On the Reconstruction of Japanese Accents

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Abstract

Based on modern dialects and ancient documents I propose a proto-accent system for mainland Japanese dialects. For the high-beginning group I hypothesize a half-falling pattern of the form *HHMM- instead of the commonly accepted high-level pattern *HHHH-.

On the whole, the proto-system consists of the two tonal patterns, falling(!) and low-level (_), and the two accent kernels, rising ([) and lowering (]), and the system contains more oppositions than previously proposed.

2

Notations

[: (abrupt) rise in pitch [[: rising pitch

] : (abrupt) fall in pitch]] : falling pitch

! : half fall in pitch !! : half falling pitch

%: half rise in pitch O : syllable (CV)

e.g.,

 [OO = HH, [[O = R, [O]O = HL, [OO]] = HF,

 [O!O = HM, [O!! = H-M, O%O = LM

A brief history of the reconstruction of Japanese accents

- E. D. POLIVANOV initiated the comparative study of Japanese accents (Nagasaki, Tosa, Kyoto and Tokyo).

- HATTORI Shiroo laid the foundations of a geographical, descriptive and comparative study of Japanese accents.

- KINDAICHI Haruhiko established proto-forms and word-accent classes.

Word-accent classes

- Word-accent classes are the categories which are proposed in the proto-system on the basis of the correspondence sets.

- Based on modern dialects and ancient documents, especially *Ruiju-Myoogishoo*, the following word-accent classes are proposed by KINDAICHI Haruhiko. Hence, they are named as "Kindaichi's word-accent classes".

Examples of K's word-accent classes

class	monosyllabic (I)	disyllabic (II)	trisyllabic (III)
-1	ka, ti, to,...	kaze, niha, tori,...	kemuri,kuruma,...
-2	na, ha, hi,...	isi, kaha, oto,...	aduki, kenuki,...
-3	ki, te, me,...	inu, hana, yama,...	komugi, tikara,...
-4		kasa, sora, matu,...	atama, wotoko,...
-5		aki, ame, nabe,...	asahi, inoti,...
-6			usagi, kitune,...
-7			itigo, kabuto,...

Prerequisites for the reconstruction

(a) The changes from the proto-system to the attested dialects and ancient documents must be explained in a phonetically natural way.

(b) Reconstructed accent patterns must be realistic, and each pattern must be clearly distinguished from the others. On the other hand, patterns of the classes which have merged in many dialects must have some common features.

(c) Reconstructed forms must make a system as a whole.

Kindaichi's proto-system (nouns)

classes	I	II	III	
-1	*[ka	*[kaze	*[kuruma	
-2	*[ha]]	*[o]to	*[adu]ki	High-beginning
-3	*ki	*yama	*[ti]kara	
-4		*so[ra	*atama	
-5		*a[me]]	*ino[ti	Low-beginning
-6			*u[sagi	
-7			*ka[bu]to	

Kindaichi's proto-system (verbs)

	IIa (vowel verbs)		IIIa	
	concl.	attrib.	concl.	attrib.
-1	*[ki]ru	*[kiru	*[a]gu	*[aguru
-2	*mi[ru]]	*mi[ru	*sa[gu]]	*sagu[ru
	IIb (cons. verbs)		IIIb	
-1	*[o]ku	*[oku	*[ata]ru	*[ataru
-2	*ka[ku]]	*ka[ku	*ugo[ku]]	*ugo[ku
-3			*a[ru]ku	*a[ruku

Problems for Kindaichi's Theory

- K' s hypothesis meets the prerequisites (b) & (c).
- However, there are many dialects where it is difficult to meet condition (a).

[1] Especially, not a few dialects have a fall in pitch in class 1 (I-1, II-1, III-1).

[2] Some dialects have different patterns between class-1 nouns and class-1 verbs, both having the same patterns in the proto-system.

[3] Some have distinctions between conclusive forms and attributive forms in verbs, both being derived from the original attributive forms.

[1] Dialects with a fall in pitch in class 1

- Many dialects have a fall after the second mora.
- They are distributed mainly in three separate districts in Japan, two of which, (1) and (2), are contiguous to dialects with half-falling pattern.

(1) Sado, Kanazawa (Ishikawa), Mikuni (Fukui), etc.

(2) Manabe-shima, Shishi-jima, Uoshima (all in Setonaikai), Yamashirodani (Tokushima), etc.

(3) Oki, Mishima (Yamaguchi), Iki, Tsushima, 2-pattern accent in Kyuushuu, etc.

[2] Class 1 noun ≠ Class 1 verb

(1) Dialects with no fall in pitch in nouns, but with a fall in pitch in verbs: Toyama, Marugame (Kagawa), etc.

Toyama: ka[ze ≠ [o]ku, sa[kana ≠ a[ta]ru

Marugame: [ka!ze ≠ [o]ku, [saka!na ≠ [a]taru

(2) Dialects with different position of the fall in nouns and verbs: Sado, Mishima, Hakata, Iki, etc.

Mishima: ka[ze] ≠ [o]ku, sa[kana] ≠ a[ta]ru

[3] Dialects with alternations between conclusive forms and attributive forms

- Sado, Himi (Toyama), Mino (Kagawa), etc.
- The Aikawa Dialect in Sado:

	Positive		Negative	
IIa-1	[ki]ru	ki[ruto]ki	[ki]N	[kiNto]ki
IIa-2	mi[ru	mi[ruto]ki	[mi]N	[miNto]ki
IIb-1	[o]ku	o[kuto]ki	o[ka]N	o[kaNto]ki
IIb-2	ka[ku	ka[kuto]ki	[ka]kaN	[ka]kaNto]ki
IIIa-1	a[ge]ru	a[geruto]ki	a[ge]N	a[geNto]ki
IIIa-2	[sa]geru	[sa]geruto]ki	[sa]geN	[sa]geNto]ki

No alternations in the past tense

- Aikawa: Past forms   Cf. Present forms

IIa-1 [ki]ta,   [ki]tato]ki   [ki]ru,   ki[ruto]ki

IIa-2 [mi]ta,   [mi]tato]ki

IIb-1 [o]ita,   [o]itato]ki   [o]ku,   o[kuto]ki

IIb-2 [kaita,   [kaitato]ki

IIIa-1 [a]geta, [a]getato]ki   a[ge]ru, a[geruto]ki

IIIa-2 sa[gete, sa[getato]ki

Explanations so far: a fall in class 1

- Kindaichi: through <u>the low flat</u> pattern.
- *[OOO > *O[OO > *OO[O > *<u>OOO</u> >*[O]OO > O[O]O

  or ....*<u>OOO</u> >*[OO]O > O[O]O

- Serious questions:

(1) Unnaturalness: Only class 1 suffers drastic changes, the others remaining almost as they were.

(2) Is it possible without any merger of classes?

(3) No dialect with <u>low flat pattern</u> is found nearby.

A case of the Shiramine dialect

- "Shiramine dialect underwent drastic changes in II-1, but preserved proto-form in II-2."(Kindaichi)
- The only possibility? (* omitted for lack of space)

```
         a        b        c        d        e        f       now
-1 [kaze = [kaze > ka[ze> kaze  >[ka]ze >ka[ze]=ka[ze]
-2 [o]to = [o]to = [o]to = [o]to > o[to] > oto   > [o]to
-3 yama>[ya]ma=[ya]ma=[ya]ma>ya[ma]>yama>[ya]ma
-4 ka[sa = ka[sa > kasa > [kasa > ka[sa  = ka[sa =ka[sa
-5 a[me]]>a[me > ame >[ame > a[me  = a[me =a[me
```

The problem of class 1

- The problem of the kernel in class 1: starting from *high-level pattern as a proto-form, it became low flat, and initial rising occurred, and then the high shifted one mora to the right --- detour!

- The same difficulties hold true also for Manabe-shima, Sado, Uoshima and Mishima dialects, and so on.

- *[O, *[OO, *[OOO must be reconsidered.

Explanations so far: Verbs

- As for [2] the difference in class 1 between nouns and verbs, only an ad-hoc explanation by analogy is given, without success.

- As for [3] the difference between conclusive and attributive forms of verbs, no explanation is yet given, because the facts are first clarified by my field research.

Other possibilities

- KINDAICHI proposed another possibility:

  II-1 *[OO]],   III-1 *[OOO]]

  However, he did not adopt this, because this hypothesis entails more difficult problems.

- TOKUGAWA Munemasa: II-1 *[OO]o (o means a particle)

- However, both did not, or rather could not, clarify the whole system, and the changes from the proto-system are not clear at all.

Half-falling tonal pattern

- A number of dialects have been found in the last 25 years which have a high-beginning half-falling tonal pattern (hereafter, half-falling tonal pattern).

- The half-falling tonal pattern has basically [OO!O-(HHM-) pattern (represented by !), distinguished from HHH- pattern ( ).

- This pattern is distributed in at least three areas: (1) Ishikawa Pref., (2) Shikoku district, and (3) islands of Setonaikai.

Geographical distribution of half-falling tonal pattern

- Ishikawa: Shiramine, Tsubata and Monzen, three non-contiguous areas.
- Shikoku district: Matsuyama〜Kawanoe (Ehime, excluding Imabari?); Kan'onji〜Marugame, Takamatsu (and many other places? in Kagawa); Ikeda〜Waki (Tokushima).
- Setonaikai: Ibuki-jima, Hiro-shima.
- The pattern appears for class 1, except for the islands in Setonaikai, where it appears on II-3 and III-4·5. The pattern appears for both categories in Kagawa dialects because of the mergers.

Examples of the half-falling tonal pattern: The case of Ibuki-jima

- The Ibuki-jima dialect has the most complicated accent system among the Japanese dialects: it is a system with one lowering accent kernel /]/ and three tonal patterns (, !,]). It has a half-falling tonal pattern (!), in addition to the two tonal patterns (,]) of the Kansai dialects.

- The dialect is also the most conservative dialect in Japan. It preserves almost all the accentual distinctions found in the Kyoto dialect of the 12th century. Only III-4 and -5 have merged.

High-beginning level tonal pattern (1)

I-1   [e·   [ega   II-1 [kaze   [kazega

I-2   [ha·]]   [ha]ga   II-2 [i]si   [i]siga

III-1 [kuruma   [kurumaga

III-2 [musu]me   [musu]mega

III-3 [ci]kara   [ci]karaga

High-beginning level tonal pattern (2)

[niwatori

[kanemo]ci

[ama]zake

[a]sagao

[niwatoriga

[kanemo]ciga

[ama]zakega

[a]sagaoga

[hiyakedome

[kawakuda]ri

[agari]guci

[aka]hadaka

[i]cyooyaku

[hiyakedomega

[kawakuda]riga

[agari]guciga

[aka]hadakaga

[i]cyooyakuga

Half-falling tonal pattern

I-? [sya·!!   [sya!ga   II-3 [i!nu   [inu!ga

III-4 [ata!ma   [ata!maga

[asi!ato   [asi!atoga
[kaga!ku]sya   [kaga!ku]syaga
[ma!me]rui   [ma!me]ruiga

[ata!makazu   [ata!makazuga
[waka!mezi]ru   [waka!mezi]ruga
[sado!ga]sima   [sado!ga]simaga

Low-beginning rising tonal pattern (1)

I-3 [[te·   te[ga   II-4 hu[ne   hune[ga

                                   II-5 sa[ru]]   sa[ru]ga

III-6 suzu[me   suzume[ga

III-? noro[ma]]   noro[ma]ga

III-7 ka[i]ko   ka[i]koga

Low-beginning rising tonal pattern (2)

atoa[si   atoasi[ga

ki[no]bori   ki[no]boriga

irozi[ro]]   irozi[ro]ga

macu[ta]ke   macu[ta]kega

kibibata[ke   kibibatake[ga

momeN[ba]ri   momeN[ba]riga

kasi[wa]moci   kasi[wa]mociga

o[cu]kisaN   o[cu]kisaNga

Accent system of the Ibuki-jima dialect

A: / O   OO   OOO   OOOO   OOOOO

    O]   O]O   OO]O   OOO]O   OOOO]O

                O]OO   OO]OO   OOO]OO

                        O]OOO   OO]OOO

                                  O]OOOO/

B: /!O   !OO   !OOO   !OOOO   !OOOOO

                        !OOO]O   !OOOO]O

                        !OO]OO   !OOO]OO

                                  (!OO]OOO)/

Accent system of the Ibuki-jima dialect

C: /|O |OO |OOO |OOOO |OOOOO
          |OO] |OOO] |OOOO]   (|OOOOO])
                 |OO]O |OOO]O |OOOO]O
                         |OO]OO |OOO]OO
                                  |OO]OOO/

Correspondences: Ibuki & Myoogi

Ibuki	K's word-classes			Myoogishoo		
	I-1,2	II-1,2	III-1,2,3	上(-), 東		H-
!		II-3	III-4,5	平平(-)		L-
˩	I-3	II-4,5	III-6,7	平上(-),平東		L-

- Half-falling tonal pattern (!) has forms [O!!, [O!O, [OO!O(-), and correspond to 平平(-) in Myoogishoo, but not to 上上(-).

Accent system of Kan'onji dialect (1)

- Kan'onji city is located on the opposite shore of Ibuki-jima. In this dialect the half-falling pattern appears for class 1, which had been regarded as high level pattern before my observation.

/!ka (1)   !kaze (1,3)   !sakana (1,4)   !kaminari
 !ha] (2)   !o]to (2)   !ke]nuki (2)   !a]sagao
                                           !kanemo]ci/
/&ki (3)   &hune (4)   &usagi (6)   &niwatori
           &nabe] (5) &kabu]to (7) &mura]saki
                                         &nokogi]ri/

Accent system of Kan'onji dialect (2)

- The Kan'onji dialect has two tonal patterns, half-falling (!) and low-connecting (&), and one lowering kernel (]).

- The half-falling pattern is like that of Ibuki-jima, but the accent kernel may fall on the first mora. The kernel does not appear on the second mora.

- The latter has "u[sagi～%usagi～[usagi" patterns in isolation, but it begins low after another word, as "[kono]usagi", which indicates that this is derived from the low-beginning rising pattern.

Accent system of Shiramine dialect

- In fact, the half-falling tonal pattern appears for class 1 of the Shiramine dialect, too.

!ka   !kaze   !sakana   !asagao   !aidagara

!hakiso]ozi

!otokoo]ya

te   kata   usagi   harigane   otosidama

hi]   ha]na   mu]sume   ne]esaN   si]asatte

oto]na   kuci]biru   kata]guruma

murasa]ki   umibo]ozu

uNteN]si

My hypothesis

- I hypothesize that this half-falling tonal pattern is the proto-form of class 1. To be precise, I propose this not only as the proto-form of class 1, but also as that of the traditionally assumed H-beginning group.

- This explains not only the origin of the accent kernel of class 1 in some dialects, but also the high-beginning level tonal pattern of other dialects in a natural way.

My proto-forms for K's classes

-1 *[ka!! *[ka!ze *[kuru!ma IIa -1 *[ki]ru   *[ki!ru

-2 *[ha]] *[o]to *[a!du]ki   -2 *mi[ru]] *mi[ru

-3 *ki   *yama *[ti]kara IIb -1 *[o]ku   *[o!ku

-4   *so[ra *atama   -2 *ka[ku]] *ka[ku

-5   *a[me]] *ino[ti IIIa-1 *[a]gu   *[agu!ru

-6   *u[sagi   -2 *sa[gu]] *sagu[ru

-7   *ka[bu]to IIIb-1 *[a!ta]ru *[ata!ru

                  -2 *ugo[ku]] *ugo[ku

                  -3 *a[ru]ku   *a[ruku

Kindaichi's law: "shiki"-preserving law

- Cognates have the same beginning feature: when a word begins H-, its cognate also begins H-, and when a word begins L-, its cognate also begins L-.
- This applies between: (1) a word and compounds containing the word as the first element, (2) a word and its derivatives, (3) inflected forms of the same word.
- My hypothesis, replacing high-beginning level by high-beginning half-fall tonal pattern, does not affect Kindaichi's law.

Changes from the half-falling pattern

- [OO]O < *[OO!O > [OOO
- The kernel (]) of class 1 is a secondary development, the place corresponding to that of half-fall (!).
- In other dialects, including Ibuki-jima, high leveling occurred.
- The half-falling tonal pattern in Ibuki-jima is a secondary development from *OO- (e.g., *OO > [O!O, *OOO[O]O > [OO!OO]O). This is regarded as a regional feature in Sanuki district.

Accentual changes of Shiramine dialect

- Only minor changes occurred: loss of final falling pitch (]]) in II-5, entailing the merger with II-4., and a delay of rise and half-fall as shown in II-1.

-1 *[ka!ze = *[ka!ze > ka%ze!!

-2 *[o]to   = *[o]to   = [o]to

-3 *yama   > *[ya]ma = [ya]ma

-4 *so[ra   = *so[ra   = so[ra

-5 *a[me]] = *a[me]] > a[me

Kanazawa dialect near Shiramine

- The Kanazawa dialect near Shiramine has a kernel on the second mora in class 1, such as "ka[ze]], ka[ze]nga", "sa[ka]na, sa[ka]nanga".

- These must have derived from the proto-forms, *[ka!ze, *[kaze!nga, *[saka!na(nga).

- The other dialects with a kernel in class 1 can be explained in almost the same way.

History of A-pattern of 2-pattern accent system in Kyuushuu

- Proto-forms   A-pattern

  *[OO!OOO   >   *[OO]OOO

  *[O]OOOO   >   *[OO]OOO

  *[O!O]OOO   >   *[OO]OOO

  *[OO!O]OO   >   *[OO]OOO

  *[OO!OO]O   >   *[OO]OOO

History of alternation in verbs of Sado

- Both concl. and attrib. originated from proto-attributive kernelless forms. The kernel in concl. is a secondary development in sentence final. On the other hand, the kernel of past form is original.

Concl. *[ki!ru.   >*[ki]ru.   >*[ki]ru.   = [ki]ru.

Attrib. *[ki!ru… >*[ki!ru… >*[kiru…   > ki[ru…

Concl. *[age!ru. >*[age]ru. >*[age]ru. >a[ge]ru.

Attrib. *[age!ru…>*[age!ru…>*[ageru…>a[geru…

Past: Con. *[ki]ta. = *[ki]ta. = *[ki]ta. = [ki]ta.

　　　Attr. *[ki]ta…=*[ki]ta… = *[ki]ta… = [ki]ta…

History of the difference between nouns and verbs in class 1

- The Himi dialect (Toyama)

II-1   *[ka!ze = *[ka!ze > *[kaze   > ka[ze

IIa-1 *[ki!ru. > *[ki]ru. = *[ki]ru. = [ki]ru. (concl.)

IIa-1 *[ki!ru…= *[ki!ru…= *[kiru… > ki[ruto]ki

past *[ki]ta. = *[ki]ta. = *[ki]ta. > ki[ta]].

      *[ki]ta…= *[ki]ta…= *[ki]ta…> ki[ta]toki

- The difference between '[ki]ru' and 'ki[ta]]' depends on the vowels of the second mora.

Half-falling > high-level

- Many dialects are assumed to have undergone the changes from high-beginning <u>half-falling</u> tonal pattern to high-beginning <u>level</u> pattern. It is progressive assimilation, a common occurrence. The position of the kernel didn't change.

- Thus: *[OO!OOO > [OOOOO

    *[OO!OO]O > [OOOO]O

    *[OO!O]OO > [OOO]OO

High level > half-falling is unnatural

- SOEDA Kenjiroo and OKUMURA Mitsuo seem to assume the reverse process, but they deal only with *[OOo > (?*[OO!o >) [OO]o, and regard as a weakening of articulation in word-final position.

- However, this weakening theory cannot explain why a half-fall in pitch appears after the second mora, irrespective of the length of the word, and whether the word has a kernel or not.

  (*[OOOOO>[OO!OOO?, *[OOOO]O>[OO!OO]O?)

- Moreover, this peculiar change must have occurred in remote dialects independently.

Beyond K's word-accent classes (1)

- MATSUMORI Akiko treats the split of III-5 into -5a (abura, inoti, kokoro, etc.) and -5b (asahi, sugata, wasabi, etc.) in Shikoku district (Ehime: Kawanoe; Kagawa: Ibuki-jima and many other places; Tokushima: Ikeda, Waki and so on) from a viewpoint of lexical diffusion, starting from the same proto-form III-5 *O[O]O.

- However, since there are no phonetic conditions for the split, these two different categories must be posited for the proto-system.

Beyond K's word-accent classes (2)

- HATTORI proposed in 1951 that III-7 should be divided into two groups. I propose the following proto-forms: III-7a *ku[suri]], III-7b *ka[bu]to.

- In the ancient literature there are a number of words beginning with 去-tone (estimated as a rising pitch).

  *[[su (nest);   *[[ha]] (tooth)

  *[[goma (sesame), *[[hebi (snake), *[[yuri (lily);
  *[[ha]gi (leg),   *[[yo]ku (well, often, adv.)

  *[[hisui (jade),   *[[e]yami (epidemic)

Beyond K's word-accent classes (3)

- High-beginning group:
  *[mi!zo]] (ditch), *[u!e]] (top)
  [toko!ro]] (place), ?[asi!ta]] (tomorrow)
- However, I omit the following two words:
  ?*[ni]]zi, ?*[ni]:zi (rainbow),
  ?*[hi]]muka, ?*[hi]:muka (east),
  Much remains to be considered concerning the syllable structure in proto-system.

The whole proto-forms

-1 *[ka!!   a *[ka!ze   a *[kuru!ma   -8 *[[hisui

-1   b *[mi!zo]]   b *[toko!ro]]   -9 *[[e]yami

-2 *[ha]]   *[o]to   *[a!du]ki

-3 *ki   *yama   *[ti]kara

-4 *[[su   *so[ra   *atama

-5 *[[ha]]   *a[me]]   a *ino[ti

-5   b *asa[hi]]

-6   *[[goma   *u[sagi

-7   *[[ha]gi   a *ku[suri]]

-7   b *ka[bu]to

The whole proto-system

-1 *!ka   a *!kaze   a *!kuruma   -8 *_[hisui

-1   b *!mizo]   b *!tokoro]   -9 *_[e]yami

-2 *!ha]   *!o]to   *!adu]ki

-3 *_ki   *_yama   *!ti]kara

-4 *_[su   *_so[ra   *_atama

-5 *_[ha]   *_a[me]   a *_ino[ti

-5   b *_asa[hi]

-6   *_[goma   *_u[sagi

-7   *_[ha]gi   a *_ku[suri]

-7   b *_ka[bu]to

- Two tonal patterns (! and _) and two kernels ([and]).

Changes from the proto-system (1)

Chuuoo (Kansai)		Proto	Ibuki
*[kuruma	< -1 a	*[kuru!ma	> [kuruma
*[tokoro	< -1 b	*[toko!ro]]	> [tokoro
*[azu]ki	< -2	*[a!du]ki	> (a[zu]ki) [musu]me
*[ci]kara	< -3	*[ti]kara	> [ci]kara
*[ata]ma	< -4	*atama	> [ata!ma
*[i]noci	< -5 a	*ino[ti	> [ino!ci
*[a]sahi	< -5 b	*asa[hi]]	> [a]sahi
*usa[gi	< -6	*u[sagi	> usa[gi
*ku[su]ri	< -7 a	*ku[suri]]	> ku[su]ri
*ka[bu]to	< -7 b	*ka[bu]to	> ka[bu]to
*hisu[i (?[OOO)	< -8	*[[hisui	> hisu[I (?[OOO)

Changes from the proto-system (2)

Kaga (Ishikawa)   Proto   Sanuki (Kagawa)

*[kuru!ma   <   -1 a *[kuru!ma   > *[kuru!ma

*[toko!ro   <   -1 b *[toko!ro]]   > *[toko!ro

*[a]zuki   <   -2   *[a!du]ki   > *[a]zuki

*[ci]kara   <   -3   *[ti]kara   > *[ci]kara

*[a]tama   <   -4   *atama   > *[ata!ma

*[i]noci   <   -5 a *ino[ti   > *[ino!ci

*[a]sahi   <   -5 b *asa[hi]]   > *[a]sahi

*u[sagi   <   -6   *u[sagi   > *u[sagi

*ku[su]ri   <   -7 a *ku[suri]]   > *ku[su]ri

*ka[bu]to   <   -7 b *ka[bu]to   > *ka[bu]to

*[hisu!i   <   -8   *[[hisui   > ?

Changes from the proto-system (3)

*ku[ru]ma < -1 a *[kuru!ma   > *[kuruma > *kuruma

*to[ko]ro < -1 b *[toko!ro]] > *[tokoro]] > *tokoro(])

*a[zu]ki   < -2   *[a!du]ki   > *[azuki   > *azuki

*[ci]kara   < -3   *[ti]kara   > *[cikara   > *cikara

*[ata!ma   < -4   *atama   > *[ata]ma   > *ata[ma]

*[ino!ci   < -5 a *ino[ti   > *[i]noci   > *i[no]ci

*[a]sahi   < -5 b *asa[hi]]   > *[a]sahi   > *a[sa]hi

*usa[gi   < -6   *u[sagi   > *usa[gi   > *[u]sagi

*ku[su]ri   < -7 a *ku[suri]]   > *kusu[ri   > *[ku]suri

*ka[bu]to < -7 b *ka[bu]to   > *kabu[to > *[ka]buto

      ?   < -8   *[[hisui   > *[hisui   > *hisui

52

Changes from the proto-system (4)

2-pattern		Proto	Nairin & Chuurin	
*[kuru]ma	< -1 a	*[kuru!ma	> *[kuruma	> *ku[ruma
*[toko]ro	< -1 b	*[toko!ro]]	> *[tokoro	> *to[koro
*[adu]ki	< -2	*[a!du]ki	> *[azu]ki	> *a[zuki]
*[tika]ra	< -3	*[ti]kara	> *[ci]kara	> *ci[ka]ra
*a[tama	< -4	*atama	> *[ata]ma	> *a[tama]
*i[noci	< -5 a	*ino[ti	> *[i]noci	> *i[no]ci
*a[sahi	< -5 b	*asa[hi]]	> *[a]sahi	> *a[sa]hi
*u[sagi	< -6	*u[sagi	> *u[sagi	> *u[sagi
*ku[suri	< -7 a	*ku[suri]]	> *ku[suri	> *ku[suri
*ka[buto	< -7 b	*ka[bu]to	> *kabu[to ?	> *[ka]buto
*[hisu]i?	< -8	*[[hisui	> *hi[sui	> *hi[sui

Thank you!

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