c. *[pisakwi* *Ø* *opu-ru]* *kiywoki* *kapara*
catalpa grow-ADN clear riverbank
'the banks of the clear river where catalpas grow'

As we see in (6), the subjects of intransitive verbs display two distinct patterns; the agent subjects of the transitive and active intransitive verbs (6a)–(6b) are marked by *ga*, but the patient subject of the inactive intransitive (6c) is morphologically unmarked in the same way as the transitive object in (6a).

OJ behaves in parallel to Hindi in that morphological case appears on agent subjects, but theme subjects of unaccusatives are zero marked. OJ, however, differs crucially from Hindi in that it displays a nominal-based split. Nominal based split ergative languages show an ergative pattern with some NPs, and a nominative pattern with others. This interacts with Silverstein's (1976) nominal hierarchy (7). Silverstein's nominal hierarchy, as is well known, references the feature specification of noun phrases and makes crucial use of featural markedness. Pronouns are specified for [person (+ego, 1P)/(+tu, 2P)], [±number], [±gender], etc. Noun phrases are specified for [±proper] [±human][±animacy] etc.

(7) **The Nominal Hierarchy** (Silverstein 1976)
pronouns > proper nouns > human > animate > inanimate
1st >2nd >3rd person

Nominative in a nominative-accusative system and absolutive in an ergative-absolutive system are unmarked (in terms of MARKEDNESS), typically phonologically zero. The

[4] Main declarative clauses and embedded clauses selected by the cognitive/speech verb such as *ip-* 'say' or *omop-* 'think', appear with the verb in the *shūsikei* 'conclusive form' V-*u*, with a different set of endings on adjectives and auxiliaries. In conclusive clauses, both subject and object are morphologically unmarked. The subject is never marked by *no* or *ga*.

accusative in the one system and ergative in the other are marked. Silverstein observes that "if the noun phrases of a language have accusative case-marking at a certain plus-value of a feature [Fi], and ergative case-marking for [-Fi], then noun phrases are accusative for all features above [Fi] in the hierarchy and ergative for all feature below [Fi] in the hierarchy" (Silverstein 1976: 123). Dixon (1979: 86–87) interprets the hierarchy to "roughly indicate the overall *agency potential* of any given NP", and observes that a number of languages have split case marking exactly on this principle.

Woolford (2008), whom I follow in the discussion below, argues that MARKEDNESS as expressed in Silverstein's nominal hierarchy is a PF constraint (to be exact, a constraint on morphological spell-out). PF is the level where "decisions are made concerning the overt realization of (abstract) features from syntax" (Woolford 2008: 29). On this view, nominals lower on the hierarchy are atypical subjects; thus they are marked ergative at PF, while those higher on the hierarchy are atypical objects, and thus they are marked accusative. Nominals that realize typical subject and object grammatical functions are unmarked morphologically. In other words, ergative case is assigned to all transitive subjects, but in nominal based split ergative languages, the more marked subjects are those that lie lower on the hierarchy. Accusative, on the other hand, is the mirror image of ergative. The more marked categories for the object are those that lie higher in the hierarchy.

A split based on the nominal hierarchy is also typical of active alignment, but crucially, the nominal hierarchy applies to the argument NPs in the opposite direction as first suggested by Dahlstrom (1983). As Mithun (1991) points out, case markers based on *agency* are frequently restricted to nominals referring to human beings. Mithun identifies the semantic basis of the active marking of various non-accusative languages, both synchronically and diachronically. The active system in Batsbi (Tsova-Tush) is limited to first and second persons. Central Pomo has an active system in nominals referring to humans only. The Georgian active system is restricted to human beings. The Yuki system is restricted to animates. From these cross-linguistic observations, the implication follows that active marking is exactly the opposite of the right-to-left application of the hierarchy proposed by Silverstein for ergative languages. The relationship between active marking and the nominal hierarchy is as stated in (8) (cf. Yanagida & Whitman 2009):

(8) **The active marking hierarchy** (AMH)
In active languages, if active marking applies to an NP type α, it applies to every NP type to the left of α on the nominal hierarchy.

Assignment of active case is dependent not just on the thematic role assigned by the verb, but on the place of S on the nominal hierarchy. Klimov (1974; 1977) emphasizes this point, stressing that in active languages both the semantics of the predicate and the subject NP govern the distribution of active case.

InOJ the active marking appears when the S argument has control over the activity and the inactive pattern appears when control is lacking. Consider (9)–(10):

(9) Old Japanese (MYS 3724; MYS 177; MYS 2991)

a. *[kimi* ***ga*** *yuk-u]* *miti* *no* *nagate*
Lord AGT go-ADN road GEN length
'the length of the road my lord travels'

b. *[**wa*** ***ga*** *naku]* *namita*
1P AGT cry.ADN tear
'the tears that I cry'

c. *[**papa*** ***ga*** *kap-u]* *kwo*
mother AGT breed-ADN silkworm
'the silkworms bred by my mother'

(10) Old Japanese (MYS 2713; MYS 3352; MYS 4318)

a. *[**asuka-gapa*** *Ø* *yuku]* *se* *wo* *paya-mi*
Asuka-river go.ADN shallows OBJ fast-CONJ
'since the shallows where the Asuka River flows are fast'

b. *[**pototogisu*** *Ø* *naku]* *kope*
cuckoo (AGT) cry.ADN call
'the call of the cuckoo crying'

c. *[aki* *no* *nwo* *ni* ***tuyu*** *Ø* *opye-ru* *pagwi]* *wo*
fall GEN field LOC dew cover-ADN bush.clover OBJ
ta-wora-zu
hand-break-not
'without breaking off the dew-laden bush clover in the fall meadow'

The verbs *yuku* 'go' and *naku* 'cry' are classified as active, more specifically, unergative verbs, and hence the subject NPs are case assigned by *v*[+Agent] (see (5) above), but whether the subject NP is morphologically realized depends on the semantic features of the nominals. The use of *ga* is obligatory for personal pronouns such as *wa* 'I' and *kimi* 'you/lord'. The human NPs higher on the hierarchy are associated with prototypical agents, which express volition and control, whereas the non-human or inanimate NPs lower on the hierarchy do not correspond to the transitivity prototype. This correlates with the fact that transitive subjects are marked by *ga*, but never marked by zero in embedded nominalized clauses in OJ.

The most crucial syntactic property of transitive clauses inOJ is that *wo*-marked objects necessarily move over the *ga*-marked subject, resulting in OSV word order (11). When objects are unmarked, they have canonical SOV word order (12) (Yanagida 2006; Yanagida & Whitman 2009). *Wo*-marked objects are specific, while zero marked objects are non-specific.[5]

[5]In Yanagida & Whitman (2009) and Frellesvig et al. (2015; 2018) we argue thatOJ displays DOM effects associated with specificity (cf. Aissen 2003).

(11) Old Japanese (MYS 3669; MYS 3960; MYS 3459)
[Object *wo* Subject *ga* V]:

a. ***ware*** ***wo*** *yami* *ni* *ya* ***imo*** ***ga*** *kwopi-tutu* *aru* *ram-u?*
I OBJ dark LOC Q wife AGT long.for-CONT be AUX-ADN
'Would my wife be longing for me in the dark?

b. ***kimi*** ***wo*** ***aga*** *mat-an-akuni*
lord OBJ I.AGT wait-not-NMLZ
'without me waiting for you'

c. ***aga*** ***te*** ***wo*** ***tono*** ***no*** ***wakugwo*** ***ga*** *torite* *nageka-mu*
my hand OBJ lord GEN child AGT take weep-AUX.ADN
'Will my lord's child take my hand and weep again tonight?'

(12) Old Japanese (MYS 868; MYS 3351)
[Subject *ga* Object Ø V]:

a. *Saywopimye* *no* *kwo* *ga* *pire* *Ø* *puri-si* *yama*
Sayohime GEN child AGT scarf wave-PST.ADN mount
'the mountain where the child Sayohime waved a scarf/did scarf-waving'

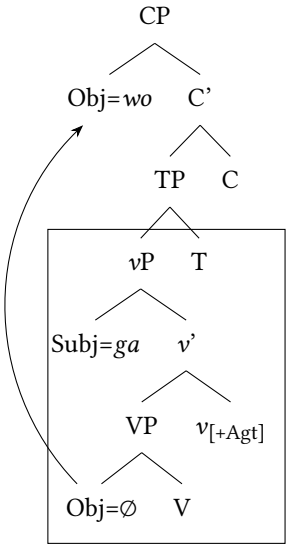
b. *kanasiki* *kwo-ro* *ga* *ninwo* *Ø* *pos-aru* *kamo*
sad child-DIM AGT cloth hang.out-ADN Q
'The sad child has hung out a piece of cloth.'

Given our assumption that ergative/active is assigned by *v* in a *v*P projection (5), the accusative is not licensed inside *v*P; the OSV dominant word order is derived by movement of the object to the left peripheral topic position; namely, the specifier of CP, as represented in (13).

As discussed extensively in Yanagida & Whitman (2009), when the subject is marked by *ga*, the objects that follow the subject are without exception non-branching noun heads, as in *pire* 'scarf' and *ninwo* 'cloth' (12a)–(12b). These noun heads are syntactically incorporated into the verb.[6] Noun incorporation, which is widely observed in ergative languages, is a detransitiving process on a par with antipassives, in that both involve a shift in valency, creating a derived intransitive (see Baker 1988). In other words, the transitive verbs with the object in (12) pattern like unergative intransitives; the subject is marked by *ga*, but the incorporated object is not assigned structural accusative case by the verb.

[6]ModJ does not have noun incorporation in a strict sense. Noun incorporation discussed by Kageyama (1980) such as *kosi o kakeru* 'sit a seat' vs. *kosi-kakeru*, *tema o toru* 'take time' vs. *tema-doru* are not productive. These expressions are possibly analyzable as lexical compounds.

(13)



DSM at Argument Structure

In this section, I have proposed that the alternation between *ga* and zero, as illustrated in Table 1,[7] arises within a smaller domain of a nominalized clause, namely *v*P (13).[8]

Table 1: DSM *ga* vs. zero in OJ

	Active	Inactive
Subject	ga	Ø
Object	Ø	

The external argument is assigned active case by $v_{[+Agt]}$, in the same way as Hindi. OJ, however, displays Woolford's (2008) third level of DSM effects. The actual exponence or marking of the feature [+Agent] is independently determined by language particular PF constraints, relatable to Silverstein's (1976) nominal hierarchy. Subject NPs higher on the nominal hierarchy appear with active predicates, and NPs lower on the hierarchy appear with inactive predicates.[9]

[7] As noted above, active marking is sensitive not only to the semantics of NPs but also to the semantics of predicates. The subjects of transitive verbs and active intransitive verbs are necessarily marked by *ga* (or *no*), but never by zero. (See §3.3 for *no*.)

[8] In §3.3, we discuss the other type of DSM which arises in a higher domain of nominalized clauses; namely CP phase.

[9] Klimov (1977: 95–96) discusses a similar correlation between subject NPs and their predicates in active languages.

3.2 Experiencer Predicates

Ergative (or active) languages often mark the subject of an experiencer verb with ergative (or active) case, treating them like an external argument. This is illustrated by Basque and Hindi, respectively in (14)–(15).

(14) Basque (isolate; Woolford 2008: 24)
Mikel-ek *ni* *haserretu* *nau.*
Michael-ERG 1SG.NOM angry.PERF AUX
'Michael angered me.'

(15) Hindi (Indo-Aryan; Mohanan 1994: 142)
tusaar-ne *vah* *kahaanii* *yaad* *kii*
Tushar-ERG that story.NOM memory.NOM do.PERF
'Tushar remembered that story.'

In Basque, the theme argument is marked by ergative case (14), while in Hindi, the experiencer is marked by ergative case (15).

Kikuta (2012) points out thatOJ *ga* appears on the non-agentive theme subject of experiencer verbs, such as *wasur-* 'forget' *omop-* 'think', *mi-* 'see' etc., and that this raises a problem for Yanagida & Whitman's (2009) hypothesis that *ga* is an active case. However, all of Kikuta's examples of these psych verbs with *ga*-marked theme subjects appear with an unspecified first person experiencer and a form of the auxiliary *yu* (stem *ye-*), which derives middles, passives, and potentials.[10]

(16) Old Japanese (MYS 4407; MYS 3191)
a. ***imo*** ***ga*** *kopisiku* *wasura-**ye**-nu-kamo*
my.lover AGT miss forget-MID-NEG.ADN-Q
'Did I miss my dear and cannot forget her?'
b. *yama* *kopeni-si,* ***kimi*** ***ga*** *omop-**yu**-raku-ni*
mountain cross-PST you/lord AGT think-MID-NMLZ-LOC
'when you came to my mind as I was crossing the mountains'

-Yu is arguably related to the acquisitive light verb *u* (stem *E-*) 'get', which Whitman (2008) proposes as the source of the well-known transitivity alterations in *-e-* inOJ and later stages of the language. *-E* derives both transitives and intransitives, a property of

[10]The productive passive auxiliary *-yu* inOJ appears after the irrealis (*mizenkei*) *a*-stem of the verb, as in (16a). With a small number of verbs such as *omopoyu* in (16b) *-yu* appears after a different stem vowel, probably reflecting an older fossilized pattern. The reviewer pointed out to me that current linguistic scholarship (cf. Whitman 2008; Frellesvig 2010; Robbeets 2015) has mostly agreed with Ohno (1953) that the *a*-stem of consonant verbs is nothing but a surface stem that diachronically reflects re-segmentation of suffixes in initial **a-*. With a polysyllabic vowel final stem followed by a polysyllabic vowel initial suffix, we would expect the first vowel to drop, thus **omop-ayu.* However, the productive medialOJ *-(a)yu* may have been derived from the copula **a-* 'to be' followed by the original causative/medial **-yu* (Robbeets 2015). Adding *omopo-* and *-yu* would give the expected result.

acquisitives such as English auxiliary *get*. If this analysis is correct, experiencer middles such as (16) may have an original transitive source, i.e. 'my dear got me to forget her', 'you got me to think of him'. That is, (16) can be analyzed as a causative middle construction; the theme subject serves as the causer argument of the verb *+yu*. A parallel construction can be seen, for example, in Assamese, cited by Woolford (2008), where the theme subject of an experiencer verb is marked ergative when the light verb *make/do* is added to the verb:

(17) Assamese (Indo-Aryan; Woolford 2008)

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.'

The subject is the external argument of the light verb *korile* 'make/do' and is assigned ergative in Assamese. Facts like these show that languages may differ as to which argument is mapped to the external argument position. The agent subject is invariably an external argument, but in some languages the causer argument of a psych-verb can be an external argument, and thus an agent, marked with ergative.

In OJ, there are also some instances in which *ga* marks clausal complements of psychological adjectives (or experiencer adjectives) that end with *si*, such as *po-si* 'want' or *kana-si* 'sad' (*-si* may be historically related to the verb *si* 'do'), as shown in (18). Importantly, these clausal complements are always marked by *ga* but never marked by *no* or zero.

(18) Old Japanese (MYS 4338; MYS 1007)

a. *[papa* *wo* *panarete* *yuku]* ***ga*** *kana-si* *sa*
mother OBJ part go.ADN AGT sad-do NMLZ
'I am sad about parting from mother.'

b. *[tada* *pitorigo* *ni* *aru]* ***ga*** *kuru-si* *sa*
only one.child DAT be.ADN AGT painful-do NMLZ
'I am pained that I am the only child…'

Although the two types of *ga* – the genitive *ga* and *ga* marking the clausal complement of psych adjectives – have been widely recognized, the historical relation between the two has not been examined. In (18a)–(18b) the theme argument of psych verbs appears in external argument position marked by *ga*, whereas an unspecified (or implicit) experiencer is an internal argument identified as first person singular (i.e. the speaker). (16a)–(16b) are apparently related to (18a)–(18b) in that they originate from a psych-transitive predicate with an unspecified first person experiencer object. Thus, (18a) literally means that 'parting from my mother made me sad', as represented in (19).

(19) [… V.ADN] **ga** [VP pro [+1SG] [AP…] *si* 'do']

The clausal subject in (18), as in the case of (16), serves as the causer, thus agentive, of the matrix predicate *po-si* 'do-wanting', *kana-si* 'doing sad'. Below in §4, I will argue that after OJ, this psych transitive construction was reanalyzed as intransitive, taking a single theme argument; this was the historical source of nominative *ga*.

3.3 DSM in syntax

In §3.1, I show that DSM effects identified at the argument structure within *v*P constitute semantically motivated case alternations between *ga* and zero. In this section, we discuss the other type of DSM associated with the alternation between *no* and zero. The latter type of DSM occurs when the subject NP is located in the position lower on the nominal hierarchy. A primary question to be addressed is: What is the difference between *no*-marked NP and z*ero*-marked NPs, given that both appear on the nominals whose semantic features are lower in the hierarchy? Examples (20a)–(20b) indicate thatOJ has DSM associated with a specific/non-specific distinction on a par with DSM in Turkish and other languages with genitive subjects in nominalized clauses:

(20) Old Japanese (MYS 4066)

a. *[u* *no* ***pana*** ***no*** *saku]* *tukwi* *tati-nu*
deutzia GEN flower GEN bloom month pass-PERF
'it was the month when the deutzia flower blooms'

b. *[okitu* *mo* *no* ***pana*** *Ø* *saki-tara]-ba* *ware* *ni* *tuge* *koso*
offing seaweed GEN flower bloom-PERF-if I DAT tell FOC
'If seaweed flowers were to bloom in the offing, tell me. (But they would not bloom.)'

In (20a) the author composes the song at the sight of the deutzia flower in the garden where the banquet was held, thus referring to a specific entity. In (20b), on the other hand, the flower in the subjunctive conditional *ba* 'if'-clause is unambiguously non-specific, since it is not at the sight of the author, nor previously mentioned in the preceding context.

In Turkish, as is well known, subjects of subordinate clauses marked by genitive are always specific, but when the subordinate subject is nominative, that is, zero-marked, its referent is interpreted as non-specific. Woolford (2008) argues that DSM in Turkish is determined at the level of syntax. Consider (21a)–(21c).

(21) Turkish (Turkic; Kornfilt 2003)

a. *[**(bir)ari-nin*** *bugün* *cocug-u* *sok-tug-un]-u* *duy-du-m*
bee-GEN today child-ACC sting-F.NOM-3SG-ACC hear-PST-1SG
'I heard that the bee/a bee (+specific) stung the child today.'

b. *[cocug-u* *bugün* ***(bir)ari*** *sok-tug-un]-u* *duy-du-m*
child-ACC today bee sting-F.NOM-3SG-ACC hear-PST-1SG
'I heard that today bees/a bee [-specific] stung the child.'

c. **[(**bir**)**ari*** *Ø* ***cocug-u*** *bugün* *sok-tug-un]-u* *duy-du-m*
bee child-ACC today sting-F.NOM-3SG-ACC hear-PST-1SG
'I heard that today bees/a bee [-specific] stung the child.'

As originally observed by Kornfilt (2003; 2008), genitive subjects move outside *v*P, thus, appearing before the object (21a). Unmarked nominative subjects in subordination must appear adjacent to the verb, resulting in OSV order (21b)–(21c).OJ *no*-marked vs. zero marked subjects behave exactly like Turkish, as evidenced by (22a)–(22b).

(22) Old Japanese (MYS 3689; MYS 2665)

a. *ipe* ***pito*** ***no*** *idura-to* *ware* ***wo*** *topa-ba* *ikani* *ipa-mu*
home someone GEN where-that I OBJ ask-if how say-AUX
'How should (I) say if someone in your family asks me where (you) are?

b. *waga* *kosi* ***wo*** ***pito*** *Ø* *mike-mu* *kamo*
IP.AGT coming OBJ someone see-FUT.ADN Q
'Would someone see me coming?'

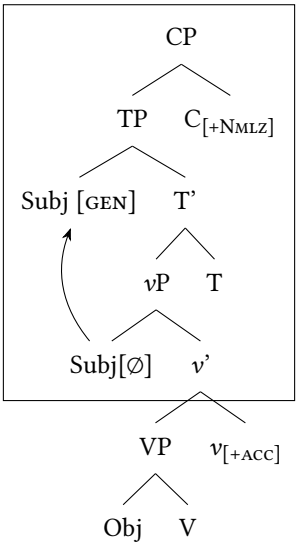
In (22a), the *no*-marked subject *pito* 'person' has a SPECIFIC reading; it picks out someone in the family member.[11] Example (22b), in contrast, has a NON-SPECIFIC reading: the existence of a set of individuals is completely undefined in previous discourse. Subjects marked by *no*, unlike *ga*-marked subjects, can appear preceding the *wo*-marked object. Unmarked subjects, in contrast, appear strictly adjacent to the verb. Yanagida (2007) provides quantitative data for zero-marked subjects in the *Man'yōshū*. For a total of 667 zero-marked subjects found in *Man'yōshū*, 580 occur immediately adjacent to the verb and 9 instances of non-conclusive transitive clauses have the pattern [Object wo Subject Ø V], given in (22b). These examples, however, without exception, appear in main clauses (Yanagida 2007: 183). Transitive subjects are never marked zero in embedded clauses.[12]

The word order facts indicate thatOJ nominalized clauses employ DSM in parallel to DOM associated with a specific/non-specific distinction. They are configurationally determined in the syntax. While the zero-marked subject of transitive verbs remains in the external argument position, namely the specifier of *v*P, the subject marked by genitive moves to the specifier of TP. This is represented in (23).

[11] I assume that SPECIFIC entities presuppose the existence of a set of individuals; the set of individuals is discourse-linked and refers to a previously mentioned set (cf. Enç 1991).

[12] As noted above,OJ displays main/embedded split case systems. In main clauses, the subjectYanagida2007Jdaigos of both transitive and intransitive verbs are marked by zero.

(23)



DSM in Syntax

The genitive subject construction (23) has a nominative-accusative pattern; the genitive subject is case-licensed by $C_{[+NMLZ]}$, and the accusative object is case-licensed by *v*.

4 The historical development of nominative *ga*

It is well known that *ga* in both possessor and subject/agent marking functions drastically decreased after OJ. The ratios between *ga* and *no* in the *Man'yōshū* (OJ; 8th century) and in *Genji monogatari* (EMJ; 11th century) taken from the Corpus of Historical Japanese (CHJ) produced by the National Institute of Japanese Language and Linguistics (NINJAL) are given below:[13]

Table 2: The ratios between *ga* and *no* in the *Man'yōshū* (Koji 1988)

	=ga	*=no*
Subject	372 (48%)	411 (52%)
Possessor	606 (10%)	5711 (90%)
Clausal subject	19 (100%)	0

These two tables indicate that *ga* in both subject and possessor functions was significantly reduced in *Genji monogatari*, written in the EMJ period. In *Genji*, 39 out of

[13]In Table 3, the quantitative data taken from the corpus is limited to the sequence of Noun+*ga/no* Verb (Subject), Noun+*ga/no*+Noun (Possessor), and Adnominal Clause+*ga/no* +Verb respectively, due to the design of the corpus. It is therefore not precisely the total occurrence of *ga/no* in the subject/possessor/clausal patterns.

Table 3: The ratios between *ga* and *no* in (*Genji*, ca. 1010, CHJ)

	=ga	*=no*
Subject	57 (4%)	1358 (96%)
Possessor	78 (0.7%)	11302 (99.3%)
Clausal subject	261 (98%)	4 (2%)

57 tokens of *ga*-marked subjects are personal pronouns, of which 24 are first person *waga*, which was already the lexicalized first person pronominal form for both possessor and subject. In contrast, instances of *ga* marking clausal subjects which select psych-predicates, as illustrated in (18), drastically increases after OJ.[14]

A further significant change in EMJ is that the OSV dominant order associated with *ga* was completely lost. This change directly results from the fact that transitive subjects came to be either zero-marked or marked by genitive *no* as in (24), resulting in [S (*no*) O *wo* V] basic word order, as represented in (23):

(24) Early Middle Japanese (Papakigi; Genji)

[ki	*no*	*miti*	*no*	*takumi]*	***no***	*yorodu*	*no*	*mono*	***wo***	*tukuri*
wood	GEN	tool	GEN	craftsman	GEN	various	GEN	thing	OBJ	make
idasu	*mo*									
out	EXCL									

'The craftsman invents various things.'

These observations suggest that EMJ is characterized as displaying the transition from an active system to an accusative system. In the following (§4.1–§4.3), I will discuss three possible scenarios for this shift in alignment in the history of Japanese.

4.1 Scenario 1: Antipassive > Accusative

A number of researchers propose that alignment change from ergative/active to accusative arises as a result of reanalysis of antipassives (cf. Harris & Campbell 1995; Bittner & Hale 1996; Aldridge 2012).[15] The transition from ergative to accusative begins when the oblique object in antipassives is reanalyzed as accusative. This explanation for alignment change may be applicable to ergative languages that have antipassive constructions. Not all languages do, of course: Polinsky (2013) and Comrie (2013) identify 14 ergative and

[14] The CHJ corpus is not designed to make distinctions between clause types. However, it is well known among traditional Japanese grammarians that the subject marker *ga/no* is restricted to what Yanagida & Whitman (2009) identified as nominalized clauses inOJ and EMJ. While *no* remains genitive marker throughout the history, *ga* started to mark the subject in main clauses in Late Middle Japanese (see Table 5 cited from Yamada 2000). By this period, the adnominal endings have been reanalyzed as matrix clause endings.

[15] In antipassives, the external argument has absolutive status rather than ergative, while the notional object is either dropped or marked as an oblique.

2 active languages with no antipassives.OJ had no antipassives. Thus the reanalysis of antipassives is not a possible diachronic pathway from non-accusative to accusative for Japanese.

4.2 Scenario 2: Active > Nominative

Harris & Campbell (1995: 258) describe as a possible but hypothetical change a shift from active to accusative alignment caused by reanalysis of an active case marker as nominative.[16] King (1988) suggests a somewhat similar hypothesis on the basis of the view that the Korean nominative marker *-i* was originally an ergative marker that underwent a shift to nominative, as shown in Table 4. King hypothesizes that *-i* originates as an ergative case and the nominative function of *-i* arises as a result of ergative *-i* coming to mark intransitive subjects.

Table 4: Alignment change in Korean (King 1988)

	Direct Object	Subject Intransitive	Subject Transitive
Before change: Ergative	Ø	Ø	*-i*
After change: Accusative	Ø/*-l*	Ø/*-i*	Ø/*-i*

Whitman & Yanigada (2015) show that King's hypothesis is not supported by the Korean data. In the case of Japanese, ModJ nominative *ga* does not directly descend fromOJ genitive *ga* used to mark active subjects. *Ga* became highly infrequent as an NP subject marker in EMJ around the 9–10th centuries.

Yamada (2000) examines the reappearance of *ga* as nominative in the text known as the *Amakusa Heike*, which was published in the late 16th century.[17] Table 5, cited from Yamada (2000), shows that while subject marker *ga* was restricted to embedded clauses inOJ and EMJ, it started to reappear in main clauses in Late Middle Japanese (LMJ).

Table 5: *Ga* in main clauses (Amakusa Heike 1592, Yamada 2000).

	Genitive	transitive	unergative	adjective	unaccusative	total
ga	0 (0%)	2 (2%)	13 (16%)	15 (18%)	54 (64%)	84 (100%)

According to Yamada, nominative *ga* in LMJ starts out as a marker for the subject of intransitive verbs, in particular, unaccusative verbs, and rarely marks the subject of

[16] Klimov (1974; 1977) also suggests that the development from active into nominative is a widespread development.

[17] The *Amakusa Heike* is a romanized version of the *Heike Monogatari*. It was composed as a textbook to teach Japanese to foreign missionaries.

transitive verbs. *Ga* appears on transitive subjects after the mid 17th century. Table 6 presents the ratios between *ga* and *no* in the *Toraakira-bon Kyogen* published in 1642.

Table 6: the ratios between *ga* and *no* (*Toraakira bon*, 1642, CHJ)

	=ga	*=no*
Subject	1622 (76%)	503 (24%)
Possessor	353 (7%)	5267 (93%)
clausal subject	20 (100%)	0 (0%)

The data in the *Toraakira bon* reveal that transitive clauses came to appear in the canonical [S *ga* O *o* V] pattern in EModJ (1600–1800), as shown by the data in (25):

(25) Early Modern Japanese (*Toraakira bon*, 1642)

ano	*mono*	***ga***	*orusu*	***o***	*itase-ba*
that	person	NOM	watch.house	ACC	do-if

'if that person watches over the house…'

These facts raise a basic question concerning the assumption that case systems shift from active to accusative: IfOJ active *ga* is the ancestor of ModJ nominative *ga*, why did *ga* decrease drastically in frequency in EMJ only to reappear in unaccusative rather than transitive verbs.

To account for these facts, I propose a third scenario; that is, a global shift from active to nominative never took place in Japanese. Instead, change in the semantic features of individual case markers, *ga* and *wo*, reorganized the overall grammatical structure of the language.

4.3 Scenario 3: Impersonal psych transitive > Intransitive

Japanese is a so-called pro-drop language throughout its history; sentences often contain no overt subject. This means that learners ofOJ were presented with scant evidence that the object moved to the left of the subject, since direct evidence for OSV would be available only in sentences with overt subjects. As a result, object movement was eventually lost. The loss of object movement then results in a reanalysis of *wo* as a pure structural accusative case.[18] The reanalysis of *wo* subsequently led to another change. That is, *ga*-marked subjects were unable to remain in the specifier of *v*P. Yanigada (forthcoming) proposes that this is attributable to the subject *in-situ* generalization (SSG), originally proposed by Alexiadou & Anagnostopoulou (2001). The SSG is analyzed as the general condition on structural case, which states that if two DP arguments are merged in the

[18]Frellesvig et al. (2018 [this volume]) argue that DOM is no longer operative in EMJ. In EMJ, *wo* was established as the structural accusative case. Its range of use was expanded to mark direct objects even with non-specific reading. Because of this change, the division between *wo* marked objects and unmarked objects became semantically opaque.

*v*P domain, at least one of them must externalize. Alexiadou & Anagnostopoulou (2001) argue that the SSG applies synchronically in a variety of constructions across languages. I suggest that the SSG provides a diachronic explanation for the loss of *ga* marked subjects of transitive verbs. That is, once *wo* was reanalyzed as structural accusative and the object remained inside *v*P domain, the subject was no longer able to stay in the specifier of *v*P; it had to move outside *v*P. This results in the dramatic increase in tokens of the [DP *no* DP *wo* V] construction (23) in EMJ.

Recall that (26) is the impersonal psych transitive construction that involves an implicit first person experiencer object.

(26) Old Japanese (MYS 4338)

[papa	*wo*	*panarete*	*yuku]*	***ga***	*kana-si*	*sa*
mother	OBJ	part	go.ADN	AGT	sad-do	NMLZ

'I am sad about parting from Mother.'

As shown in Table 3 above, examples like (26) significantly increased in frequency after OJ. Some examples are given in (27) cited by Ohno (1977: 142). Ohno (1977; 1987) observes that in EMJ, adnominal clauses marked by *ga* are used predominantly with psych predicates with a first person experiencer (27a), as is the case in OJ, but that they began to appear with non-psych intransitive verbs (27b).

(27) Early Middle Japanese (Kocho/Genji, Usugumo/Genji)

a.

[kokorobape	*wo*	*mi-ru]*	***ga***	*wokasi-u*	*mo*
kindness	ACC	see-ADN	AGT	thankful-CONCL	EXCL

'Seeing (someone's) kindness makes (me) thankful.'

b.

[kumo	*no*	*usuku*	*watare-ru]*	***ga***	*nibi*	*iro*	*na-ru*
cloud	GEN	shallow.pass	away-ADN	AGT	red	color	become-ADN

wo
EXCL

'the clouds passing thinly away become red'

In (27b) the adnominal clause marked by *ga* is the subject of a non-psych intransitive verb, and it involves no implicit first person experiencer. A further change in EMJ is that while this psych predicate construction was used only in nominalized clauses in OJ, it came to appear in non-nominalized main clauses as in (27a). Based on MJ (800–1600) data, I hypothesize that ModJ nominative *ga* is descended from *ga* marking the clausal complements of psychological predicates. Following Ohno's (1977; 1987) observations and data collected from the corpus, nominative *ga* developed as a result of a reanalysis of impersonal psych-transitive as unaccusative intransitive where the *ga* marked argument came to be the sole argument of the predicate, that is, nominative. *Ga* reappeared in LMJ as a nominative postposition, marking the theme argument of intransitives, and it was extended to mark the subjects of transitive verbs in EModJ. This scenario gives a straightforward explanation for why nominative *ga* started to mark the subject of intransitive verbs, as observed by Yamada (2000).

5 Summary

I have argued that the semantic opposition between case marked vs. zero marked subjects inOJ nominalized clauses show two types of DSM effects which fit with well-established cross-linguistic patterns. I have also argued that the reanalysis of *wo* as structural accusative is a direct cause of the loss of active *ga* marking the subject of transitive verbs. The quantitative data in EMJ and LMJ suggest that nominative *ga* emerges as a result of a reanalysis of psych-transitive predicates as intransitive where the *ga* marked argument is the sole argument of the predicate. It has been widely believed that case systems change from non-accusative to accusative or accusative to non-accusative alignment. TheOJ data support the view that case systems do not merely shift from one alignment to another due to a single change. Instead, a cascade of changes in the morphological/semantic features of individual case markers, as exemplified byOJ and EMJ *ga* and *wo*, occur over time, eventually leading to overall change of case marking systems in a given language.

Digitized texts

- The Japanese Historical Corpus, the National Institute of Japanese Language and Linguistics, https://maro.ninjal.ac.jp/
- The Oxford Corpus of Old Japanese, http://vsarpj.orinst.ox.ac.uk/corpus/
- *Man'yôshû* Kensaku, Yamaguchi University http://infux03.inf.edu.yamaguchi-u.ac.jp/~manyou/ver2_2/manyou.php

Abbreviations

ABS	absolutive
ACC	accusative
ADN	adnominal
AGT	agent
ASP	aspect
AUX	auxiliary verb
CONC	concessive
CONCL	conclusive
CONJ	conjunctive
CONT	continuative
DAT	dative
DIM	diminutive
ERG	ergative
EXCL	exclamative
F	female
FOC	focus marker
FUT	future
GEN	genitive
HON	honorific
IMPERF	imperfective
LOC	locative
MID	middle
MOD	modal
NEG	negative
NMLZ	nominalizer
NOM	nominative
NONFUT	non-future
OBJ	object marker
PST	past
PL	plural
PRT	second position particle (an evidential)
PERF	perfective
1P	first person
2P	second person
Q	question particle

References

Aissen, Judith. 2003. Differential object marking: Iconicity vs. Economy. *Natural Language and Linguistic Theory* 21(3). 435–483.

Aldridge, Edith. 2004. *Ergativity and word order in Austronesian languages*. Ithaca, NY: University of Ithaca dissertation.

Aldridge, Edith. 2008. Generative approaches to ergativity. *Language and Linguistics Compass* 2(5). 966–995.

Aldridge, Edith. 2012. Antipassive in Austronesian alignment change. In Dianne Jonas, John B. Whitman & Andrew Garrett (eds.), *Grammatical change: Origins, nature, outcomes*, 331–345. Oxford: Oxford University Press.

Alexiadou, Artemis & Elena Anagnostopoulou. 2001. The subject-in-situ generalization and the role of case in driving computations. *Linguistic Inquiry* 32(2). 193–231.

Anand, Pranav & Andrew Nevins. 2006. The locus of ergative case assignment: Evidence from scope. In Alana Johns, Diane Massam & Juvénal Ndayiragije (eds.), *Ergativity: Emerging issues*, 3–25. Dordrecht: Springer.

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

Bittner, Maria & Kenneth L. Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27(1). 1–68.

Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam. 2001. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–156. Cambridge, MA: MIT Press.

Comrie, Bernard. 1973. The ergative: Variations on a theme. *Lingua* 32. 239–253.

Comrie, Bernard. 1978. Ergativity. In Winfred Philipp Lehmann (ed.), *Syntactic typology: Studies in the phenomenology of language*, 329–394. Austin: University of Texas Press.

Comrie, Bernard. 2013. Alignment of case marking of full noun phrases. In Matthew S. Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. http : / / wals . info / chapter/98.

Dahlstrom, Amy L. 1983. Agent-patient languages and split case marking systems. In *Proceedings of the 9th Annual meeting of the Berkeley Linguistics Society*, 37–46.

Diesing, Molly. 1992. *Indefinites*. Cambridge, MA: MIT Press.

Dixon, R. M. W. 1979. Ergativity. *Language* 55(1). 59–138.

Enç, Mürvet. 1991. The semantics of specificity. *Linguistic Inquiry* 22(1). 1–25.

Frellesvig, Bjarke. 2010. *A history of the Japanese language*. Cambridge: Cambridge University Press.

Frellesvig, Bjarke, Stephen W. Horn & Yuko Yanagida. 2015. Differential object marking in Old Japanese: A corpus based study. In Dag T. T. Haug (ed.), *Historical linguistics 2013: Selected papers from the 21st International Conference on Historical Linguistics, Oslo, 5–9 August 2013*, 195–212. Amsterdam: John Benjamins.

Frellesvig, Bjarke, Stephen Horn & Yuko Yanagida. 2018. A diachronic perspective on differential object marking in pre-modern Japanese: Old Japanese and Early Middle Japanese. In Ilja A. Seržant & Alena Witzlack-Makarevich (eds.), *Diachrony of differential argument marking*, 183–207. Berlin: Language Science Press. DOI:10.5281/zenodo.1228255

Harris, Alice C. & Lyle Campbell. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.

Kageyama, Taro. 1980. *Goi no kozo*. Tokyo: Shohakusha.

Kikuta, Ciharu. 2012. Jodai nihongo no ga-kaku nituite [On the case marker *ga* in Old Japanese]. *Dosisha Daigaku Jinbun Gakkai (The Literary Association)* 89. 89–123.

King, Ross. 1988. Towards a history of transitivity in Korean. Paper given at the 24th Meeting of the Chicago Linguistic Society.

Klimov, Georgij A. 1974. On the character of languages of active typology. *Linguistics* 131. 11–25.

Klimov, Georgij A. 1977. *Tipologija jazykov aktivnogo stroja [Typology of languages of the active type]*. Moscow: Nauka.

Koji, Kazuteru. 1988. *Man'yôshû joshi no kenkyu*. Tokyo: Kasama Shoin.

Kornfilt, Jaklin. 2003. Subject case in Turkish nominalized clauses. In Uwe Junghanns & Luka Szucsich (eds.), *Syntactic structures and morphological information*, 130–214. Berlin: Mouton de Gruyter.

Kornfilt, Jaklin. 2008. DOM and two types of DSM in Turkish. In Helen de Hoop & Peter de Swart (eds.), *Differential subject marking*, 79–112. Kluwer: Springer.

Legate, Julie Anne. 2002. *Warlpiri: Theoretical implications*. Cambridge, MA: Massachusetts Institute of Technology dissertation.

Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39(1). 55–101.

Mithun, Marianne. 1991. Active/agentive case marking and its motivations. *Language* 67(3). 510–546.

Miyagawa, Shigeru. 1989. *Structure and case marking in Japanese*. San Diego: Academic Press.

Mohanan, Tara. 1994. *Argument structure in Hindi*. Stanford: Center for the Study of Language & Information.

Nomura, Takashi. 1993. Jôdaigo no no to ga ni tsuite [On the particles *no* and *ga* in Old Japanese]. *Kokugo Kokubun* 62. 1–17.

Ohno, Susumu. 1953. Nihongo no dôshi no katsuyôkei no kigen ni tsuite [On the origins of Japanese verb inflection]. *Kokugo to kokubungaku [Japanese Language and Literature]* 350. 47–56.

Ohno, Susumu. 1977. Shukaku joshi ga no seiritsu [The development of the nominative case particle *ga*]. *Bungaku* 45. 102–117.

Ohno, Susumu. 1987. *Bunpo to goi [The grammar and the lexicon]*. Tokyo: Iwanai.

Polinsky, Maria. 2013. Antipassive constructions. In Matthew S. Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. http://wals.info/chapter/108.

Robbeets, Martine. 2015. *Diachrony of verb morphology: Japanese and the Transeurasian language*. Berlin: Mouton de Gruyter.
Silverstein, Michael. 1976. Hierarchy of features and ergativity. In R. M. W. Dixon (ed.), *Grammatical categories in Australian languages*, 112–171. Atlantic Highlands, NJ: Humanities Press.
Whitman, John. 2008. The source of the bigrade conjugation and stem shape in pre-Old Japanese. In Bjarke Frellesvig & John Whitman (eds.), *Proto-Japanese. Issues and prospects*, 159–174. Amsterdam: John Benjamins.
Whitman, John & Yuko Yanigada. 2015. A Korean grammatical borrowing in Early Middle Japanese kunten texts and its relation to the syntactic alignment of earlier Korean and Japanese. *Japanese/Korean Linguistics* 21. 121–135.
Woolford, Ellen. 1997. Four-way case systems: Ergative, nominative, objective and accusative. *Natural Language and Linguistic Theory* 15(1). 181–227.
Woolford, Ellen. 2008. Differential Subject Marking at argument structure, syntax and PF. In Helen de Hoop & Peter de Swart (eds.), *Differential Subject Marking*, 17–40. Dordrecht: Springer.
Yamada, Masahiro. 2000. Shugo hyôji ga no seiryoku kakudai no yôso [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.
Yanagida, Yuko. 2006. Word order and clause structure in Early Old Japanese. *Journal of East Asian Linguistics* 15(1). 37–68.
Yanagida, Yuko. 2007. Jôdaigo no nôkakusei ni tsuite [On ergativity in Old Japanese]. In Nobuko Hasegawa (ed.), *Nihongo no shubun genshô [Main clause phenomena in Japanese]*, 147–188. Tokyo: Hituzi Shobo.
Yanagida, Yuko & John Whitman. 2009. Word order and alignment in Old Japanese. *Journal of East Asian Linguistics* 18(2). 101–144.
Yanigada, Yuko. Forthcoming. Differential argument marking (DAM) and object movement: A typological perspective. In Nishiyama Kunio, Hideki Kishimoto & Edith Aldridge (eds.), *Topics in theoretical Asian linguistics*. Amsterdam: John Benjamins.