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Problems of Primary Root Structure in Pre-Proto-Japanic[1)]

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Abstract.

Although there are many hypotheses concerning the "origins" and genetic affiliations of Japanese/Japanic, it appears that the diachronic information inherent in the Japanese language material itself is still insufficiently understood. A potential clue to Pre-Proto-Japanic language typology is offered by the Japanese morpheme structure, which, when analyzed in a framework of internal reconstruction, reveals a striking predominance of simple monosyllabic roots with tonal distinctions. In addition to the numerous monosyllabic stems of the types (C)V(C) still present in modern Japanese, a large part of the more complex stems of the synchronic types (C)VCV(C) can actually be shown to be composed of primary monosyllabic components. This suggests that Japanese, very much like Mandarin Chinese on the continent, has evolved from a monosyllabic tonal language of the Sinitic type in the direction of an increasingly polysyllabic and decreasingly tonal language of the Altaic type. The present paper contains a general characterization of this evolutive process, while a more elaborate analysis of selected details will form the subject of separate papers in the future.

0. Preliminary remarks.

The significant role played by monosyllabic roots in Japanese is a fact obvious to anyone familiar with the language. Monosyllabic roots as such are not rare in the languages of the world, but in Japanese they contrast markedly with the generally polysyllabic word structure of the language. Although the potential diachronic importance of this peculiarity

has been recognized by a few linguists(notably AUSTERLITZ 1987), very little consistent work has been done on the theme, especially when we think of how much effort has been put on the external comparisons of Japanese in contexts such as the Altaic Hypothesis(cf. e.g. MILLER/VOVIN 1994).

It is therefore not uninteresting to examine the status of monosyllabic roots in Japanese once more in order to determine their significance for the typological prehistory of the Japanic language family as a whole. As a working hypothesis, we may assume that monosyllabic roots were once the predominant, possibly even the sole, root type of Pre-Proto-Japanic. The formation of the modern Japanese lexicon, with its overwhelmingly polysyllabic roots and stems, must have taken place in a variety of ways, the most important of which seems to have been compounding.

The reasons why the earlier monosyllabic roots had to be reorganized into longer compound words are relatively easy to discern in the synchronic language material. Apparently, a series of phonological developments in Pre-Proto-Japanic had led to a drastic reduction of the distinctions available at both the paradigmatic and the syntagmatic level. The building of polysyllabic compounds was the simplest method to cope with the disturbing impact of increasing homonym. There was another method, however, and it seems also to have been employed by Pre-Proto-Japanic: the creation of additional distinctions at an entirely new level, that of tonal oppositions.

If the above scheme holds true, the typological prehistory of Japanic can be viewed as parallel to that of Sinitic. It is well known that Proto-Chinese probably created its tonal system to compensate for the loss of earlier segmental and sequential distinctions, many of which can still be recovered by comparisons with the other Sino-Tibetan languages. Later, especially in Mandarin, another wave of phonological neutralizations necessitated a massive extent of compounding, due to which the modern lexicon of Mandarin is overwhelmingly polysyllabic(cf. e.g. NORMAN 1989. 86-87, 111-117). This is just one aspect of the typological drift that has been termed the "Altaization of Chinese"(HASHIMOTO 1976. 61-63).

Assuming that analogous developments have taken place in Japanic, we may, then, also speak of the "Altaization of Japanese", implying that

Pre-Proto-Japanic was “originally” a language of a non-Altaic type. At the current level of knowledge, it is still too early to call this assumption anything but an unproven hypothesis. The present paper will now go on to examine the general material evidence that can be presented in favor of this hypothesis.

1. Pronouns and numerals.

Pronouns show in many languages structural differences with regard to other parts of speech. Typically, pronouns tend to be short and phonologically simple even in languages which mainly operate with long or phonologically complex words. It is therefore neither surprising nor particularly diagnostic that the basic pronominal roots in Japanic are monosyllabic, corresponding to the structural type (C)V. This is synchronically immediately visible in the demonstratives and interrogatives, as in modern Japanese ko- (ko-no, ko-ko, ko-re etc.) ‘this [1st person reference]’, so- (so-no, so-ko, so-re etc.) ‘that [2nd person reference]’, ka- (ka-no, ka-re etc.) ‘that [3rd person reference]’, a- (a-no, a-re etc.) ‘that [distant reference]’, do- (do-no, do-re, do-ko etc.) < *i-tu(-) ‘which’, da- (da-re) < ta(-) ‘who’. There are also rather transparent traces that monosyllabic roots once prevailed in the system of the personal pronouns, as is still visible from wa- (wa-ga, wa-re, wa+ takusi) ‘I’, earlier probably opposed to (*)na- ‘you’.

It is, however, somewhat less typical of a polysyllabic language to have also predominantly monosyllabic numeral roots. This is unambiguously the case with at least four Japanic basic numerals, denoting pairwise two digits of the first quintet as well as the corresponding doubles formed by a kind of “Ablaut”: mi- (mi-tu etc.) ‘three’: mu- (mu-tu etc.) ‘six’, yo- (yo-tu etc.) ‘four’: ya- (ya-tu etc.) ‘eight’(cf. MILLER 1967. 337-338). Very probably, the roots corresponding to three other basic digits are also monosyllabic, with “Ablaut” variants”: hi- (hi-to-tu etc.) < *pi- ‘one’: hu- (hu-ta-tu etc.) < *pu- ‘two’: ha- (ha-ta-) < *pa- ‘twenty’, i- (i-tu-tu etc.) ‘five’.

Additionally, there exist old monosyllabic expressions for the powers of 10: -so < (*)-so- 'ten'(as in mi-so 'thirty' etc.), -(h)o < (*)-pö 'hundred'(as in mi-o 'three hundred'), ci < ti(-) < (?) *tö.i 'thousand'. This leaves us very few numerals remaining outside of the monosyllabic system. These may well be secondary innovations or borrowings: nana(-) 'seven', kokono(-) 'nine', to(w)o 'ten', momo 'hundred'.

2. Monosyllabic nominal roots.

There is no doubt that the canonic types of nominal root in modern Japanese are (C)V and (C)VCV. The bisyllabic type is, of course, predominant in the modern language, but it is impossible to deny the fact that the monosyllabic type is also amply represented in the corpus of nominal roots. Even a survey with no pretension of being complete will easily reveal more than 50 monosyllabic nominal roots in modern Japanese, many of them involved in sets of two or more homonymys. Arranged according to their Proto-Japanic segmental composition, these roots include the following(selected and adapted from MARTIN 1987. 376-599):

*pa > ha(1) 'tooth', (2) 'leaf' (as in *ko-no+ha* id.), (? 2 > 3) 'blade', (4) 'feather' > -*wa* classifier for birds, (5) *(-*n*-)pa > ba 'place' (cf. also the topic marker *wa*)

*ma (6) 'space', (7) ma-'true' (as in *ma+koto* 'truth' etc.)

*wa (8) 'wheel'

*ta (9) '(rice)field' (also in e.g. *ta-na+be* 'field-side')

*na (10) 'name' (also in *na+mae* id.), (11) 'weed'

*ka (12) 'mosquito', (13) 'fragrance' (also in *ka+ori* id.), (14) 'deer'

*ya (15) 'arrow', (? 15 > 16) 'spoke (of wheel)', (17) ya > (suffixally:) + *ya* 'house' (as in *yao+ya* 'greengrocery')

*po (18) 'ear of grain'

*mö > mo (19) 'seaweed'

*wö > o (20) ‘tail’ (also in e.g. *ho-no+o* ‘flame’), (21) ‘male’(as in *o-to+ko* id., also suffixally as + *o*), (22) ‘little’(mainly prefixally as o-)

*to (23) ‘door’ (also in e.g. *to+nari* ‘neighbour’, (24) ‘grindstone’ (to+ isi id.)

*so (25) ‘hemp’ > ‘cloth’ (also in *so+de* ‘sleeve’)

*no (26) ‘field’ (also in e.g. *no+hara* id.)

*ko (27) ‘small’(prefixally as *ko+*), (27 > 28) ‘child’(also suffixally as + *ko*), (? 27 > 29) ‘flour’, (30) ‘basket’(also in *ka+go* id.)

*yo (31) ‘segment (in bamboo)’, (? 31 > 32) ‘world, generation’, (33) ‘night’

*u (34) ‘cormorant’, (35) ‘(cyclic sign of the) hare’(normally *u+sagi* ‘rabbit’)

*pu > hu (36) ‘stitch’

*tu > cu (37) ‘harbour’ > ‘ferry’, (38) ‘spittle’(normally in *tu+ba/ki* id.)

*su (39) ‘nest’, (40) ‘reed screen’ (normally in *su+dare* id.)

*nu (41) ‘marsh’

*yu (42) ‘boiled water’

*pi > hi (43) ‘sun’ > ‘day’, (44) ‘cypress’ (as in *hi-no+ki* id.)

*mi (45) (only prefixally) mi+ ‘exalted’ (as in *mi+koto* ‘lord’), (46) ‘water’ (as in *mi-na+to* ‘harbour’)

*wi > i (47) ‘well’, (48) (cyclic sign of the) ‘boar’ < ? ‘wild, wilderness’ (as in *i-no+sisi* ‘wild boar’)

*ti > ci (49) ‘blood’

*pe > he : (suffixally) + *e* or + *be* (50) ‘side, direction’ (as in *kawa+be* ‘riverside’), (? 50 > 51) ‘layer’(as in *ya+e* ‘eightfold’)

*me (52) ‘female’ (as in *me+ga* ‘female deer’)

*we > *e* (53) ‘bait’

*se (54)‘back’ (as in *se+naka* id.)

*ne (55) '(cyclic sign of the) rat' (normally *ne+zumi* 'rat')

*ye > *e* (56) 'inlet', (57) 'handle'

Even if some of these stems were not "originally" monosyllabic, but due to the irregular truncation of more complex roots(an extremely unlikely possibility, as correctly noted by MILLER 1994.234), the diversity of the extant monosyllabic nouns is considerable. Moreover, with the addition of historical and dialectological data, the list could easily be increased.

3. Monosyllabic diphthong roots.

The number of monosyllabic nouns is also further increased by the well-known category of what may be called diphthong roots. Like the simple monosyllables, these are basically of the type (C)V, but in certain occurrences, notably in absolute use, they are "enlarged" with an additional segment, phonologically analyzable as an asyllabic(semivocalic) i. Although the latter had merged with the preceding vowel already by the time of Old Japanese, the quality of the original root vowel is in many cases still identifiable from inflexional (including derivational) patterns. The following is a selection of some of the better-attested nominal roots of this category(based on MARTIN 1987):

*mai > *me* (58) 'eye': *ma-* (as in *ma-na+ko* 'eye(ball)'),

*tai > *te* (59) 'hand': *ta-* (as in *ta+suke-ru* 'to help' etc.)

*nai > *ne* (60) 'sound': *na-* (as probably in the composition of *na-r-u* 'to sound', possibly also *na-k-u* 'to cry')

*kai > *ke* (61) 'hair'(as probably in *kami* 'top hair' < **ka+mi*)

*pöi > *hi* (62) 'fire': *ho-* (as in *ho+no-wo* 'flame')

*nöi > *ni* (63) 'load': *no-* (as probably in the composition of *no-r-u* 'to ride': *no-se-r-u* 'to load')

*köi > *ki* (64) 'tree': *ko-* (as in *ko+no-ha* 'leaf')

**mui* > *mi* : *mu-* (65) 'body' (as in mune 'breast' < **mu+ nai)*, (? 65 > 66) 'fruit' (as probably in *ume* 'plum' < **mu+mai*), (67) 'bug, worm, snake'(as in the composition of *mu-si* 'bug', *ma-mu-si* 'viper')

It is well known that the vowels identifiable on the basis of these alternations are *a *ö *u as well as implicitly *i, suggesting an original four-vowel system for Pre-Proto-Japanic. The apparent absence of the vowels *o(= wo, as opposed to *ö > o) and *e(= ye, as opposed to *ai > ë > e) in this context is generally understood as meaning that these two vowels are secondary, but there are other equally plausible explanations. In any case, the basic rule is that the final segment of the diphthong disappears in inflectional(including derivational) forms as well as in compounds before a syllable-initial consonant. This rule, on the other hand, allows two alternative explanations concerning the disappearing segment: either (a) it was originally part of the root, meaning that its deletion was once a regular combinatory phonological development, or (b) it was an element secondarily added to the end of some roots, meaning that its presence was originally conditioned by morphological or semantic criteria. Both explanations can be supported, and have been supported, by a variety of additional arguments, but, generally, the assumption of a phonological process as the underlying mechanism (a) would seem to have a sounder basis. This would mean that, in addition to the simple monosyllabic stem type (C)V, Pre-Proto-Japanic nominal roots can also have been of the more complex diphthong type (C)Vi.

Diphthong roots are also attested among verbs, and, in fact, they form synchronically the only type of verbal roots ending in a vowel segment(as in de-ru 'to come out', mi-ru 'to see'). Since all other types of verbal roots end in a consonant, it is tempting to assume that the asyllabic i(palatal glide) in the end of the diphthong roots also originally represents some more substantial consonant segment. If, however, the general root type for verbs was once (C)VC, the same may have applied to nouns, allowing us to postulate tentatively a derivation (C)V(i) < *(C)VC for all the simple monosyllabic native nominal roots of Proto-Japanic.

4. Root reduplication.

Supposing that the monosyllabic roots of the type *(C)VC in Pre-Proto-Japanic were composed of segments representing paradigmatic resources as scarce as are later attested for Proto-Japanic and Old Japanese, then the disturbing impact of homonymy must have been considerable especially for those nominal roots that were gradually reduced down to the shape (C)V(i). This must have increased the need for bisyllabic and polysyllabic lexical structures. One method available for Pre-Proto-Japanic for the building of bisyllabic words out of monosyllabic roots was reduplication. Cases of lexicalized reduplication surviving today are not particularly many, but they do reveal a number of clearcut functional and phonological patterns. Occasionally, they also allow us to reconstruct additional monosyllabic roots, otherwise lost in the language.

Apart from the universal type of reduplication observed in haha 'mother' < *pa&pa and cici 'father' < *ti&ti, most examples of the phenomenon in Japanic involve plurality. A small but important and functionally coherent group is formed by a few terms for paired (symmetric) body parts:

*mi (68) 'ear': *mi&mi > mimi 'ear/s'

*pö (69) 'cheek': *pö&pö > hoo or hoho 'cheek/s'(also in *ka+ pö 'face+ cheek' > kao 'face')

*pi (70) 'vulva': *pi&pi > hii 'pubic area'

Other examples of reduplication also occasionally involve plurality, as in haqpa 'leaf : leaves' < *pa&pa. In principle, we can surmise the presence of reduplication in all cases that fill the proper material criteria, though without independent evidence it is often difficult to rule out the role of other phenomena such as compounding, derivation and borrowing: e.g. nana 'seven' < ? *na&na (if not a loanword), sasa 'bamboo grass' < ? *sa&sa (if not a compound or a derivative with + sa/-sa, as in ku-sa 'grass'), sisi 'meat, game' < ? *si&si (if not a derivative in -si).

There are also examples of reduplicated dipthong roots, in which the final segment of the dipthong is regularly lost in the first component of the reduplicated complex, as in mame 'bean/s' < *mai&mai (possibly from *mai 'eye'), hae 'fly : flies' < *pai&pai, possibly also cuci 'earth' < ? *tui&tui.

Most importantly, reduplication also occurs in consonant-stem verbs, perhaps originally denoting plurality of action (alternatively: frequentativeness, continuativeness, or the like), as in tatam-u 'to fold' < *tam&tam-u, cuzuk-u 'to continue' < ? *tuk&tuk-u. These cases suggest that reduplication was either accompanied or followed by a process of root-final consonant deletion, supporting the correctness of the assumption that the monosyllabic nominal roots of the type (C)V have also lost a final consonant.

5. Compound nouns.

With reduplication being limited to a few rather peripheral cases, the principal method of increasing the corpus of bisyllabic nominal stems in Pre-Proto-Japanic was inevitably compounding. Nobody can deny the presence in Japanic of a large number of more or less transparent compound nouns, built from two(or more) monosyllabic roots. In many cases these nouns form series involving identical elements in the position of either the initial or the final component. In some of such nouns, both components may still be identified on the basis of the modern language, while in others the compound nature can only be inferred from the general pattern. Examples of series involving identical final components are (partly in repetition from JANHUNEN 1994):

**me* > me 'female, woman': hime 'princess' < *pi+ me 'sun+ woman', yome 'bride' < *yo+ me [with an obscured initial component]

**mui* > mi 'bug, worm, snake' : hami 'viper' < *pa+ mui 'tooth+ snake', nomi 'flea' < *no+ mui [with an obscured initial component], simi 'moth' < *si+ mi [with an obscured initial component]

**nai* > ne 'root' : yane 'roof' < *ya+ nai 'house+ root', hane 'feather' < *pa+ nai 'feather+ root', mune 'breast' < *mui+ nai 'body+ root', tane 'seed' < *ta+ nai 'field+ root', ine 'rice plant' < *zi+ nai [with an obscured initial component], possibly also in hone 'bone' < *pö+ nai [with an obscured initial component]

**to* > to 'door' < 'opening' : ido 'well' < *wi+ (n)to 'well+ opening', mado 'window' < *mai+ (n)to 'eye+ opening', yado 'shelter' < *ya+ (n)to 'house+ door', edo 'inlet [also as a toponym]' < *ye+ (n)to 'inlet+ opening', kado 'gate' < *ka+ (n)to [with an obscured initial component]

**ya* > ya 'dwelling, house' : koya 'hut'< *ko+ ya 'small house', miya 'temple' < *mi+ ya 'holy+ house', oya 'parents' < *o+ ya 'respected house', possibly also saya 'sheath' < *sa+ ya [with an obscured initial component]

Examples of series with identical initial components are somewhat less common but not non-existent. Often in these cases the initial component has obtained a function close to that of a prefix:

**mi* > mi- 'exalted, holy' : miya 'temple' [cf. above], miko 'prince' < *mi+ ko 'holy+ child', mine 'peak' < ? *mi+ nai 'holy [mountain] root' (with many more examples of trisyllabic and longer words)

**ko* > ko- 'small' : koya 'hut' [cf. above], koma 'colt' < *ko+ [u]ma 'child+ horse', possibly also in kome 'hulled rice' < *ko+ mai 'small eye/sprout'

Less systematic examples of semantically obscured compounds such as koke 'moss' < *koi+ kai 'tree+ hair', mae 'front' < *mai+ pe 'eye+ side', abound in Japanese. Trisyllabic and longer words, including many items of the basic vocabulary, also often contain a clearly segmentable monosyllabic element in their composition, as is exemplified

by tamago ‘egg’ < *tama+ ko ‘ball+ child’, namida ‘tear’ < *mai+ mi-(n)ta ‘eye+ water’. Though all of this is basically well known, the correct conclusions remain to be drawn.

Indeed, it does not require much fantasy to recognize in the Japanic lexicon other potential cases of compounding. Since there are so many still transparent examples of the phenomenon, there must also be many entirely obscured instances of compounding. Some of these can be identified on the basis of correlative series extant in the language. In these cases, we can, at most, only identify one of the components, as in the following:

-mi in umi ‘sea’ < *u+ mi, nami ‘wave’ < *na+ mi, both obviously containing a final component to be identified with *mi > mi ‘water’, as in mi-na+ to ‘port’, mizu < *mi-(n)tu ‘water’

si- in sita ‘lower part, below’ < *si+ ta, simo id. < *si+ mo, both containing an initial component with the shape *si and with the basic meaning ‘lower part, below’

a- in asi < *a+ sVi ‘foot, leg’, ato < *a+ to ‘footprint > trace’, awata < *a+ pa(+)ta ‘kneecap’, ahiru ‘duck’ < *a+ piru ‘broad-foot’, all obviously containing the otherwise unattested primary root *a ‘foot, leg’

There are obvious dangers in such identifications, caused by the vagueness of the semantic parallelism and the amount of homonymy present in the language. Nevertheless, this is the only way by which we can approach the goal of internal reconstruction for Proto-Japanic, and the evidence is strong that, in spite of potential errors made in the process, the method itself is correct. The situation is very similar to that prevailing in the field of external comparisons, where a basically sound method can become dangerous if used without caution. It is important to stress, however, that the identification of monosyllabic roots in the framework of internal reconstruction is definitely not less scientific as a diachronic method than is the more conventional line of research which looks only for external comparisons.

6. Nominal derivation.

In some cases of obscured compounding we actually move in areas close to derivation. We do not know to what extent derivation played a role in Pre-Proto-Japanic, but the presence of a well-developed suffixal morphology at the level of Proto-Japanic suggests that some monosyllabic elements may have quite early developed into derivative suffixes. If this is so, we do not have to look for a concrete lexical meaning for every single element, even if we can segment them in the composition of bisyllabic or polysyllabic words built upon monosyllabic nominal roots.

A few examples of suffix-like elements occurring after monosyllabic roots are the following:

-sa < *-sa (possibly 'grass, plant'), as in kusa 'grass', asa 'hemp', possibly also in sasa 'bamboo grass'(if not based on reduplication)

-su < *-su (possibly 'kind, gender'), as in mesu 'female' < *me-su (based on *me 'female'), osu 'male' < *wo-su (based on *wo 'male')

-si < ? *-si, *-soi, *-sui, as in musi 'bug, worm, snake' < *mu-si (based on *mui id.), hosi < *pö-si 'star'(based on *pöiöi 'fire'), asi 'foot, leg' [cf. above], isi 'stone'(cf. iso 'cliff', iwa 'rock'), quite possibly also in kisi 'cliff', hasi < *pasi 'bridge' and many other items

-ma < *-ma (indicating places and locations, cf. ma 'space'), as in yama 'mountain'(? 'upper place'), sima 'island'(? 'lower place'), hama 'beach', numa 'marsh'

-wa < *-pa (also indicating places and topographic features, cf. *pa 'place'), as in kawa 'river', niwa 'garden', sawa 'swamp', iwa 'rock' [cf. above], cf. also kawa 'side'

Obviously, the chances of getting results in this sector of internal reconstruction are the greater the more complete sets of correlative items we can find. The potential significance of any results will, of course, also have to be investigated against the tonal properties of the words concerned as well as against the general phonostatistical picture of the Japanic lexicon.

7. Conclusions and implications.

Although a schematic presentation of the above type can hardly put an end to other lines of inquiry connected with the search for the origins of Japanese, we clearly have to consider the possibility that the entire lexicon of Pre-Proto-Japanic once consisted of monosyllabic roots. The canonical type of root would then originally have been *(C)VC, still preserved by the majority of verbal roots in modern Japanese. The loss of the final consonant segment led to the origination of the root type (C)V, which became prevailing for nouns, though both verbs and nouns were also represented among the diphthong roots of the type (C)Vi.

If we go further back in linguistic prehistory, it is, of course, unlikely that the root type *(C)VC was 'original' in any ultimate sense. Quite possibly, it had arisen due to some other process, perhaps involving the loss of an earlier root-final vowel. However, unlike the final consonant, this final vowel would have disappeared so long long ago that no historical or morphophonological trace remains of it. When we start comparing Japanic words with those of other language families on a genetic basis we should therefore be prepared to use only monosyllabic roots for Japanic. Because of the cumulative effect of phonological reduction and increasing homonymy in Pre-Proto-Japanic, external comparisons involving Japanic lexical material are bound to be difficult, and we should not expect easy results.

It goes without saying that there are other possible ways to treat the phenomenon of Japanic monosyllabism. We could, for instance, speculate that there was a process of root-internal consonant loss and subsequent vowel contraction, i.e. (C)V < *(C)VCV, as has been

suggested on the basis of external comparisons for a restricted corpus of items involving a hypothetical intervocalic *-r- (WHITMAN 1990). If such assumptions can be proven, they might imply that monosyllabism was, after all, only a restricted phenomenon in Pre-Proto-Japanic. A preliminary assessment of the statistical facts would seem to speak against such a formulation, however, for the multitude of monosyllabic roots occurring in the composition of both transparent and obscured compounds and derivatives appears simply too large to be explained by a phonological process of restricted validity. Clearly, much remains to be done in the field of Japanic internal reconstruction, but the monosyllabic hypothesis of Pre-Proto-Japanic root structure has to be recognized as one of the most promising directions for future research.

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