

On the Reconstruction of Pre-Old Japanese Morphology: OJ Grammatical Morphemes Reflecting Pre-OJ *k- ~ *s-

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1 Introduction

In an article published in 2001, I proposed that a number of grammatical forms in initial *t-* and *n-*, including case and conjunctive particles,

* I am grateful to the organizers of JK29 for inviting me to give the talk in the conference on which this paper is based. Thank you to the JK29 participants for stimulating questions and comments. As ever, I am indebted to Stephen W. Horn for sharing his views and insights on Old Japanese grammar and discussing this paper with me. This paper forms part of the research project *Construction of Diachronic Corpora and New developments in Research on the History of Japanese* at the National Institute for Japanese Language and Linguistics.

Japanese/Korean Linguistics 29.

Edited by Kaoru Horie, Kimi Akita, Yusuke Kubota, David Y. Oshima, and Akira Utsugi.

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perfective auxiliaries, and nonfinite verb endings, are related to the productive regular Old Japanese copulas in *n-* (mainly *ni* and *no*) and *t-* (mainly *to*) and reflect various morphologizations from two alternating proto-Japanese or pre-Old Japanese copula roots **n-* ~ **t-* (Frellesvig 2001). In subsequent work (e.g. Frellesvig 2008, 2012, 2013, 2019), I have proposed reconstruction of a number of different aspects of proto- and pre-Old Japanese morphology. Building in part on results and proposals set out in those publications,¹ and picking up on a briefly mentioned suggestion in Frellesvig 2010: 121, I will in this paper consider a number of grammatical forms from Old Japanese in initial *k-* and *s-* and propose that they have a common pre-Old Japanese or proto-Japanese source in two alternating roots **k-* ~ **s-*.

These forms include adjective predicators (‘adjectival copula’) and past tense suffixes for verbs, which for example, as is well known, share the forms *ki* and *si* (with opposite distribution of adnominal and conclusive function), as shown in these examples from the Man’yōshū, the 8th century poetry anthology which contains the bulk of the texts from the Old Japanese period.²

(1) Adjectival copula	Past tense
<p><i>topo-ki twosa-di</i> far-ACP.ADN Tosa-road ‘The long road to Tosa’ (MYS 6.1022)</p>	<p><i>omopi-ki</i> . long.for-PST.CLS ‘(I) have been longing (for my beloved)’ (MYS 4.501)</p>
<p><i>ama-di pa topo-si</i> . heaven-road TOP far-ACP.CLS ‘The road to heaven is long’ (MYS 5.801)</p>	<p><i>omopi-si</i> kimi long.for-PST.ADN my.lord ‘My lord, whom (I)’ve been longing for’ (MYS 4.644)</p>

¹ I will draw on and make reference to findings presented in those papers, but not rehearse or repeat background, documentation or argument.

² OJ is the oldest attested stage of Japanese, largely the language of the 8th century. For the general descriptive framework for OJ morphology and the transcription of OJ, as well as general facts about OJ, see Frellesvig 2010 (in particular chapters 1 to 3). In cited examples from OJ, phonographically written text is transcribed in *italics*, whereas logographically written text is transcribed in plain type. Examples will be drawn from the Man’yōshū. The poetic texts from the OJ period and the language contained in them may easily be accessed through the *Oxford-NINJAL Corpus of Old Japanese* (ONCOJ), which is heavily annotated and associated with powerful search functionality, at <https://oncoj.ninjal.ac.jp/>.

Abbreviations used in this paper which are not included in the Leipzig glosses are: ACP adjectival copula; ADN adnominal; CLS conclusive; FP focus particle; MPST modal past; NCONJ negative conjectural; NML nominal; PFX prefix; PROV provisional; RSP respect; SPST simple past. Language abbreviations: EMJ Early Middle Japanese (800-1200); OJ Old Japanese; pJ proto-Japanese.

These two different suffixes (adjectival copula and simple past tense), however, do not share just the forms *si* and *ki*, but in fact exhibit striking form overlaps through their paradigms. We will look at their forms together with a range of other grammatical OJ forms in *k-* and *s-*: First the adjectival copula and its forms will be introduced (§2) and then compared with the forms of the simple and modal past tense auxiliaries *-ki* and *-kyer-* (§3). The following sections discuss other OJ grammatical forms in *k-* and *s-*: focus particles *ka* and *so* (§4), *su* in the negative auxiliary *-zu* and semblative copula *nasu* (§5), the demonstratives *ko* and *so*, and the two irregular grammatical verbs *ko-* ‘come’ and *se-* ‘do’ (§6). Finally, §7 will summarize and discuss, proposing that all the forms considered derive from two alternating pre-OJ or pJ demonstrative roots **k-* ~ **s-*, reflected in OJ as the demonstratives *ko* and *so*.

2 The Adjectival Copula

Adjectives may in OJ be used in various ways (see Frellesvig 2010: 79-93), but the main use is predication by a bound, inflecting suffix which here is referred to as the ‘adjectival copula’ because of its function to predicate adjectives. The three main forms of the adjectival copula, conclusive, adnominal and infinitive (adverbial), are exemplified in (2)-(4).

(2) *a ga mune ita-si*
 I GEN heart painful-ACP.CLS
 ‘My heart aches’ (MYS 15.3767)

(3) *kiywo-ki tuku-ywo*
 clear-ACP.ADN moon-night
 ‘A clear moon-lit night’ (MYS 20.4453)

(4) *kimi ga yuki ke naga-ku nari-nu*
 my.lord GEN go day long.ACP.INF become-PFV.CLS
 ‘It has been a long time since you left’ (MYS 5.867)

The adjectival copula inflects largely for the same categories as verbs, including finite conclusive, adnominal and exclamatory forms, a range of non-finite subordinating forms, and combinations with the negative and the conjectural auxiliaries. The full paradigm of the adjectival copula is composite and suppletive, as shown in (5). Some of these forms are very frequent, others quite rare. The paradigm of the following EMJ period is somewhat simpler and in particular without alternative forms for morphological categories and without

the negative, conjectural and nominal forms (see Frellesvig 2010: 233 about the EMJ paradigm).³

(5) Conclusive	<i>si</i>
Adnominal	<i>ki</i>
Exclamatory	<i>sa</i>
Exclamatory	<i>kyere</i>
Infinitive	<i>ku</i>
Infinitive	<i>mi</i>
Gerund	<i>kute</i>
Gerund	<i>mito</i>
Conditional	<i>kyeba</i>
Conditional	<i>kupa</i>
Provisional	<i>kyeba</i>
Provisional	<i>kyereba</i>
Concessive	<i>kyedo</i>
Concessive	<i>kyeredo</i>
Nominal	<i>kyeku</i>
Negative nominal	<i>kyenaku</i>
Conjectural	<i>kyemu</i>

These forms may be organized according to shape as shown in (6).

³ After OJ, *sa* and *mi* changed to become nominalizers, still used in modern Japanese: *tuyo-sa* ‘strength’, *tuyo-mi* ‘forte (strong point)’, but in OJ they took part in predicating adjectives. *Mito* was lost after OJ.

(6)

	<i>ku</i>	<i>ki</i>	<i>si</i>	<i>sa</i>	<i>mi</i>
Conclusive			<i>si</i>		
Adnominal		<i>ki</i>			
Exclamatory				<i>sa</i>	
Exclamatory		<i>kyere</i>			
Infinitive	<i>ku</i>				
Infinitive					<i>mi</i>
Gerund	<i>kute.</i>				
Gerund					<i>mito</i>
Conditional		<i>kyeba</i>			
Conditional	<i>kupa</i>				
Provisional		<i>kyeba</i>			
Provisional		<i>kyereba</i>			
Concessive		<i>kyedo</i>			
Concessive		<i>kyeredo</i>			
Nominal		<i>kyeku</i>			
Negative nominal		<i>kyenaku</i>			
Conjectural		<i>kyemu</i>			

Kute, *kupa* and *mito* are transparently built on *ku* and *mi*, respectively. The forms in *kye* may be thought to derive from contractions of *ki* with a form in initial *a* (*i-a > ye), further divided into two subsets, as in (7).

- (7) (a) *kyeba* < *ki-aba, *kyedo* < *ki-ado, *kyeku* < *ki-aku, *kyenaku* < *ki-anu-aku, *kyemu* < *ki-amu
(b) *kyere* < *ki-are, *kyereba* < *ki-ari-aba, *kyeredo* < *ki-ari-ado

The forms in (a) involve morphological material independently attested or well reconstructed with verbs: *aba ‘conditional’ (probably < *amu-pa ‘conjectural-TOP’), *ado ‘concessive’ (? < *amu-to), *aku* ‘nominalizer’, *an- ‘negative’, *am- ‘conjectural’. The forms in (b) have the existential verb *ari* interpolated between the adjectival copula root and the inflectional morpheme; it is the forms in (b) from among the forms in (5) which survive into EMJ and beyond, whereas the forms in (a) are lost. Note that also the nominal forms were lost, as part of the loss of the inflectional category of nominal also for verbs in general.

Other than the two *-mi* based forms in the paradigm, which I will say no more about here, we thus find forms built on *ku*, *ki*, *si*, and *sa* in the paradigm, suggesting alternating roots *k- ~ *s-.

3 Past Tense Auxiliaries

As is well known, OJ (as well as EMJ) had two past tense auxiliaries, simple past and modal past, exemplified in (8)-(9) and (10)-(11), respectively.

- (8) *kapyeri-kyeru pito kitar-eri to ipi-sikaba*
 return-come.STAT person arrive-STAT that say-SPST.PROV
potopoto sini-ki .
 almost die-SPST.CLS
 ‘When people said that someone who was coming back (from exile) had arrived, I almost died (thinking it was you)’ (MYS 15.3772)
- (9) *imo ga mi-si aputi no pana pa*
 beloved GEN look.at-SPST.ADN chinaberry.tree GEN flower TOP
tiri-nu besi .
 scatter-PFV must
 ‘The flowers of the chinaberry tree which my beloved looked at must have scattered.’ (MYS 5.798)
- (10) *wa ga yadwo no pana tatibana tiri-ni-kyeri* .
 I GEN house GEN flower tachibana fall-PFV-MPST.CLS
 ‘The flowers of the *tachibana* by my house had fallen’ (MYS 10.1969)
- (11) *ware pa ki-na-mu to ipi-kyereba*
 I TOP come-PFV-CONJ that say-MPST.PROV
 ‘When I said that I would come, ...’ (MYS 9.1740)

Looking at the full paradigms of these two auxiliaries, simple past (12) and modal past (13), it is clear that the simple past has a suppletive paradigm, while the forms of the modal past are like those of the irregular existential verb *ar-*; and it is conspicuous that both paradigms have widespread form overlap and identity with the *ki* and *si* based forms of the adjectival copula. Note that some of the simple past tense forms were lost in the transition to EMJ (or in early EMJ): conditional *kyeba* and the two nominal forms *kyeku* and *siku*.

- (12) Conclusive *ki*
 Adnominal *si*
 Exclamatory *sika*
 Conditional *kyeba*
 Conditional *seba*
 Concessive *sikado*
 Provisional *sikaba*
 Nominal *kyeku*
 Nominal *siku*
 Conjectural *kyemu*

- (13) Conclusive *kyeri*
 Adnominal *kyeru*
 Exclamatory *kyere*
 Concessive *kyeredo*
 Provisional *kyereba*
 Nominal *kyeraku*

Form identity between the paradigms of the adjectival copula and the past tense auxiliaries is as in (14):

- | | |
|---------------------------------------|----------------------------|
| (14) Adjectival copula | Simple past |
| <i>si</i> conclusive | <i>si</i> adnominal |
| <i>ki</i> adnominal | <i>ki</i> conclusive |
| <i>kyemu</i> conjectural | <i>kyemu</i> conjectural |
| <i>kyeba</i> conditional, provisional | <i>kyeba</i> conditional |
| <i>kyeku</i> nominal | <i>kyeku</i> nominal |
| | Modal past |
| <i>kyere</i> exclamatory | <i>kyere</i> exclamatory |
| <i>kyeredo</i> concessive | <i>kyeredo</i> concessive |
| <i>kyereba</i> provisional | <i>kyereba</i> provisional |

The modal past forms are transparent contractions of *ki* with the existential verb *ar-*, *kyer-* < *ki-ar-, like we saw with some of the forms of the adjectival copula in (7).

For the simple past, we first of all find identity with the adjectival copula in the forms *si* and *ki*. The syntactic function is opposite in the two paradigms, but as reported in Frellesvig (2012) the morphologically expressed differentiation between conclusive and adnominal function is most likely a secondary, late pre-OJ development (see also §5 below). This is well

illustrated by the fact that *si* and *ki* are found with the same additional morphological material, see (15)⁴.

The remaining forms from the simple past paradigm are shown in (15) in three subsets. The forms in (a) are identical with those in the adjectival copula paradigm and have the same diachronic derivation, cf. (7.a) above. Those in (b) are not identical, but significantly they are built on the shared form *si* contracted with the same additional morphological material as is found in (a) and in the adjectival copula (cf. (7)); the forms in (a) and (b) thus form part of the same pattern: built on *ki* and *si* contracted with the same morphological material, with both *ki* and *si* and the additional morphological matter shared with the adjectival copula. Finally, the forms in (c) involve a stem *sik*, with the same morphological material attached.⁵

- (15) (a) *kyeba* < *ki-aba, *kyeku* < *ki-aku, *kyemu* < *ki-amu
 (b) *seba* < *si-aba, *siku* < *si-(a)ku
 (c) *sikado* < *sik-ado, *sikaba* < *sik-aba, *sika* < *sik-a

It is very difficult to believe that this widespread form identity and shared morphological material between the adjectival copula and the two past tense suffixes could be due to chance. Rather, it suggests very strongly that they are closely related, with the adjectival copula, which displays the most variation, being the oldest and providing a clear morphological link with and between the other two, and that at least the forms in (14) and (15.a-b) reflect the same source as the adjectival copula, going back to the alternating roots *ki* ~ *si*.

Functionally, this may be thought to have developed from a copula.⁶ First, the function of the adjectival copula was to predicate adjectives, i.e. that of a copula. Second, development of tense markers from copulas has been proposed at least as early as Franz Bopp who posited copula origins for many conjugational endings in Sanskrit (1816). For Japanese this is straightforwardly plausible both because of word order [nominal.predicate copula], and because of the fact that the two past tense suffixes attach to a stem of verbs

⁴ Note also that there are examples of the conclusive form of the adjectival copula modifying a noun even if they are rare, e.g. *kagurwo-si kami* ‘black-ACP.CLS hair; black hair’ (MYS 16.3791).

⁵ Note that whereas *aba, *amu, *ado and *aku form part of standard reconstructions of pre-OJ verbal morphology, the *a posited here as part of the exclamatory form *sika* is not as readily found. It is, however, tempting to see the adjectival copula form *sa* which functionally is similar to, but not identical with, simple past *sika* as involving the same material. And it is further possible that *sa* and *sika* are related to the anaphoric, demonstrative adverbs *sa* ‘that way’ and *sika* ‘that way’; cf. §6 on demonstratives.

⁶ See Kuznetsov (this volume) for additional hypotheses about the etymology of the modal past *kyer-*.

(the so-called *ren'yōkei* of traditional Japanese grammar) which is segmentally identical with both the infinitive and with the derived deverbal nominal, e.g. *omopi* in (1) which other than its use as a stem, could be infinitive ‘yearn for’ and a derived noun ‘yearning’, or similarly *sini* in (8) which is also exemplified as a deverbal nominal in (27) below; cf. further (§6) about deverbal nominals.⁷

4 Focus Particles

The particles *ka* and *so* fit well into the pattern proposed above of grammatical forms in *k-* and *s-* with copular function, or functions that can develop from copulas. *Ka* and *so* are well known for taking part in the focus construction *kakari-musubi*,⁸ exemplified in (16)-(17), where a focused constituent is marked by *ka* or *so* and the predicate of the sentence is in the adnominal form (see Frellesvig 2010: 247-257 for the basic facts about *kakari-musubi*; Quinn forthcoming for an insightful functional description and analysis).⁹ As suggested in the translations, many examples of *kakari-musubi* can felicitously be translated into *it*-clefts (or other clefts).

(16) *oyodure ka wa ga kiki-turu*
 lie KA I GEN hear-PFV.ADN
 ‘Was it a lie that I heard?’ (MYS 3.420)

(17) *wa ga kwopuru kimi so kizo no ywo ime ni*
 I GEN love.ADN my.lord SO last.night GEN night dream DAT
mi-ye-turu
 see-PASS-PFV.ADN
 ‘It was you, my beloved lord, that I saw last night in a dream’ (MYS 2.150)

However, we also find many examples of sentence final *ka* or *so* concluding a nominal predication. (18) is a 5-7-5-7-7 *waka* poem in which the first two verse lines (*ware nomwi so, kimi ni pa kwopuru*) show the *kakari-musubi*

⁷ It is worth noting that also a number of other verb suffixes which may be thought to derive from the same source as the *t-* and *n-* copulas attach to this stem (perfectives, gerund formant, etc., see Frellesvig 2001).

⁸ In OJ, *so* was the main form of that particle, with a variant *zo* being somewhat rarer (with more than three times as many instances of *so* as of *zo*), but in EMJ *zo* becomes the dominant and then sole form. It is generally assumed, also here, that *so* is the older form.

⁹ It should be borne in mind here that a main function of the ‘adnominal’ form was to form nominalized clauses, in addition to its function as the predicate in relative clauses after which it was named.

construction with *so*, and final three lines have a subject which is a nominalized clause with the nominalizer *koto* (*wa ga sekwo ga, kwopu to pu koto pa*) and a nominal predicate (*koto no nagusa*) concluded by *so*.

- (18) ware nomwi *so* kimi ni pa kwopuru .
 I only SO my.lord DAT TOP yearn.for.ADN
 [wa ga sekwo ga kwopu to pu koto pa]_{SBJ}
 I GEN husband GEN yearn.for COMP say thing TOP
 [koto no nagusa]_{PRED} *so*
 word COP.ADN comfort SO
 ‘It is only me who yearns for you (not the other way around). It is false words of comfort that you, my husband, say that you yearn for me’
 (MYS 4.656)

Other examples of nominal predications concluded by *ka* and *so* include (19)-(20), both with an anaphoric referential null-pronoun subject (the referent of which is mentioned in the preceding sentence) of the nominal predicate.

- (19) ... kapa no oto_i kiywosi .
 ... river GEN sound_i clear
 [∅_i]_{SBJ} [... pune no nami no sawaki]_{PRED} *ka*
 it_i ... boat GEN wave GEN noise KA
 ‘The sound from the river is clear. Is it (= the sound) the noise from the waves of the boat (which Hikoboshi of the Tanabata legend) is rowing?’
 (MYS 10.2047)

- (20) yuki_i na pumi sone .
 snow_i PROH step PROH
 [∅_i]_{SBJ} [sibasibamo pura-nu yuki]_{PRED} *so* .
 it_i over.and.over fall-NEG snow SO
 ‘Don’t step on the snow. It (= the snow) is snow that doesn’t fall often.’
 (MYS 19.4227)

Examples such as (19)-(20) above demonstrate that an important function of *ka* and *so* was to conclude nominal predications, i.e. the function of a copula.

Furthermore, it is worth here recalling Ohno’s (1993) proposal that the *kakari-musubi* construction originated in inversion of (a) nominalized subject clauses with the predicate in the adnominal form and (b) nominal predicates marked by one of the focus particles, such that for example the

diachronic source of (16) above would have been like (21), with *ka* concluding the nominal predication.

(21) [*wa ga kikituru*]_{SBJ} [*oyodure*]_{PRED} *ka*

Narrog 2021 is an impressive and immensely useful literature review of various hypotheses about the origin of the *kakari-musubi* construction and of the history of research on that topic; it may be consulted for many more references. In his survey, Narrog notes that ‘in Japanese linguistics, this [=Ohno’s] hypothesis has been met with scepticism, mainly for the reason that the expected source structures with verbs are largely absent in OJ’ (2021: 22). However, ‘non-inverted’ examples with a nominalized clause as subject and a nominal predicate are in fact not that difficult to come by, e.g. (22)-(23) with the nominalized clauses marked by *pa* and *mo*, and (24)-(26) with bare nominalized clauses.

(22) [*nagarape-tiru pa*]_{SBJ} [*nani no pana*]_{PRED} *so mo* .
fall-scatter.ADN TOP what COPflower SO EMP
‘Which flower is it that is scattering?’ (lit: ‘That which is scattering, which flower is it?’) (MYS 8.1420)

(23) [*senoumi to nadukete aru mo*]_{SBJ}
Se-no-umi COMP call be.ADN also
[*sono yama no tutum-yeru umi*]_{PRED} *so* .
that mountain GEN dam.in-STAT.ADN sea SO
‘It is the sea which dams in that mountain that is called Se-no-umi’ (lit.: ‘That which is called Se-no-umi is the sea which dams in that mountain’) (MYS 3.319)

(24) [*kimi ni ap-yeru*]_{SBJ} [*koyopi*]_{PRED} *ka*
my.lord DAT meet-STAT.ADN tonight KA
‘It is tonight that I met you / Is it tonight that I met you?’ (lit. ‘That I met you is tonight’) (MYS 8.1613)

(25) [*sawosika no tuyu wake naka-mu*]_{SBJ}
male.deer GEN dew brush.aside cry-CONJ.ADN
[*takamatwo no nwo*]_{PRED} *so*
Takamato GEN field SO
‘It is the field of Takamato where the male deer will cry out, brushing aside the dew’ (lit. ‘That/where the male deer will cry out, brushing aside the dew, is the field of Takamato’) (MYS 20.4297)

- (26) [wa ga sekwo ga pusa tawori-k-yeru]_{SBJ}
 I GEN husband GEN bunch break-come-STAT.ADN
 [wominapyesi]_{PRED} **ka mo**
 patrinia KA EMP
 ‘It is a bunch of patrinia that my husband has snapped off and brought’
 (lit. ‘That which my husband snapped off a bunch of and brought is patrinia’) (MYS 17.3943)

The data presented in this section shows first of all that it is highly plausible that copula is the basic, or original, function of *ka* and *so*. In that way, *ka* and *so* fit the form and function pattern suggested in the preceding sections. Second, it may be seen that Ohno’s hypothesis about the origin of *kakari-musubi* should not be discounted.¹⁰

5 Negative and Semblative

Pursuing further this hypothesis of a *k- ~ s-* alternation between grammatical forms, it may be proposed that the infinitive of the adjectival copula, *ku*, took part in a similar relation with *su*, a formant which may be thought to form part of etymology of the negative auxiliary *-zu* and the semblative copula *nasu*. This *su* shares remarkably similar morphology and overlapping functions with *ku*.

The negative auxiliary has the following main forms and uses:

- (27) Infinitive (adverbial)
a ga mopu imo ni apa-zu sini se-me
 I GEN yearn.for beloved DAT meet-NEG.INF dying do-CONJ
 ‘I will die without meeting my beloved’ (MYS 15.3740)
- (28) Conclusive
yuki wo ... miredomo aka-zu
 snow ACC look.at.CONC tire.of-NEG.CLS
 ‘I never get tired of looking at the snow’ (MYS 17.4001)

¹⁰ If Ohno’s hypothesis is correct, the ‘inversion’ probably came about as right dislocation of the bare (nominalized clausal) subject. Right dislocation was quite common in OJ (at a rough estimate, just under one in five main clauses in the poetic OJ texts have a right dislocated constituent; even if this is skewed by the genre, it is significant proportion). I am not sure why Narrog (ibid.) believes that an intermediary stage ‘XP=*so* [... verb]=*pa*’ would be necessary or involved. ‘Inversion’ of attested sentences like those in (24)-(26) is all that is needed.

- (29) Adnominal
 miredo aka-**nu** yosinwo *no* kapa
 look.at.CONC tire.of-NEG.ADN Yoshino GEN river
 ‘The river of Yoshino which I never get tired of looking at’ (MYS 1.37)

The full OJ paradigm of the negative includes forms for most of the categories which verbs inflect for, as shown in column (a) of (30). This is a suppletive paradigm that combines forms in *n-*, which have the same endings as regular lexical consonant stem verbs,¹¹ and forms built on *zu*. For the infinitive and gerund there are rare forms in *n-* (*ni*, *nito*), which were lost from the language in the transition to the following EMJ period. It may be thought that the OJ paradigm represents the last stage before the completion of a reformation of an earlier, pre-OJ, paradigm, as shown in (c), with a full set of regular forms in *n*, with the forms in (b) replacing pre-OJ forms to give the paradigm in (a), eventually without *ni* and *nito* (see Frellesvig 2008: 184-189 for details about the reformation of the paradigm of the negative, including its motivation).

(30)

	(a) OJ	(b)	(c) pre-OJ
Conclusive	<i>zu</i>	<i>zu</i> < * <i>ni</i> - <i>su</i>	* <i>nu</i>
Adnominal	<i>nu</i>		<i>nu</i>
Exclamatory	<i>ne</i>		<i>ne</i>
Infinitive	<i>zu</i> (~ <i>ni</i>)	<i>zu</i> < * <i>ni</i> - <i>su</i>	<i>ni</i>
Gerund	<i>zute</i> (~ <i>nito</i>)	<i>zute</i> < * <i>ni</i> - <i>su</i> - <i>te</i>	<i>nito</i>
Conditional	<i>zupa</i>	<i>zupa</i> < * <i>ni</i> - <i>su</i> - <i>pa</i>	* <i>naba</i>
Provisional	<i>neba</i>		<i>neba</i>
Concessive	<i>nedo</i>		<i>nedo</i>
Nominal	<i>naku</i>		<i>naku</i>

The forms in (b) were based on the pre-OJ infinitive *ni* extended with *su*.¹² This *su* is traditionally thought to be the conclusive form of the verb *se-* ‘do’ and accordingly the use of *zu* as infinitive said to be secondary. However, the morphology of *zu*, with direct affixation of *te* and *pa* to form further forms, and the use as infinitive (adverbial), is exactly like the use of *ku* in the

¹¹ Except that the gerund in *-to* is slightly irregular: Regular verb gerunds have *-te*, but *to* is also found in the paradigm of the adjectival copula in *mito*, cf. (5) above.

¹² *Ni* itself is usually thought to be cognate with the Korean negation *ani*. See Frellesvig 2019: 247-248 about the reinterpretation of the negative adverb *ani*, vestigially attested in OJ, as a verb ending, and Frellesvig 2008: 184 about the resegmentation from V(erb)-*ani* to V.*a-ni*.

paradigm of the adjectival copula, and it seems more likely that *zu* is primarily the infinitive form and that the use of *zu* in conclusive function is secondary and an extended use of the infinitive; see further below in this section about this.

The second grammatical form to be considered in this section is the semblative copula ('be like') *nasu* (which has an Eastern OJ variant *nosu*) which is used in the following ways (although the conclusive use is rare).

(31) Adverbial

asa-pi **nasu** magupasi *mo*
 morning-sun SMBL beautiful EMP
 'It (= the province of Ise) is beautiful like the morning sun!' (MYS 13.3234)

(32) Adnominal

matama **nasu** putatu no *isi*
 jewel SMBL two COP stone
 'Two stones which are like jewels' (MYS 5.813)

(33) Conclusive

kwopuraku *pa* *puzi no takane ni* *puru yuki*
 long.for.NML TOP Fuji GEN peak DAT fall snow
nasu mo
 SMBL EMP
 'My longing for you is like the snow that falls on the peak of Fuji!'
 (MYS 14.3358)

Diachronically, *nasu* may be thought to reflect the *n*-copula root *na* (cf. OJ copula *ni* and *no*, see Frellesvig 2001) and the formant *su*: *nasu* < **na-su*.

Thus, we find the same relation between *ku* in the paradigm of the adjectival copula which forms the infinitive/adverbial form, and *su* which is found in the semblative copula and in the negative, as we do between the *k*- and *s*-initial forms within and between the paradigms of the adjectival copula and the two past tense auxiliaries, here in an alternation *ku* ~ *su*.

(34) Adjectival copula	Semblative copula
<i>ku</i> infinitive	<i>nasu</i> < * <i>na-su</i> adverbial, adnominal, conclusive
	Negative
<i>ku</i> infinitive	<i>zu</i> < * <i>ni-su</i> infinitive, conclusive
<i>kute</i> gerund	<i>zute</i> < * <i>ni-su-te</i> gerund
<i>kupa</i> conditional	<i>zupa</i> < * <i>ni-su-pa</i> conditional

While adjectival copula *ku* is used only as infinitive/adverbial, the *su* proposed here as part of the origin of the semblative copula and the negative was used without morphologically expressed differentiation between adverbial, adnominal and conclusive function.¹³ Morphological differentiation between conclusive and adnominal has traditionally been regarded as a basic and primitive feature of Japanese verb/predicate morphology through time (and usually is projected back on to and reconstructed for pJ), but it rather seems likely that it was in fact not a feature of early pre-OJ or pJ, but a late pre-OJ innovation (see Frellesvig 2012), and it should therefore not be surprising that we find forms which do not exhibit this differentiation.

In particular, it may be suggested that the basic function of *su* was infinitive/adverbializing, much like adjectival copula *ku* and the regular copula *ni*, and that the use of the forms it attached to was extended to conclusive, and for the semblative copula also adnominal, function. This finds a good functional parallel within OJ and EMJ in the use of the infinitive of the stative existential verb *ari* in both conclusive and infinitive function.

6 Demonstratives *ko* and *so*, and the Verbs *ko-* ‘come’ and *se-* ‘do’

The final forms in *k-* and *s-* to be considered here are the two demonstratives *ko* and *so* and the two verbs *ko-* ‘come’ and *se-* ‘do’.

OJ had two main demonstrative pronouns, *ko* ‘proximal; speaker’ and *so* ‘non-proximal; non-speaker’, each used on their own and with some further extended forms, e.g. the locational demonstratives *koko*, *soko*, as well as more distantly related forms, e.g. *kaku* ‘this way’ and *sate* ‘that way’ (see Frellesvig 2010: 139-43 for more detail). OJ *ko* and *so* are the direct ancestors of the *ko-* and *so-* forms in the three-term *ko-so-a* demonstrative system of Modern Japanese, but the OJ system of demonstratives was somewhat different from Modern Japanese: As shown by Hashimoto (1966), it was basically a two-term system, with ‘speaker’ vs. ‘non-speaker’ as the basic reference, and furthermore and importantly, *ko* was mostly used deictically, e.g. (35), whereas *so* mostly was used anaphorically, with, e.g. (36), or without an explicit antecedent.¹⁴

¹³ For the negative, *zu* < **ni-su* was of course not used in adnominal function, as the functions it was replacing did not include the adnominal function (cf. Frellesvig 2008).

¹⁴ Note, though, that the OJ demonstrative system may have gone back to an earlier pre-OJ three-term system, **i* ‘proximal’ **ki* ‘mesial’ **si* ‘distal’, from which the **i* term was lost resulting in a reinterpretation of the two remaining terms (see Frellesvig and Whitman 2008: 27-29).

- (35) *are pa wasurezi ko no tatibana wo*
 I TOP forget.NCONJ this GEN mandarin.orange ACC
 ‘I will not forget it, this mandarin orange (which the poet was looking at)’ (MYS 18.4058)
- (36) *amanogapa pasi; watas-eraba*
 Milky.Way bridge build.across-STAT.COND
so; no pe yu mo i-watara-sa-mu
 that GEN top ABL even PFX-go.across-RSP-CONJ
 ‘If a bridge, had been built across the Milky Way, she (Tanabata, the Weaver star) would cross on top of it; (= the bridge).’ (MYS 18.4126)

There is a fairly close functional parallel between the demonstratives *ko* and *so* and the two irregular verbs *ko-* ‘come’ and *se-* ‘do’. The full simple paradigms of these two verbs are shown in (37); other than the shape of the basic stem, they inflect identically.

(37)	<i>ko-</i> ‘come’	<i>se-</i> ‘do’
Conclusive	<i>ku</i>	<i>su</i>
Adnominal	<i>kuru</i>	<i>suru</i>
Exclamatory	<i>kure</i>	<i>sure</i>
Imperative	<i>ko</i>	<i>se(yo)</i>
Negative conjectural	<i>kozi</i>	<i>sezi</i>
Optative	<i>kona</i>	<i>sena</i>
Infinitive	<i>ki</i>	<i>si</i>
Gerund	<i>kite</i>	<i>site</i>
Continuative	<i>kitutu</i>	<i>situtu</i>
Conditional	<i>koba</i>	<i>seba</i>
Concessive	<i>kuredo</i>	<i>suredo</i>
Provisional	<i>kureba</i>	<i>sureba</i>
Nominal	<i>kuraku</i>	<i>suraku</i>

Ko- ‘come’ is a speaker-focused deictic motion verb, (38), and thus a straightforward form and verbal function match with demonstrative *ko*.

- (38) *ikwoma no yama wo kwoyete so aga kuru*
 Ikoma GEN mountain ACC crossing FP I GEN come.ADN
 ‘I come (here), crossing over Mount Ikoma’ (MYS 15.3590)

The verb *se-* ‘do’ is functionally more complex. *Se* is usually treated as a, or even the prototypical, transitive verb in modern and pre-modern Japanese and furthermore as the transitive counterpart of *nar-* ‘become’. Etymologically, the transitive counterpart of *nar-* is *nas-* ‘make’, but it is certainly true that *se-* in modern Japanese has transitive and causative uses, particularly in resultative constructions, and it is usually assumed that there is some etymological relation between *se-* and the transitive verb formant *-s-* (as for example in *nas-*) and also the causative formant *-sase-* which comes into the language in the EMJ period. However, in OJ, *se-* had no lexical uses and had, outside of resultative constructions, no transitivity associated with it; *se-* was essentially a grammatical element with the following main uses (see further Frellesvig 2013):

- (a) as a pro-verb, (39)
- (b) in resultative (and a few other raising) constructions, (40)
- (c) to predicate activity nominals, both lexical activity nouns, (41), and
- (de)verbal activity nominals, (42).

(39) *suga-makura aze ka maka_i-sa-mu . kworo se_i ta-makura*
 sedge-pillow why FP roll-RSP-CONJ darling do.IMP arm-pillow
 ‘Why would you lie with a pillow made of sedge? Darling, lie with my arms as your pillow’ (MYS 14.3369)

The collocation *makura mak-* means ‘roll a pillow/headrest; lie with/use as a pillow’, and in this example, *mak-* is the explicit antecedent of *se* ‘do!’. There are also many examples of pro-verb *se-* without an explicit antecedent.

(40) *awoyagwi wo kadura ni situtu*
 green.willow ACC hair.decoration COP.INF do.CONT
 ‘Making the green willow into a hair-decoration’ (MYS 5.825)

(41) *iza kwo-domo tapawaza na se so*
 INTJ child-PL acting.foolishly PROH do PROH
 ‘Hey, children, don’t act foolishly’ (MYS 20.4487)

(42) *izari suru ama no turi-bune*
 fishing do diver GEN fishing-boat
 ‘The fishing boats of the divers who are fishing’ (MYS 15.3609)

Pro-verb *se-* is a straightforward functional match with demonstrative *so* in its function as a pro form. It may further be suggested that it is the pro-verb use which gave rise to the resultative use of *se-* and that this originated in

grammaticalization or conventionalization of instances of *se-* to stand in for or replace lexical verbs with resultative uses, such as *tukur-* ‘make (into)’, or the just mentioned *mak-*, which in the collocation with *makura* in addition to its direct object frame (*makura mak-* / *makura wo mak-*) from (39), also is used in a resultative frame *N wo makura ni/to mak-*, see (43).

- (43) *urabuti wo makura ni makite*
 bay.shore ACC pillow COP.INF roll.GER
 ‘Using/with the shore of the bay as your pillow’ (MYS 13.3339)

The final main use of *se-* is as a predicator of what I here call ‘activity nominals’. These include a quite small number of actual nouns, such as *tapawaza* in (41), but the great majority are (de)verbal forms such as *izari* ‘fishing’ in (42) or *sini* ‘dying’ in (27) above. These latter forms are identical in shape with the inflected verb infinitive and with the stem to which some suffixes attach, including the past tense auxiliaries discussed in §3.¹⁵ The reason I refer to these forms as ‘deverbal nominals’ is that they syntactically have a great deal in common with the ‘verbal nouns’ of NJ, e.g. *benkyoo* ‘studying’, in that both are predicated by *se-* and both clearly exhibit both nominal and verbal properties (see Frellesvig 2013).¹⁶ A significant difference between the NJ verbal nouns and the OJ deverbal nominals is of course that the former make up their own part of speech, or at least a clearly morphologically and syntactically delineated subgroup of verbs, whereas the OJ deverbal nominals were productively formed from verbs. It is still not clear what the difference was in OJ between using a verb in a simple inflected form and using it with *se-*. However, for the purposes here, what is significant is that *se-* used with the deverbal nominals and with activity nouns functions as a simple predicator, carrying morphological information, that is, like a copula.¹⁷ This is not shared by demonstrative *so*, but it should be kept in mind that the relation between demonstratives and copulas is well established cross-linguistically, the latter developing out of the former. Interestingly, the uses of *se-* can be thought to preserve and reflect an earlier stage in the development of some of the other

¹⁵ In traditional Japanese grammar, all of these functions are lumped together under the label ‘*ren’yōkei*’. They are certainly diachronically and/or derivationally related, but in a synchronic analysis, they should be distinguished.

¹⁶ This shows that although verbal nouns today overwhelmingly are Sino-Japanese, constructions existed in Japanese prior to the adoption of these Sino-Japanese words into which they could easily fit, facilitating their intake. If the term ‘gerund’ were not used in Japanese grammar for another form, it would be an obvious choice for the OJ deverbal forms which have a great deal in common with the gerunds of for example English or Latin.

¹⁷ Note also that *se-* is used in copula function in expressions like *pitori site* ‘alone, being alone’.

forms discussed in this paper, prior to their morphologization. First, *se-* predicates a form (deverbal nominal) which is segmentally identical with the stem to which the past tense suffixes attach. Second, although *se-* has some copular function, it is morphologically free in that it does not have to be adjacent to the nominal it predicates, but can be separated by a particle, adverb, or other material. This is not the case for the regular OJ and later copulas (*no, ni, nar-, to,* etc.) which are clitics, or for suffixes and particles discussed in §§2-5 which are either bound morphemes (adjectival copula, past tense suffixes, *su*) or clitics (particles).

In terms of form, demonstrative *so* and *se-* ‘do’ are not as close a match as demonstrative *ko* and *ko-* ‘come’. However, it is likely that the synchronically basic stem of ‘do’, *se-*, diachronically is derived and goes back to a pJ/pre-OJ root **sə* which may be thought to be reflected in OJ in *so/sonē* in the prohibitive construction *na* VERB *so/sonē* (see (20) and (41) above for examples).¹⁸

Thus, there is a strong functional fit between the demonstratives *ko* and *so* and the two irregular verbs *ko-* and *se-*: *ko* and *ko-* are both speaker-focused deictics, and *so* and *se-* are both anaphoric pro-forms, with *se-* exhibiting further specialized copula-(like) and simple predicating uses. On the reconstruction of the root underlying *se-* as *so* (< **sə*), these forms can be reduced to a simple alternation *ko* ~ *so*.

7 Concluding

The hypothesis offered in this paper is that the forms discussed in this paper, summarized in Table 1 by morphology/part of speech,¹⁹ are related and diachronically reflect the same material, in the form of two alternating roots **k-* ~ **s-*.

¹⁸ *Na* was originally a negative adverb; *so* may be thought to reflect the use as imperative of an earlier root of ‘do’ (the original pattern of imperatives of vowel base verbs was to use the basic stem) and *sonē* an archaic optative form of ‘do’, suggesting a diachronically underlying root *so* (< **sə*: pre-OJ **/ə/* > OJ */o/* through regular sound change). On this suggestion, the basic stem *se-* incorporates the same derivational matter as the bigrade verbs and diachronically derives from pre-OJ **sə-y* > OJ *se*.

¹⁹ I have provisionally included the forms from the simple past which involve *sik*.

	<i>k-</i>	<i>s-</i>
adjectival copula	<i>ki</i> <i>kyeba, kyedo, kyeku, kyenaku, kyemu</i> <i>kyere, kyereba, kyeredo</i> <i>ku, kute, kupa</i>	<i>si</i> <i>seba</i> <i>sa</i>
simple past tense	<i>ki</i> <i>kyeba, kyeku, kyemu</i>	<i>si, siku</i> <i>seba</i> <i>sika, sikado, sikaba</i>
modal past tense	<i>kyeri, kyeru, kyere, kyeredo, kyereba,</i> <i>kyeraku</i>	
negative		<i>zu < *ni-su, zute < *ni-</i> <i>sute, zupa < *ni-supu</i>
semblative copula		<i>nasu < na-su</i>
focus particles	<i>ka</i>	<i>so</i>
demonstratives	<i>ko</i>	<i>so</i>
grammatical verbs	<i>ko-</i>	<i>se- (~ so)</i>

Table 1. *K- ~ s-* forms by morphology and part of speech.

The forms in Table 1 take part in one of four alternations, three of which include forms of the adjectival copula, as summarized in (44) and shown in Table 2 by phonological shape.

- (44) **ki ~ si:** instantiated in most of the forms within the adjectival copula and simple past tense paradigms, as well as between these two paradigms, and between the modal past and the adjectival copula paradigms.
- ku ~ su:** adjectival copula infinitive *ku* (and gerund and conditional) and infinitive/adverbializer *su* in the negative infinitive/conclusive (and gerund and conditional) *zu* < *ni-su and the semblative copula *nasu* < *na-su*.
- ka ~ sa:** focus particle *ka* and adjectival copula exclamatory *sa*. These two are morphologically different.
- ko ~ so:** demonstrative *ko* and *ko-* ‘come’, and *se-* (~ *so*) ‘do’ and focus particle *so*.

<p>ki</p> <p>adjectival copula <i>ki; kyeba, kyedo, kyeku, kyenaku, kyemu</i></p> <p>simple past <i>ki; kyeba, kyeku, kyemu</i></p> <p>adjectival copula <i>kyere, kyereba, kyeredo</i></p> <p>modal past <i>kyeri, kyeru, kyere, kyereba, kyeredo, kyeraku</i></p>	<p>si</p> <p>adjectival copula <i>si; seba</i></p> <p>simple past <i>si, siku; seba; sika, sikado, sikaba</i></p>
<p>ku</p> <p>adjectival copula <i>ku, kute, kupa</i></p>	<p>su</p> <p>negative <i>zu</i> < *ni-su, <i>zute</i> < *ni-sute, <i>zupa</i> < *ni-supu</p> <p>semblative <i>nasu</i> < <i>na-su</i></p>
<p>ka</p> <p>focus particle <i>ka</i></p>	<p>sa</p> <p>adjectival copula <i>sa</i></p>
<p>ko</p> <p>demonstrative <i>ko</i></p> <p>verb <i>ko-</i> ‘come’</p>	<p>so</p> <p>demonstrative <i>so</i></p> <p>verb <i>se-</i> (~ <i>so</i>) ‘do’</p> <p>focus particle <i>so</i></p>

Table 2. *K-* ~ *s-* forms by shape.

Phonologically, the alternations include the vowels /i, a, o, u/. I shall not here say much about the vowels, particularly because the present state of our understanding of the role of vowels in pre-OJ word formation outside of some simple parts of verb derivation and inflection is quite limited,²⁰ except to say that all four OJ vowels represented are direct, simple reflexes of vowels found in all reconstructions of pJ vowels, from the most minimal, four-vowel reconstruction (e.g. Martin 1987): OJ /i/ < pJ */i/, /a/ < */a/, /o/ < */ə/, /u/ < */u/; to the most maximal, seven-vowel reconstruction (e.g. Frellesvig and Whitman 2008): OJ /i/ < pJ */i, e/, /a/ < */a/, /o/ < */i, ə/, /u/ < */u, o/.²¹ All four vowels in the alternating forms could therefore be direct, simple reflexes of pJ material.

Morphologically, the forms range between bound morphemes (adjectival copula, simple and modal past tense, *su* infinitive/adverbializer), particles (focus particles), and full words (demonstratives and verbs). The members of each alternation are in some cases distributed morphologically differently (e.g. *ka* particle, *sa* bound morpheme), but there is some internal coherence in that the *ki* ~ *si* and *ku* ~ *su* forms all are bound morphemes and *ko* ~ *so* mostly are full words (demonstratives and verbs), except for the particle *so*.

Functionally, a copula function, or copula origin, is common to most of the forms, as described in the preceding sections: adjectival copula, simple and modal past, focus particles, infinitive/adverbializer *su* in *na-su* and in *zu* < *ni-su, and some uses of *se-* ‘do’. However, first, the forms that have copula function are restricted and/or specialized: the adjectival copula is used only with adjectives, *se-* ‘do’ only to predicate certain types of nominals, and the particles *ka* and *so* have emphatic, exclamative and/or interrogative force. For simple nominal predication, including predication of nominal adjectives, the regular *n-* copula (*no, ni nar-*), which is the source of the Modern Japanese copula forms *da, desu, de, ni, no, na* etc., or less frequently the *t-* copula (*to*), also still in use in modern Japanese, were used. This suggests that the *k- ~ s-* based copula forms were older and generally had been replaced by the *n-* and *t-* copula forms, except in restricted, specialized contexts.

Second, not all the *k ~ s* forms have copula function. This is the case for the two demonstratives and *ko-* ‘come’, but also for some of the functions of *se-* ‘do’. A relation between demonstratives and copula is cross-linguistically

²⁰ For example, in verb inflection *-i* is associated with infinitive/nonfinite inflection and *-u* is associated with finite (conclusive) inflection. That is clearly not the case for the forms here.

²¹ It should be noted that it today is commonly accepted that the adnominal *ki* in the adjectival copula paradigm reflects an earlier **ke* which gave *ki* through mid-vowel raising (through an intermediate stage *kye* which is attested in Eastern OJ, alongside a few forms with *ke*). It is thus possible that all instantiations of the *ki ~ si* alternation actually go back to **ke ~ *se*, but that does not affect the substance of the reconstructions proposed here, and in particular not the main point that all the forms discussed reflect a **k- ~ *s-* alternation.

well established, but always, as far as I am aware, from demonstrative to copula, not the other way. This suggests that a plausible scenario for the relationship between all of the forms considered here is that the demonstratives reflected in OJ as *ko* and *so* were the source of the other forms. Thus, the hypothesis can be restated more precisely as in (45).

- (45) The forms summarized in Tables 1 and 2 are related and ultimately diachronically derive from two alternating pre-OJ or pJ demonstrative roots **k-* ~ **s-* which are reflected in OJ as the demonstratives *ko* and *so*.

The main developments involved may be summarized as in (46).²²

- (46) (a) development from the demonstratives of the two verbs *ko-* ‘come’ and *so-~se-* as verbalizations of the core function of the demonstratives
(b) development from the demonstratives of copulas (the attested uses of *se-* likely reflecting one stage in this development), including the adjectival copula
(c) development from copula of focus particles
(d) development from copula of the past tense auxiliaries

Finally, as for the origin, or source, of the *k* ~ *s* alternation, there are two possibilities: Either (a), it is ultimately a suppletive relation, with a separate source for each of the two members, or (b), the members of the alternation reflect a split of a single source (which could have taken place before or after pJ). Assuming (a), we would like to be able to identify separate candidates for each member. The two demonstratives might be candidates, but they are in a close paradigmatic relationship. Assuming (b), we would ultimately both have to identify a plausible single source and propose some kind of condition for the split. As a single source, a palatal **/c/* might present itself, but the OJ material gives us no grounds on which to propose conditions for a split. Dialect divergence with separate sound changes, followed by dialect convergence or borrowing would be a possibility, but that remains completely speculative. The fact that there is little evidence of a *k* ~ *s* alternation elsewhere

²² This proposal, that the demonstratives are the source of the other forms, would seem to suggest that *ko* ~ *so* reflects the earliest or original alternation, and that other forms involve incorporation of additional material, or morphological use of vowel alternations. However, as mentioned above, it is at present not possible meaningfully to discuss the vowels involved in the alternations.

within the language makes it difficult to consider actual phonological conditions.²³

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²³ Without attaching too much importance to this, it should be mentioned that it is possible to identify a few OJ lexical items which seem to exhibit a *k* ~ *s* alternation, including the following: *toki* ‘time’ ~ *tosi* ‘year’; *aka* ‘bright, red’ ~ *asa* ‘morning’ (cf. also *akatoki* ‘dawn’); *okure* ‘be (left) behind’ ~ *oso* ‘late’; *kosi* ‘lower back’ ~ *se-so* ‘back’; *kapa* ‘river’ ~ *sapa* ‘mountain stream; marsh’; *kup* ‘eat’ ~ *sup* ‘imbibe, inhale’. It should also be noted that the Korean ‘do’ verb, Middle Korean *ho-* > Modern Korean *ha-ta*, is easier to compare with OJ *se-* (~ *so* < **sə*) if OJ *se-* ultimately reflects a single root which split into **k-* ~ **s-*, as K /h/ generally has better correspondences with J /k/ than with J /s/. This could also contribute to understanding correspondences like LMK *helí* ‘lower back’ :: OJ *kosi* ~ *so-*. Both of these points, Japanese internal lexical *k* ~ *s* alternations, and correspondences of Korean /h/ mainly with J /k/, but also with J /s/ could be taken to support a single origin for the *k* ~ *s* alternation in the grammatical forms examined in this paper.

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