

**OLD JAPANESE
CONJUGATION CLASSES**
Bjarke Frellesvig

OJ has eight verbal conjugation classes. From a synchronic morphophonological point of view, they fall in two major groups, *consonant* base and *vowel* base verbs, each with regular and irregular subclasses. The traditional names for the verb classes are explained below. There are two major lexical classes: *Yodan*, which holds approximately 75% of all OJ verbs, and *Shimo Nidan* (abbreviated *S2*), which accounts for approximately 20% of the verbs. The remaining classes have small sets of members. There are around 30 *Kami Nidan* (*K2*) verbs and fewer than a dozen *Kami Ichidan* (*K1*) verbs. *Na-hen* holds two lexical verbs and an auxiliary. *Ra-hen*, *Ka-hen*, and *Sa-hen* are each defined by a single idiosyncratic and highly frequent verb with some amount of grammatical functions: *ar-* 'be, exist', *se-* 'do', and *ko-* 'come', respectively.

Regular

<i>Consonant base</i>	<i>Yodan</i>	75% of OJ verbs	<i>kak-</i> , <i>or-</i> , ...
<i>Vowel base</i>	<i>Shimo Nidan</i> <i>Kami Nidan</i>	20% of OJ verbs c. 30 verbs	<i>ake-</i> , <i>ware-</i> , ... <i>okwi-</i> , <i>ori-</i> , ...

Irregular

<i>Consonant base</i>	<i>Ra-hen</i> <i>Na-hen</i>	<i>ar-</i> , <i>wor-</i> <i>sin-</i> , <i>in-</i> , <i>-n-</i> .
<i>Vowel base</i>	<i>K1</i> <i>Sa-hen</i> <i>Ka-hen</i>	c. 10 verbs <i>mi-</i> , <i>ni-</i> , ... <i>se-</i> <i>ko-</i> .

Regular verb classes.

Consonant base verbs: Yodan.

Yodan is the largest verb class. The base ends in a consonant: most have the shape CVC-; those which are longer, CVCVC- usually incorporate more or less transparent derivational matter. The following base final consonants are found: *-p*, *-t*, *-k*, *-b*, *-g*, *-m*, *-s*, *-r*. That is to say, no regular consonant base verb ends in *-d*, *-n*, *-z*; *-y*, *-w* (see also **root Consonant loss**).

Vowel base verbs: Shimo and Kami Nidan.

Shimo Nidan is the large regular class of vowel base verbs, with bases ending in *-e*. Most *S2* verb bases are dissyllabic, *CVCe-*, but there are a few monosyllabic, *Ce-*, and some trisyllabic *CVCVCe-* bases as well.

Kami Nidan verbs end in *-wi* (neutralized as *-i* after alveolars and glides). They number only about 30. Most are dissyllabic, *CVCwi-*, but a few monosyllabic, *Cwi-*, and trisyllabic, *CVCVCwi-*, bases are included. The following is a reasonably full list of *K2* verbs in OJ and MJ. Note that some verbs are attested in forms that do not allow a positive determination on strict criteria of their conjugational class in OJ.

kwopwi- 'love'
koi- 'lie down' [= //koyi//; only Inf. attested]

komwi- 'enclose, put in' [only attested once in the compound *tumagomwi* 'wife-enclosing'; usually S2
kome-
kozi- 'uproot' [only OJ Inf.; this is the only pJ verb root in -zV]
kui- 'regret' [= //kuyi//]
mwi- 'turn'
nagwi- 'become calm'
negwi- 'appease, solace, pray, be sympathetic with' [only OJ Inf.]
odi- 'fear' [only OJ Concl.]
oi- 'age, get old' [= //oyi//; only OJ Inf.]
okwi- 'arise'
opwi- 'grow/get bigger'
osori- 'fear, dread, be apprehensive' [only OJ Inf.]
oti- 'fall'
pwi- 'dry (intr.)'
pwi- 'sneeze'
pwi- 'winnow' only 1 OJ ex., the Inf. in the compound *pwi-gapa*
porobwi- 'go to ruin' [only OJ Concl.]
puri- 'get old' [only OJ Inf.]
sabwi- 'get desolate, old, rusty, faded'
sakwi- '(?)be torn' [rare and only Inf.; usually S2 *sake-* 'be torn']
sipwi- 'insist, force'
susabwi- 'become strong' [from EMJ also *susabu* and *susamu*, both Yodan]
sugwi- 'pass by, exceed, elapse, pass away'
tamwi- 'go round, turn'
todomwi- 'stop (tr.)' [also S2 *todome-* which is more common]
tukwi- 'get exhausted'
wabwi- 'be embarrassed, disappointed, apologize for'
wi- 'sit; be'
woti- 'be rejuvenated' [only OJ base and Inf.]
yodi- 'grab and pull' [only OJ Inf.]
yokwi- avoid, go around'.

...-*bwi-* 'be like ...'; derives verbs from nouns or adjectives, e.g.: *arabwi-* 'be wild' (*ara-* 'wild'),
manabwi- 'imitate; learn' ~ *manebwi-* 'imitate' (cf. *mane* 'imitation').
 ...-*sabwi-* 'act as / display characteristics appropriate for ...'; derives verbs from nouns, e.g.:
kamusabwi- 'act godly, be old' (*kamu-/kamwi* 'spirit, god'), *yamasabwi-* 'be mountain-like' (*yama*
 'mountain').

Additional K2 verbs (attested in EMJ unless noted):

abi-/ami- 'bathe oneself in'
iki- 'live' [from LMJ; Yodan in OJ and EMJ]
isati- 'weep' [attested as K1 in OJ]
kabi- 'turn mouldy'
kobi- 'flatter'
koi- 'freeze' [= //koyi//]
kori- 'feel regret/remorse for, learn by experience'
kuti- 'rot'
miti- 'become full' [from LMJ; Yodan in OJ and EMJ]
mukui- 'requite' [= //mukuyi//]
nebi- 'get, seem old'
nedi- 'twist, screw'
nobi- 'extend, lengthen, spread, grow'
obi- 'tie around the waist' [Yodan in OJ]
ori- 'descend, alight'
padi- 'feel shame'
potobi- 'swell with water'
simi- 'freeze' [*simu/o]
tibi- 'get worn out' [not attested until LMJ]
todi- 'shut'
urami- 'resent, regret'

Formation of inflectional forms.

The katsuyookei system.

In Japanese school grammar, verb forms are analyzed in terms of six basic 'katsuyookei' (活用形, inflected forms or stems), or simply 'kei', which function as *word forms* and/or *combinatory* stems to which suffixes are added to form extended word forms. Thus, for example the Conditional (*kakaba, akeba*) is analyzed as *mizenkei* + *-ba*, the Gerund (*kakite, akete*) as *ren'yookei* + *-te*, the Concessive (*kakedo, akuredo*) as *izenkei* + *-do*; in this framework formants such as *-ba, -te, -do* are thought of as 'particles' (*joshi*). Table gives the traditional *kei* of the eight verb classes (note that only one class has distinct shapes for all six *kei*, viz. Na-hen).

	Yodan	Ra-hen	K1	Na-hen
<i>mizenkei</i>	<i>kaka</i>	<i>ara</i>	<i>mi</i>	<i>sina</i>
<i>ren'yōkei</i>	<i>kaki</i>	<i>ari</i>	<i>mi</i>	<i>sini</i>
<i>shūshikei</i>	<i>kaku</i>	<i>ari</i>	<i>miru</i>	<i>sinu</i>
<i>rentaikei</i>	<i>kaku</i>	<i>aru</i>	<i>miru</i>	<i>sinuru</i>
<i>izenkei</i>	<i>kake</i>	<i>are</i>	<i>mire</i>	<i>sinure</i>
<i>meireikei</i>	<i>kakye</i>	<i>are</i>	<i>mi(yo)</i>	<i>sine</i>

	S2	K2	Sa-hen	Ka-hen
mzk.	<i>ake</i>	<i>okwi</i>	<i>se</i>	<i>ko</i>
ryk.	<i>ake</i>	<i>okwi</i>	<i>si</i>	<i>ki</i>
ssk.	<i>aku</i>	<i>oku</i>	<i>su</i>	<i>ku</i>
rtk.	<i>akuru</i>	<i>okuru</i>	<i>suru</i>	<i>kuru</i>
izk.	<i>akure</i>	<i>okure</i>	<i>sure</i>	<i>kure</i>
mrk.	<i>ake(yo)</i>	<i>okwiyo</i>	<i>se(yo)</i>	<i>ko</i>

Table. *Katsuyookei* paradigms for the OJ verbal conjugations classes.

Those auxiliaries which do not belong to one of the main verbal conjugation classes (the Negative, Direct Past, Adjective, and Subjunctive auxiliaries) have the following *katsuyookei* representation; none has a mrk.

	Negative	DirectPast	Adj. (ku)	Adj. (Shiku)	Subj.
Mzk.	<i>-(a)zu ~ -(a)na</i>	<i>-kye ~ -se</i>	<i>-kye</i>	<i>-kye</i>	<i>-(a)mase</i>
Ryk.	<i>-(a)zu ~ -(a)ni</i>	-	<i>-ku</i>	<i>-ku</i>	-
Ssk.	<i>-(a)zu ~ -(a)nu</i>	<i>-ki</i>	<i>-si</i>	<i>-∅</i>	<i>-(a)masi</i>
Rtk.	<i>-(a)nu</i>	<i>-si</i>	<i>-ki</i>	<i>-ki</i>	<i>-(a)masi</i>
Izk.	<i>-(a)ne</i>	<i>-sika</i>	<i>-kyere ~ -kye</i>	<i>-kyere ~ -kye</i>	-

Table. *Katsuyookei* paradigms for the OJ Negative, Adjective and Direct Past auxiliaries.

Traditional names for the verb classes.

The traditional nomenclature for the verb classes is based on the *katsuyookei* system in combination with the so-called 'gojuu'on-zu' ('50 sound chart') arrangement of the hiragana and katakana characters in ten columns (*gyō*, representing initial consonants) by five rows (*dan*, representing vowels). The names of the verb classes refer to the positions in the kana arrangement of the final kana used in writing the *kei*. This terminology pays no heed to the *kō-otsu* syllable distinctions, as it was devised for the classical language of the Heian period (where those distinctions had merged) and particularly as it was established before the final discovery of the *kō-otsu* distinctions; also, transparent endings written in a full kana are

ignored for the purposes of these names, viz. the *-ru*, *-re*, and *-yo* of K1, K2, S2, Ka-hen, Sa-hen, and Na-hen.

Yodan (四段 'quadrigrade') verbs are thus named because they are written with final *kana* from 'four rows' (*yo-dan*), i.e. with four different vowels, e.g. the *ta*, *ti*, *tu*, *te* of the forms of *tatu* 'stand':

mzk.	<i>tata</i>	た た
ryk.	<i>tati</i>	た ち
ssk.	<i>tatu</i>	た つ
rtk.	<i>tatu</i>	た つ
izk.	<i>tate</i>	た て
mrk.	<i>tate</i>	た て

As shown in Table above, the izk. and mrk. were in fact different (although the difference was neutralized after some consonants, e.g. *t*); thus izk. *kake* was distinct from mrk. *kakye*. However, once *Cye* and *Ce* had merged at the beginning of the EMJ period (for which the system was devised), izk. and mrk. became homonymous. **Kami ichidan** (上一段 'upper monograde', abbreviated K1) verbs are written with *kana* from 'one row' (*ichi-dan*), the *-i* row (cf. invariant *mi* in Table), which is in the 'upper' (*kami*) half in the usual vertical sequence in the columns in the *kana* tables. **Kami nidan** (上二段 'upper bigrade', K2) verbs are written with final *kana* from 'two rows' (*ni-dan*), the *-i* and *-u* rows (cf. *ori*, *oku*), of which the *-u* row is in the middle and *-i* in the upper half. **Shimo nidan** (下二段 'lower bigrade', S2) verbs are written with final *kana* from two rows, the *-u* and *-e* rows (cf. *aku*, *ake*), of which the *-e* row is in the 'lower' (*shimo*) half. The final four conjugation classes are termed 'irregular' (*henkaku*). **Kagyô-henkaku** (カ行変格 'k-irregular', Ka-hen カ変) is written with *kana* from the 'k-column' (*ka-gyô*); **Sagyô-henkaku** (サ行変格 's-irregular', サ変 Sa-hen) is written with *kana* from the 's-column' (*sa-gyô*); **Ragyô-henkaku** (ラ行変格 'r-irregular', Ra-hen ラ変) is written with *kana* from the 'r-column' (*ra-gyô*); and **Nagyô-henkaku** (ナ行変格 'n-irregular', Na-hen ナ変) with *kana* from the 'n-column' (*na-gyô*).

Names and uses of the six katsuyookei.

The *kei* have the following main uses: **Mizenkei** (未然形; abbreviated mzk.; 'irrealis') is a combinatory stem used with the 'particles' *na* and *ba* and the auxiliaries: *-zi*, *-s-*, *-sime-*, *-ye-*, *-re-*, *-zu*, *-m-*, *-masi*. **Ren'yôkei** (連用形; ryk.; 'adverbial form, the form followed by inflected words (用言 *yôgen*)') is (a) the Infinitive; (b) a combinatory stem used with the 'particles' *te*, *tutu* and the auxiliaries: *-te-*, *-n-*, *-tar-*, *-ki*, *-kyer-*. **Shûshikei** (終止形; ssk.; 'conclusive form') is the Conclusive. **Rentaikēi** (連体形; rtk.; 'adnominal form, the form followed by uninflected words (体言 *taigen*)') is the Adnominal. **Izenkei** (已然形; izk.; 'realis') is (a) the Exclamatory; (b) a combinatory stem used with the particles *ba* and *do*. **Meireikei** (命令形; mrk.; 'imperative') is the Imperative. *Izenkei* and *mizenkei* are named in contrast after the meaning of the forms ending in *-ba*: realis: Provisional *sinure-ba* 'as, when one dies'; irrealis: Conditional *sina-ba* 'if one dies'. The forms in Table are those inflected verb forms for which the *katsuyookei* system provides an analysis.

	Yodan	Ra-hen	Na-hen	S2	K2	K1	Sa-hen	Ka-hen		
Base	<i>kak-</i>	<i>ar-</i>		<i>sin-</i>	<i>ake-</i>	<i>okwi-</i>	<i>mi-</i>		<i>se-</i>	<i>ko-</i>
(a) Mzk.	<i>kaka</i>	<i>ara</i>		<i>sina</i>	<i>ake</i>	<i>okwi</i>	<i>mi</i>		<i>se</i>	<i>ko</i>
Neg.Conj.	<i>kakazi</i>	<i>arazi</i>		<i>sinazi</i>	<i>akezi</i>	<i>okwizi</i>	<i>mizi</i>		<i>sezi</i>	<i>kozi</i>
Desiderative	<i>kakana</i>	<i>arana</i>	<i>sinana</i>	<i>akena</i>	<i>okwina</i>	<i>mina</i>	<i>sena</i>		<i>kozi</i>	
Conditional	<i>kakaba</i>	<i>araba</i>		<i>sinaba</i>	<i>akeba</i>	<i>okwiba</i>	<i>miba</i>		<i>seba</i>	<i>koba</i>
Honorific	<i>kakas-</i>	-		<i>sinas-</i>	-	-	<i>myes-</i>		<i>ses-</i>	-
Causative	<i>kakasime-</i>		<i>arasime-</i>	<i>sinasime-</i>		<i>akesime-</i>	<i>okwisime-</i>		<i>misime-</i>	<i>sesime-</i>
Passive	<i>kakaye-</i>	<i>araye-</i>	<i>sinaye-</i>	-	-	<i>miye-</i>	-		-	-
Passive	<i>kakare-</i>	<i>arare-</i>	<i>sinare-</i>	-	-	-	-		-	-
Negative	<i>kakan-</i>	<i>aran-</i>		<i>sinan-</i>	<i>aken-</i>	<i>okwin-</i>	<i>min-</i>		<i>sen-</i>	<i>kon-</i>
Negative	<i>kakazu</i>	<i>arazu</i>		<i>sinazu</i>	<i>akezu</i>	<i>okwizu</i>	<i>mizu</i>		<i>sezu</i>	<i>kozu</i>
Conjectural	<i>kakam-</i>	<i>aram-</i>		<i>sinam-</i>	<i>akem-</i>	<i>okwim-</i>	<i>mim-</i>		<i>sem-</i>	<i>kom-</i>
Subjunctive	<i>kakamasi</i>	<i>aramasi</i>	<i>sinamasi</i>	<i>akemasi</i>	<i>okwimasi</i>	<i>mimasi</i>	<i>semasi</i>		<i>komasi</i>	
(b) Inf./ryk.	<i>kaki</i>	<i>ari</i>		<i>sini</i>	<i>ake</i>	<i>okwi</i>	<i>mi</i>		<i>si</i>	<i>ki</i>
Gerund	<i>kakite</i>	<i>arite</i>		<i>sinite</i>	<i>akete</i>	<i>okwite</i>	<i>mite</i>		<i>site</i>	<i>kite</i>
Continuative	<i>kakitutu</i>	<i>aritutu</i>	<i>sinitutu</i>	<i>aketutu</i>	<i>okwitutu</i>	<i>mitutu</i>	<i>situtu</i>		<i>kitutu</i>	
Perfective	<i>kakite-</i>	<i>arite-</i>	-		<i>akete-</i>	<i>(yodite-) mite-</i>		<i>site-</i>		<i>kite-</i>
Perfective	<i>(sakin-) arin-</i>			-		<i>(token-) okwin-</i>	<i>min-</i>		<i>sin-</i>	<i>kin-</i>
Direct Past	<i>kakiki</i>	<i>ariki</i>		<i>siniki</i>	<i>akeki</i>	<i>okwiki</i>	<i>miki</i>		<i>siki/sesi</i>	<i>-/kosi</i>
Modal Past	<i>kakikyer-</i>	<i>arikyer-</i>	<i>sinikyer-</i>	<i>akekyer-</i>	<i>okwikyer-</i>	<i>mikyer-</i>	<i>siker-</i>		<i>kiker-</i>	
(c) Excl./izk.	<i>kake</i>	<i>are</i>		<i>sinure</i>	<i>akure</i>	<i>okure</i>	<i>mire</i>		<i>sure</i>	<i>kure</i>
Provisional	<i>kakeba</i>	<i>areba</i>		<i>sinureba</i>	<i>akureba</i>	<i>okureba</i>	<i>mireba</i>		<i>sureba</i>	<i>kureba</i>
Concessive	<i>kakedo</i>	<i>aredo</i>		<i>sinuredo</i>	<i>akuredo</i>	<i>okuredo</i>	<i>miredo</i>		<i>suredo</i>	<i>kuredo</i>

Table. Inflected forms ordered according to formation on *katsuyokei*.

(1)	Negative	Direct Past	Adjective	Subjunct.
(a)				
Mzk.	<i>-(a)zu ~ -(a)na</i>	<i>-kye ~ -se</i>	<i>-kye</i>	<i>-(a)mase</i>
Conditional	<i>-(a)zupa</i>	<i>-kyeba ~ -seba</i>	<i>-kyeba ~ -kupa</i>	<i>-(a)maseba</i>
Negative Conjectural		<i>-kyem-</i>	<i>-kyem-</i>	<i>-kyenaku</i>
(b)				
Inf./ryk.	<i>-(a)zu ~ -(a)ni</i>	-	<i>-ku</i>	
Gerund	<i>-(a)zute ~ -(a)nito</i>		<i>-kute</i>	
Direct Past Modal Past	<i>-(a)zuki ~ -(a)niki</i> <i>-(a)zukyer-</i>			
(c)				
Excl./izk.	<i>-(a)ne</i>	<i>-sika</i>	<i>-kye ~ -kyere</i>	
Provisional Concessive	<i>-(a)neba</i> <i>-(a)nedo</i>	<i>-sikaba</i> <i>-sikado</i>	<i>-kyeba ~ -kyereba</i> <i>-kyedo ~ -kyeredo</i>	

Discussion. The *katsuyookei* system was devised to account for the verb forms of Middle Japanese. It may have been inspired to some extent by the four main verb forms ('principal parts') in Latin grammar.¹ If you know *amo, amavi, amatum, amare* ('to love') or *video, vidi, visum, videre* ('to see'), you can form and identify any form of those verbs, as well as identify their conjugational class. And likewise, if you know the six *kei* of a MJ verb. As the *katsuyookei* system on the one hand has been denounced in 'structuralist' descriptions such as Yokoyama, Bentley, Vovin, or Miller, but on the other hand is the standard way of thinking or talking about Japanese verb morphology within the Japanese tradition, we will discuss it in this section.

It is true that the *katsuyookei* system has some shortcomings in the description of MJ and that it in several ways is even less appropriate for OJ verb morphology. First and foremost, the *katsuyookei* system shares with any analysis which focuses on an absolute, positive, and atomistic identification of the meaning or function of individual morphemes rather than on word forms - and this includes the 'structuralist' ones mentioned above - the fact that it detracts attention from the paradigmatic relations which hold among the inflectional verb forms. It is, for example, a significant fact about OJ that the Modal Past auxiliary *-kyer-* has a Provisional (*-kyereba*), but not a Conditional form (**-kyeraba*); and it is easy to state this fact in this way, i.e. in terms of inflected forms. It is equally possible to say that the particle *-ba* combines with *-kyere* (the *izk.* of *-kyer-*), but not with *-kyera* (the *mzk.*) - or that the flective *-(ur)eba* does, but *-aba* does not combine with *-kyer-* - but the perspective is different. It is the traditional perspective, focussing on individual formants, which has informed most previous descriptions of Japanese inflectional morphology, detracting attention from the paradigmatic relationships holding among inflected forms.

Other than this, the major conceptual shortcoming of the *katsuyookei* system is that it presents the six *kei* as equivalent morphological primitives. However, they are not that: the morphological categories are those represented by the actual inflectional verb forms. Nor are they on a par: some are exclusively word forms (*mrk.*=Imperative, *rtk.*=Adnominal), some are both word forms and combinatory stems (*ryk.*=Infinitive, *ssk.*=Conclusive, *izk.*=Exclamatory), and one is exclusively a combinatory stem (*mzk.*). The *katsuyookei* system thus conflates two different aspects of verb morphology. On the other hand, five of the *kei* correspond to five basic inflected forms and the *katsuyookei* system thus captures an important fact of the language.

¹ 1st person singular indicative present; 1.sg.ind. perfect; prf. participle neuter; prs. infinitive.

Infinitive	=	<i>ren'yōkei</i>
Conclusive	=	<i>shūshikei</i>
Adnominal	=	<i>rentaikei</i>
Exclamatory	=	<i>izenkei</i>
Imperative	=	<i>meireikei</i>

Focusing on its analysis of the formation of inflectional verb forms, the main descriptive drawback of the *katsuyōkei* system is that it provides no further analysis of the six *kei*. That is to some extent a corollary of the kana writing system which provides no ready means of writing segments. Apart from this, the traditional analysis is not appreciatively inferior to other proposed analyses. In fact, it may be seen to constitute a reasonable framework for understanding the formation of most verb forms.

Basic inflected forms.

In the following discussion of formation of verb forms we will make frequent reference to the regular phonological rules of vowel deletion which apply when two vowels are brought together in composition or morphological derivation, see (**phonology**), and we will prefer analyses which derive correct (observable) surface forms through application of these rules over analyses which invoke specific, otherwise unmotivated morphophonemic rules. First of all, the formation of the five basic inflected verb forms may be analyzed as follows.

Yodan.

Base	<i>kak-</i> 'write'	<i>war-</i> 'break (tr.)'
Infinitive	<i>kaki</i> <= <i>kak + i</i>	<i>wari</i> <= <i>war + i</i>
Imperative	<i>kakye</i> <= <i>kak + ye</i>	<i>ware</i> <= <i>war + ye</i>
Conclusive	<i>kaku</i> <= <i>kak + u</i>	<i>waru</i> <= <i>war + u</i>
Adnominal	<i>kaku</i> <= <i>kak + ru</i>	<i>waru</i> <= <i>war + ru</i>
Exclamatory	<i>kake</i> <= <i>kak + re</i>	<i>ware</i> <= <i>war + re</i>

Shimo Nidan.

Base	<i>ake-</i>	<i>ware-</i> 'break (intr.)'	<i>e-</i> 'get, have'
Infinitive	<i>ake + Ø</i>	<i>ware + Ø</i>	<i>e + Ø</i>
Imperative	<i>ake (+ yo)</i>	<i>ware (+ yo)</i>	<i>e + yo</i>
Conclusive	<i>aku</i> <= <i>ake + u</i>	<i>waru</i> <= <i>ware + u</i>	<i>u</i> <= <i>e + u</i>
Adnominal	<i>akuru</i> <= <i>aku + ru</i>	<i>waruru</i> <= <i>waru + ru</i>	<i>uru</i> <= <i>u + ru</i>
Exclamatory	<i>akure</i> <= <i>aku + re</i>	<i>warure</i> <= <i>waru + re</i>	<i>ure</i> <= <i>u + re</i>

Kami Nidan.

Base	<i>okwi-</i>	<i>ori-</i> 'descend'
Infinitive	<i>okwi + Ø</i>	<i>ori + Ø</i>
Imperative	<i>okwi + yo</i>	<i>ori + yo</i>
Conclusive	<i>oku</i> <= * <i>okwu</i> <= <i>okwi + u</i>	<i>oru</i> <= <i>ori + u</i>
Adnominal	<i>okuru</i> <= <i>oku + ru</i>	<i>oruru</i> <= <i>oru + ru</i>
Exclamatory	<i>okure</i> <= <i>oku + re</i>	<i>orure</i> <= <i>oru + re</i>

The Conclusive, Adnominal, and Exclamatory endings are common to the two conjugational classes. The following regular phonological processes take place in the formation of these three forms:

- (2) Vowel deletion

ake + u => aku
*okwi + u => *okwu => oku*

Consonant deletion

kak + ru => kaku
kak + re => kake

The vowel base verbs attach the Adnominal and Exclamatory endings to the Conclusive, rather than to the base. The Conclusive is thus used as a stem in addition to its use as an inflected form. An alternative analysis would posit the Adnominal and Exclamatory formants as *-uru* and *-ure*, respectively, for the vowel base verbs. This would mean, first, that the flectives are different for the consonant and vowel stem verbs. Second, and more importantly, specific morphophonemic rules would be required to generate the correct forms, see (3): the regular phonological vowel deletion rules give the observable surface form with polysyllabic vowel bases, but incorrect forms are generated for the monosyllabic vowel bases, (b), whereas the proposed analysis gives the correct forms in all cases, (a).

(3)	(a) Conclusive + <i>-ru</i> (<i>/-re</i>)	(b) Base + <i>-uru</i> (<i>/-ure</i>)
<i>CVCwi</i> K2	<i>oku+ru => okuru</i> 'rise'	<i>okwi+uru => (okwuru =>) okuru</i>
<i>CVCe</i> S2	<i>aku+ru => akuru</i> 'open'	<i>ake+uru => akuru</i>
<i>Cwi</i> K2	<i>pu+ru => puru</i> 'dry (intr.)'	<i>pwi+uru => *pwiru</i>
<i>Ce</i> S2	<i>pu+ru => puru</i> 'pass, elapse'	<i>pe+uru => *peru</i>

The Consonant base verbs form their Infinitive and the Imperative by means of flectives, *-i* and *-ye*, respectively, whereas the vowel base verbs simply use the base as Infinitive and, originally, Imperative (see further below). The Infinitive formant is sometimes said to be *-i* also for the vowel base verbs. However, that, again, would mean that otherwise unmotivated morphophonemic rules would have to be posited, for the regular phonological rules give incorrect forms for the S2 verbs, (b).

(4)	(a) Base = Infinitive	(b) Base + <i>-i</i>
<i>CVCwi</i> K2	<i>okwi</i>	<i>okwi+i => okwi</i>
<i>Cwi</i> K2	<i>pwi</i>	<i>pwi+i => pwi</i>
<i>Ce</i> S2	<i>pe</i>	<i>pe+i => *pi</i>
<i>CVCe</i> S2	<i>ake</i>	<i>ake+i => *aki</i>

Extended inflectional forms.

Combinatory stems. It has been thought to be problematic for the traditional analysis that some *katsuyookei* are both word forms and combinatory stems. However, it is first of all not clear why this should be a problem, i.e. why an inflected form should not provide the stem upon which other forms are built. It has to be kept in mind that the inflected forms have some prosodic shape overlaid their segmental shape. It is only the segmental shape which is used as a stem for extension. It is likely that the segmental shape of the inflected forms distinguished an independent use from the use as a combinatory stem by means of some additional prosodic morpheme. Thus, in our analysis above, the Adnominal and the Exclamatory of the vowel base verbs were said to be built on the Conclusive.

Exclamatory/izenkei. It is on the other hand quite clear that the Provisional and the Concessive are formed by attaching the formants *-ba* and *-do* to the Exclamatory, cf. (c). There can be no doubt that this is the case if also the Provisional and Concessive of the Direct Past are considered, demonstrating that in actual fact the Exclamatory functions both as an inflected word form and as a combinatory stem.

(5)		Yodan	S2	Direct Past
Exclamatory		<i>kake</i>	<i>akure</i>	<i>-sika</i>
Provisional		<i>kakeba</i>	<i>akureba</i>	<i>-sikaba</i>
Concessive		<i>kakedo</i>	<i>akuredo</i>	<i>-sikado</i>

Ren'yōkei and mizenkei. The bulk of inflectional forms are formed directly on the base of regular vowel base verbs, but have either *-i-* or *-a-* after the base in the consonant base classes. These are the forms which are said to be built on the *ren'yookei* and the *mizenkei*, respectively, in the traditional framework, viz. the forms under (a) and (b) above. A major point of contention between the traditional and 'structuralist' analyses is the segmentation of these forms.

Infinitive/ren'yookei. Looking at the forms under (b), it first of all seems clear enough that they are readily segmentable as Infinitive plus an invariant (consonant initial) formant: *-te*, *-tutu*; *-te-*, *-n-*, *-ki*, *-kyer-*. This is shown by those verbs which have a morphological Infinitive distinct from the base: the consonant base verbs and Sa-hen and Ka-hen. The sole exception is the use of the base of Sa-hen and Ka-hen with some forms of the Direct Past. As noted below, this reflects that those two verbs in a few forms use the base as Infinitive like the other vowel base verbs. Alternatively, it has been proposed that the underlying shape of these formants have initial *-i-*, e.g. *-ite* for the Gerund formant, *-ikyer-* for the Modal Past, etc. attaching directly to the base. However, also this would require otherwise unmotivated morphophonemic rules to derive the correct surface forms, for the regular phonological rules of vowel deletion would give incorrect surface forms for the Sa-hen, Ka-hen, and polysyllabic S2 verbs, see (b), whereas (a) gives the correct surface forms.

	(a) Infinitive + <i>-te</i>	(b) Base + <i>-ite</i>
<i>CVCe S2</i>	<i>ake+te => akete</i>	<i>ake+ite => *akite</i>
<i>Ce S2</i>	<i>pe+te => pete</i>	<i>pe+ite => pete</i>
Sa-hen	<i>si+te => site</i>	<i>se+ite => *sete</i>
Ka-hen	<i>ki+te => kite</i>	<i>ko+ite => *kote</i>

It is not surprising that the Infinitive is the stem upon which a number of forms are built, for the Infinitive is also used as the first member of compounds and may be thought a general compositional form in addition to its independent use, and it is also a nominalized form (the substantive). Thus, the Infinitive functions both as a word form and as a combinatory stem, just like the Exclamatory. It is difficult to disagree with the traditional analysis on this point.

Mizenkei. The forms which in the *katsuyookei* system are said to be based on the *mizenkei* are those under (a) which are built on the base of the vowel base verbs,² but have *-a-* in the consonant base conjugations. The *mizenkei* is thus a secondary, bound, vowel final stem of the consonant base verbs. It is derived by adding *-a-* to the basic stem and is used for combination with a number of consonant initial suffixes which do not attach to the Infinitive. The formants which select the *mizenkei*, rather than the Infinitive or base of consonant base verbs, are noted as in () to show this, the '(a)' not being part of the phonemic shape of the suffixes, but a morphophonemic notation to show which stem these suffixes select.

- (6) *-(a)zi*, *-(a)na*, *-(a)ba*; *-(a)s-*, *-(a)sime-*, *-(a)ye-*,
-(a)re-, *-(a)n-*, *-(a)zu*, *-(a)m-*, *-(a)masi*.

² An exception to this is the K1 Honorific which is lexicalized with those verbs on which it is formed; see QQQ, QQQ.

It has, however, been proposed that the formants in question synchronically have initial *-a-* (e.g. *-aba*) and attach directly to the verb base, but again this would require otherwise unmotivated morphophonemic rules to derive the correct surface forms, as the regular phonological rules would give incorrect forms with the polysyllabic vowel base verbs, (b), whereas (a) gives the correct forms.

(7)	(a) Nidan base + <i>-ba</i>	(b) Nidan base + <i>-aba</i>
K2	<i>okwi+ba => okwiba</i>	<i>okwi+aba => **okwaba/*okaba</i>
S2	<i>ake+ba => akeba</i>	<i>ake+aba => *akaba</i>

Consonant versus vowel base morphophonology.

The overall morphophonological difference between consonant and vowel base verbs lies in the extensive use of the base of vowel base verbs. Whereas the consonant base verbs use a stem forming suffix to form the *mizenkei* and flexives to form the Infinitive and the Imperative, the vowel base verbs simply use the bare base as the combinatory stem used for forming extended forms, as Infinitive and, originally, Imperative. In OJ some S2 verbs use the bare base as Imperative, but mostly the imperative use of the base is reinforced by the exclamatory particle *yo*. K2 verbs generally use *yo* in the Imperative. Of the irregular vowel base verbs, Ka-hen always and both K1 and Sa-hen sometimes use the basic stem as Imperative. In OJ *yo* seems to have been in the course of changing from an exclamatory particle reinforcing the imperative use of the base to an inflectional ending marking the Imperative, but it is not a flexive proper at the OJ stage.³ This in itself is an important difference between the vowel and consonant base verbs: Despite the superficial resemblance between the Imperative formants, the synthetically integrated flexive *-ye* of the consonant base verbs is not directly related to the fairly independent exclamatory particle *-yo*.

	Yodan	S2	K2
Base	<i>kak-</i>	<i>ake-</i>	<i>okwi-</i>
Infinitive	<i>kak-i(-)</i>	<i>ake(-)</i>	<i>okwi(-)</i>
Imperative	<i>kak-ye</i>	<i>ake (yo)</i>	<i>okwi (yo)</i>
Mizenkei	<i>kak.a-</i>	<i>ake-</i>	<i>okwi-</i>

The (primary) consonant base verbs thus exhibit a more synthetic inflection, in turn reflecting their higher age in the language, whereas the vowel base verbs have a more agglutinative and simpler inflection, in turn reflecting the younger age of the main vowel base classes, the Nidan verbs.

The *katsuyookei* system is so deeply ingrained in the way verb morphology is thought about in the Japanese tradition that it would be unnecessarily complicating to abandon it in a publication like this one, despite its inherent descriptive and conceptual inconsistencies (much more so than for example insisting on setting up an extra separate locative case in a school grammar of Latin), particularly because most descriptions and discussions of changes in verb morphology and to some extent syntax take the *katsuyookei* system as the point of departure. Furthermore, as was seen above, this way of representing verbs both captures basic inflected forms *and* provides a basis for understanding the formation of extended inflectional forms. From a pedagogical point of view, finally, the six *kei* are just the right number for a paradigm.

³ Cf. e.g. ZdB s.v. *yo*. Cf. also the use of the exclamatory particle *ya* to reinforce the imperative use of the base of the S2 verb *ne-* 'sleep' in song 10 in the Kinkafu (thought to reflect very late OJ or very early EMJ): *umara-ni ne ya* 'sleep well!'.

With a few adjustments, the *katsuyookei* system well expresses the basic morphophonological difference between consonant and vowel base verbs. The following representation will be adopted, including the basic stem and showing that the *mizenkei* is a derived stem and not a word form, and not positing a *mizenkei* for the vowel base verbs.

	Yodan	Ra-hen	Na-hen		
base	<i>kak-</i>	<i>ar-</i>	<i>sin-</i>		
mzk.	<i>kaka-</i>	<i>ara</i>	<i>sina</i>		
ryk./Inf.	<i>kaki</i>	<i>ari</i>	<i>sini</i>		
ssk./Concl.	<i>kaku</i>	<i>ari</i>	<i>sinu</i>		
rtk./Adn.	<i>kaku</i>	<i>aru</i>	<i>sinuru</i>		
izk./Excl.	<i>kake</i>	<i>are</i>	<i>sinure</i>		
mrk./Imp.	<i>kakye</i>	<i>are</i>	<i>sine</i>		
	S2	K2	K1	Sa-hen	Ka-hen
base	<i>ake-</i>	<i>okwi-</i>	<i>mi-</i>	<i>se-</i>	<i>ko-</i>
mizenkei	-	-	-	-	-
ren'yōkei	<i>ake</i>	<i>okwi</i>	<i>mi</i>	<i>si</i>	<i>ki</i>
shūshikei	<i>aku</i>	<i>oku</i>	<i>miru</i>	<i>su</i>	<i>ku</i>
rentaikei	<i>akuru</i>	<i>okuru</i>	<i>miru</i>	<i>suru</i>	<i>kuru</i>
izenkei	<i>akure</i>	<i>okure</i>	<i>mire</i>	<i>sure</i>	<i>kure</i>
meireikei	<i>ake(yo)</i>	<i>okwiyo</i>	<i>mi(yo)</i>	<i>se(yo)</i>	<i>ko</i>

Stative and Nominalized forms; the Adjective auxiliary.

The formation of the morphological Stative and the Nominalized form is not straightforward within the *katsuyookei* system. The morphological *Stative* diachronically reflects contraction of an originally analytic construction with the Infinitive followed by the existential verb *ar-*: **saki-ar- > sakyar-*. Synchronically, the Stative may be analyzed as having the shape *-yer-* attached to the base of Yodan verbs: *sak-yer-*. With Sa-hen, Ka-hen and the few K1 verbs on which it is formed, a fairly high degree of lexicalization must be envisaged, reflecting diachronic monosyllabication of the etymological source: **si-ar- > ser-*, **ki-ar- > kyer-*. In the *katsuyookei* system the Stative is said to be formed by attaching an auxiliary *-r-* to the mrk. of Yodan (*sakye*) and Sa-hen (*se-yo*), giving the correct forms *sakyar-* and *ser-*. Earlier, before the *koo-otsu* syllable distinctions were properly appreciated, the Stative was said to be formed on the mzk. of Sa-hen (*se-*) and on the izk. of Yodan (*sake*) giving, however, an incorrect form: **saker-*; that is still current in grammars which focus on MJ (in which the *koo-otsu* syllable distinctions had merged).

(8)

	Yodan	Sa-hen	Ka-hen	K1	
Base	<i>sak-</i>	<i>se-</i>		<i>ko-</i>	<i>ki-</i>
Stative	<i>sakyar- seri</i>	<i>kyer-</i>		<i>kyer-</i>	

The *Nominalized* form, too, reflects an originally analytic construction, consisting of the Adnominal and a following (formal) noun/nominalizer **aku* 'thing, place'. At some point **aku* must have been reinterpreted as a flective and the combination morphologised. The basics of this analysis is due to Ohno (e.g. NKBT 4:57-60). He believes that the Direct Past *-siku* is irregular, but as it is, also this form conforms to the phonological rules of vowel deletion. However, the adjective forms, as well as the very rare Direct Past variant *-kyeku*, must be thought to be older lexicalized forms, as they do not reflect regular synchronic vowel deletion, but diachronic contraction (**ia > ye*) at a stage where the Adnominal was

juxtaposed with **aku*. **Aku* is not found in isolation, but perhaps reflected in the verb *akugare*- 'yearn' (no OJ attestation) which Ohno derives from **aku* 'place' + *kare*- 'be separated from'. In the *katsuyookei* system, two variant formants are set up: *-ku* which attaches to the mzk. of Yodan, Ra-hen, adjectives, and the Negative auxiliary (for which, then, a mzk. *na-* is set up); *-raku* which attaches to the mzk. of K1 and to the ssk. of K2, S2, Ka-hen, Sa-hen, Na-hen.

(9)	Yodan	<i>kakaku</i>	<= <i>kaku-aku</i>
	Ra-hen	<i>araku</i>	<= <i>aru-aku</i>
	-(a)n- 'Neg.'	-(a)naku	<= -(a)nu-aku
	S2	<i>akuraku</i>	<= <i>akuru-aku</i>
	K2	<i>okuraku</i>	<= <i>okuru-aku</i>
	K1	<i>miraku</i>	<= <i>miru-aku</i>
	Ka-hen	<i>kuraku</i>	<= <i>kuru-aku</i>
	Sa-hen	<i>suraku</i>	<= <i>suru-aku</i>
	Na-hen	<i>-nuraku</i>	<= <i>-nuru-aku</i>
	Direct Past	<i>-siku</i>	<= <i>-si-aku</i>
		~ <i>-kyeku</i>	< <i>*-ki-aku</i>
	Adjective	<i>-kyeku</i>	< <i>*-ki-aku</i>

Finally, for the adjective auxiliary, the frequent and important forms Exclamatory-1 and Infinitive-2, *-sa* and *mi*, respectively, have no representation in the *katsuyookei* system.