

# Japanese, Basque, and the Languages of Eurasia: The Question of Genetic Affiliation

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## 1.0. Introduction

This essay examines the question of the genetic affiliation of the Japanese language in the light of some recent findings in the field of comparative historical linguistics. It augments my earlier research into grammatical parallels between Japanese and Basque (Thornton 2002 and 2005). This research was prompted by Joseph H. Greenberg's evidence for a Eurasiatic macrofamily of languages (Greenberg 2000). Euroasiatic, of course, does not incorporate Basque, a language generally classified as a linguistic isolate. (Recently, however, John Bengtson has persuasively added to the evidence for a genetic link between Basque and the North Caucasian languages [Bengtson 2009 ff]). Like the earlier articles, this research starts with grammatical evidence based on eleven of Greenberg's seventy-two grammatical formatives. It suggests that Basque and Japanese, situated at the westernmost and easternmost extremes of the Eurasian continent respectively, retain, due to geographic isolation, striking grammatical and phonological similarities going back to an ancient linguistic unity. It does not claim that Japanese and Basque are closely related genetically, for they are not—certainly not in the traditional conception of relatedness, where among other criteria the maximum time depth for identifying evidence of genetic relatedness allegedly does not exceed some eight thousand to ten thousand years at most.

Greenberg's Eurasiatic consists of the following seven stocks: Indo-European, Uralic, Altaic, Gilyak, Korean-Japanese-Ainu, Chukotian, and Eskimo-Aleut stocks (the latter now in located on the North American continent). Within Eurasiatic Greenberg recognizes a Japanese-Ainu-Korean unity. Similar to Greenberg's Eurasiatic but incorporating additional languages is the Nostratic hypothesis, first proposed by Holger Pedersen in the nineteen-twenties and since adjusted to new research.

As for phonological descriptions of tone and accent Japanese, Korean, Ainu and Basque are well represented in the literature (Ainu the least, however), but the study of sound structure seems not to have been applied as universally to the study of questions of genetic relatedness as one would hope. Herein we very briefly consider tone and accent in Japanese and Basque and how it may contribute to answering the question of a distant genetic link between the two languages.

In what follows I argue in particular that Basque and Japanese, each as a result of long geographical isolation, preserve discernable traces of an even more ancient linguistic unity than that of Eurasiatic/Nostratic.

### 1.1. Historical background

Historical linguists generally accept the proposition that all the world's languages are descended from a single original language originally spoken probably in East Africa and as early as at least 100,000 years BP. John C. Kearns observes that '[t]he fact that a fully human vocal apparatus seems not to have evolved until the advent of *Homo Sapiens* suggests the development of a wholly evolved linguistic capability was not a revolutionary event, but rather the product of a gradual though powerfully driven evolution dating from the beginning of early *Homo Sapiens* in Southern Africa, perhaps some 180,000 years ago' (Kearns 1994, 148). It is now fairly widely accepted, based on geographical, archeological, anthropological and biogenetic evidence, that by about 100,000 years or slightly more BP a fully developed spoken language capacity was present in *Homo Sapiens* or modern humans. A forthcoming study of world myths arguing that certain myths can be traced back some 100,000 years (Witzel, forthcoming) enables one to enlist it as further support for the date of 100,000 years BP or earlier.

On one view, human language as we know it today in the form of living languages and extinct languages which we have been able to some extent to piece together using linguistic, archeological and other types of evidence, may represent a somewhat more recent stage of development. Johanna Nichols, for example, assumes three stages for the peopling of the world and spread of human language out of Africa, eventually leading to a subsequent loss of much of what must have been originally a great typological or structural diversity of language:

The first [stage] begins with the origin of our species, probably in Africa and over 100,000 years ago, and comprises the period when our range was limited to the tropical Old World and perhaps chiefly Africa. This must have been a time of great linguistic diversity. Societies would have been small, simple, and autonomous. . . .

The second stage can be called the age of expansion. During this time, humans expanded out of the Old World tropics to colonize Europe, inner Asia, New Guinea-Australia, and the New World. . . . The stage of expansion can be dated to approximately 60,000 to 30,000 years ago. . . .

The third stage begins with the end of glaciation. It involves the rise of complex societies and large-scale economies, the spread of languages driven by economic and political prestige, and consequent reduction in linguistic diversity. The spread of a few lineages and a single structural type (verb-final, dependent-marking, accusative) over most of Eurasia, beginning with the Indo-European spread, is an example of this process. (Nichols 1992, 274-275)

Thus we note that Proto-Indo-European was of the verb-final (SOV) type. All of the modern descendent languages of Proto-Indo-European in Europe (except Celtic, which is VSO), however, have now evolved to become verb-medial (SVO) but with remnant features of their SOV ancestry clearly in evidence (such as, for example, in the case of the adjective in English, modifier normally precedes modified). In contrast, in the Indo-European east the original SOV structure is retained, e.g. Persian, Panjabi and Pashto (South Asia). (The time-span since Proto-Indo-European, the hypo-

thetical reconstructed ancestor of the Indo-European languages, is estimated to be at least six thousand years). Basque is SOV, but with focus-prominent variation, and Japanese, Korean and Ainu are SOV.

As to how Japanese might be related to Korean, Ainu and other languages, whether on the Eurasian continent (especially the Altaic languages, e.g. Miller 1971), in Southeast Asia or South Asia, two fairly recent overviews in English are found in Shibatani (Shibatani 1990, 94-118) and Greenberg (2000, 1-23). (For more on the Southeast Asia and South Asia proposals, cf. Thornton 2002, 120-121.) A Japanese-Korean genetic link, at least, is now widely acknowledged, going back perhaps some four thousand years according to some researchers. Shibatani points out that '[t]he majority of scholars upholding this theory also regard Korean as a branch of the Altaic language family. They try at least to find relationships between Korean and Japanese on the one hand, and between Korean and the Altaic languages on the other' (Shibatani, 94). Among 'unacceptable' theories cited by Shibatani is Basque. He does not mention Ainu in this particular context, though there are others who likewise regard Japanese, Korean and Ainu as forming a separate branch of the Altaic superfamily. However', Greenberg points out, it is obvious on the merest inspection that languages of Altaic proper (Turkic, Mongolian, and Tungusic) have much in common that is not shared by Korean or Japanese' (Greenberg, 11). (Japanese, Korean and no doubt Ainu are considered closer to Tungusic than to Turkic or Mongolian.)

## 2.0. Grammatical evidence

Despite their vast separation in time and space, Basque and Japanese in particular display several particularly striking similarities with regard to a number of grammatical formants and aspects of phonology and accent. This leads to the question of the relationship of Greenberg's Eurasiatic to the Nostratic superfamily, which, as defined by Bomhard and Kerns, overlaps Eurasiatic and adds to the Eurasian stocks Kartvelian, Elamo-Dravidian, and Sumerian, among others, but not Basque or North Caucasian. Kerns is quick to clarify that this is not to say that a (probably more distant) genetic relationship is ruled out (Bomhard and Kerns 1994, 143). (Afro-Asiatic, originally included by Bomhard and Kerns, is no longer considered a subgrouping of Nostratic but rather as a separate stock side by side with Nostratic.)

Our grammatical evidence applies the test of Greenberg's grammatical formatives to Basque, here with augmentations and emendations to some of the comparisons of the Pre-Japanese and Pre-Basque grammatical formants in my earlier essays. In my view, the functional and morphological characteristics of these grammatical formants share too many clear parallels for this agreement to be dismissed as merely coincidental.

### 2.1.1. 'Derivational K' and 'Relational K' (Greenberg's 'Diminutive K')

The similarities between Basque *-ko* and Proto-Indo-European *\*ko* have long been recognized and debated, but in my view the similarities between Basque *-ko* and Japanese *ko* seem equally if not more compelling. First, we consider the case for a link between Basque *ko* and Proto-Indo-European (PIE) *\*ko*. The authoritative scholar of Basque R. L. Trask is the leading exponent of the view that

Basque is a linguistic isolate (Trask 1997 ff). Trask rejects a genetic link with PIE as well as the question whether PIE *\*ko* and Proto-Basque *\*ko* might have been in close proximity for an extended period of time. He carefully examines the eminent Indo-Europeanist Antonio Tovar's claim (1954, 1959, 1970) that the similarities exhibited by Basque *-ko* and Proto-Indo-European *\*ko*, although not genetically related, suggest that the Indo-European (IE) languages and Basque must share 'some single common source' by virtue of presumably having been 'members of an ancient European linguistic area' that must have been extraordinarily cohesive, finding this 'at best an implausible conjecture, at least until someone turns up more extensive evidence for an ancient *Sprachbund* involving Proto-Basque and PIE' (Trask 1997, 373). (Trask surveys the claims of Basque kinship to a number of other languages than PIE, but does not mention Japanese or the claims of kinship involving it.)

In his analysis of PIE *\*ko* and Basque *ko* Trask distinguishes between two functions of Basque *ko*, namely that of deriving derivatives-'derivational' *ko*-and that of producing 'a complex adjectival modifier which can appear within a noun phrase', but emphatically not a true adjective-'relational' or 'adnominal' *ko* (Trask, 100). Basque 'derivational' *ko* mainly derives diminutives, e.g.:

Basque *mando* 'mule', *mandako* 'small mule';

Basque *mutil* 'boy', *mutiko* 'boy' (earlier 'little boy') (Trask 1997: 376).

Trask stresses that the production of diminutives (and, much more rarely, augmentatives) is a secondary function of the Basque suffix *-ko*, and it is in regard to this function alone that that he acknowledges that Basque (derivational) *ko* shares a certain grammatical similarity with PIE *\*ko* insofar as PIE *\*ko* also derives diminutives, e.g.:

Sanskrit *paśu* 'domestic animal', *paśu-k-a* 'small domestic animal' (Greenberg: 164);

Russian *deva* 'maiden, virgin', *devočka* 'dear little girl' (in which *-ka* is the [grammatically feminine] reflex of PIE *\*ko*, with *-č-* signaling endearment).

In addition to Indo-European, Greenberg also reports diminutive *-k* in Finno-Ugric (reconstructed as *\*-k* and *\*-ka* ~ *-kă*), Old Turkic (*-ak*), Modern Turkic languages (*-ka* and *-ke*, e.g. Karaim *kuł* 'male peasant', *kułka* 'female peasant'), probably Chuvash (*-k*), and Mongolian (a nominal suffix *-ka(n)* ~ *ke(n)* designating diminutives, and sometimes female beings) (Greenberg: 165).

As for Korean, it has a '*k* diminutive, especially in archaic and dialect words'; and for Ainu, M. M. Drobrovorskij in his 1875 Ainu-Russian dictionary 'gives a pair of examples from the *Mosh-iogusa* in which Ainu *ko-* prefixed to a verb appears to have a diminutive force, *anukaru* "to look at for a long time", *koanukaru* "to look at (for some time)" (Greenberg: 165). Greenberg observes that '[i]n Indo-European there is widespread use of *-k* as a general nominal and adjectival derivational suffix', although notably its 'common diminutive uses [are considered] secondary' (Greenberg, 164). As for Japanese *ko*, unlike in Basque and Indo-European derivational (diminutive) *ko-* is prefixed:

Japanese *koinu* ‘puppy’ (*inu* ‘dog’).

Examples are plentiful in both languages. Japanese *ko* also can function as a freestanding noun phrase, with semantic content, as *ko* ‘child’.

Greenberg reports research by Daniel Jurafsky (1995, 565) finding that the fundamental meaning of Indo-European *\*-ko* is ‘child’, as in Japanese, and not ‘pertaining to’ (Greenberg: 165). Within Indo-European derivational/diminutive *ko* is widespread, according to Greenberg, and characteristically with feminine connotations; it is even attested in Sanscrit. In Eurasiatic he reports its presence in Finno-Ugric, Turkic and Gilyak (both with feminine connotations; the latter regularly forms feminine proper names by suffixing *-k*), Kamchadal and Eskimo.

Greenberg also notes diminutive *-k* in Finno-Ugric (reconstructed as *\*-k* and *\*-ka ~ -kä*), Old Turkic (*-ak*), Modern Turkic languages (*-ka* and *-ke*, e.g. Karaim *kut* ‘male peasant’, *kutka* ‘female peasant’), probably Chuvash (*-k*), and Mongolian (a nominal suffix *-ka(n) ~ ke(n)* designating diminutives, and sometimes female beings) (Greenberg, (*-ke*) 165).

That Basque *-ko* and PIE *\*-ko* both derive diminutives leads to ‘something resembling a convergence between the Basque and IE suffixes’, Trask acknowledges (Trask, 376)—that is, a convergence between the behavior of PIE *\*-ko* and Basque ‘derivational’ *-ko*.

Trask finds no evidence, however, of any property of PIE *\*-ko* comparable to the properties of Basque ‘relational’ suffix *-ko*—the ‘relational’ function of which he identifies as the primary or ‘cardinal’ function of the Basque suffix *-ko* (Trask, 376). Trask distances Basque *-ko* from Indo-European *-ko* on the grounds that the Basque suffix, unlike Indo-European *-ko*, is ‘not a derivational suffix but a syntactic element which can be added freely to any constituent of an appropriate type’ (375). Basque *-ko* ‘is attached to adverbials, regardless of their internal structure’ and it ‘derives adjectival modifiers which behave quite differently from lexical adjectives’ (375). The ‘relational suffix’ *-ko* can be added to ‘virtually any kind of adverbial phrase, regardless of its syntactic structure to produce a complex adjectival modifier which can appear within a noun phrase’ (100), e.g. *atzo* ‘yesterday’, *egunkaria* ‘newspaper’, *atzoko egunkaria* ‘yesterday’s newspaper’; *hemen* ‘here’, *jendea* ‘the people’, *hemengo jendea* ‘the people here’ (Trask, 101). ‘It has no semantic content, but only a syntactic function’; Indo-European *\*-ko*, in contrast, ‘on occasion derived adjectives, or nouns based on adjectives, with a meaning along the lines of “related to, belonging to”, e.g. Latin *ūni-cu-s* “unique” and nouns, e.g. Latin *bell-icu-s* “warlike” (<*bell-um* “war”) and it has semantic content along the lines of “related to, belonging to”’ (Trask, 374). On the basis of this and other points too numerous to mention here, Trask argues against a genetic link between PIE *\*-ko* and Basque *ko*. (Cf. Thornton 2002, 115-116 for additional details.)

I wish to argue, however, that a parallel to Basque relational *ko* can be identified, if not in Indo-European, then at least in the branch of Eurasiatic to which Japanese belongs. (To be fair to Trask, we must note that he would not recognize Greenberg’s Eurasiatic as a valid linguistic entity.) That parallel is represented at least in the Old Japanese compound Noun-*ga*-Noun, a fossilized form which displays morphological and syntactic counterparts to the Basque compound Noun-*ko*-Noun. Compare the following Basque and Japanese examples respectively:

Basque *buru -ko- min*  
head *ko* pain  
headache (Trask, 250)

Japanese Yui *-ga- hama*  
Yui *ga* beach  
Yui Beach

In the Japanese construction we observe the voicing of *k* to *g* and the change of original *o* to *a*. There is evidence in Japanese upon which to argue that *ga* comes from *ko*, as the alternation *o ~ a* is frequent in Old Japanese (Murakami Takashi, personal communication), with the voicing of *k* to *g* a result of sequential voicing. Here we note also that in both Basque and Old Japanese this compound noun construction is of limited occurrence. In Basque it occurs only occasionally and in Japanese it seems to be limited to place names.

Finally, a third point of similarity between PIE *\*-ko* and Basque *-ko* are their special affinity for the locative. In Japanese locative pronouns are derived by suffixing *-ko* to the interrogative stem *do-* ‘wh-’ and the deictic stems *ko-* ‘here’ (proximal), *so-* ‘there’ (mesial) and *aso-* ‘there’ (distal). In Basque also there is evidence of *ko* having a special affinity for the locative: ‘. . . the addition of *-ko* to an NP [noun phrase] in the locative is particularly frequent’ (Trask, 102). The Basque for ‘where is?’ is *nonda/nondago*—predominantly the latter; I do not know whether an argument for a connection between the *-go* of *dago* and *ko* has any validity: Basque linguists would reject this (Hualde, personal communication, Kobe, December, 2002.) (Cf. also section 2.1.9, ‘Interrogative N’, below).

### 2.1.2. Passive Participle T

Basque and Japanese alike form gerunds and progressives with *te*: Basque *te ari*, Japanese *te iru* (Old Japanese *te ari*).

Gerunds: Basque *ikus-te* ‘looking, seeing’

Japanese *mi-te* ‘looking, seeing’

Progressives: Basque *ikus-te-n ari da* ‘is looking’ (3<sup>rd</sup> person singular)

Japanese *mi-te iru-n(o) da* ‘am/is/are looking’ (Old Jp *mi-te ari*)

Note that in Basque *-n*, which is locative, as is typologically expected, follows *te*, whereas in Japanese *-n*, which is said to be a contracted form of the genitive particle *no*, follows the existential, *iru*; in both languages *da* is a copula. There seems to be a lack of consensus among Japanese linguists as to whether *iru* was originally existential. The gerund in *te* must be more ancient than the progressive.

### 2.1.3. Participle NT

As Greenberg states, '[t]he common active participle of Indo-European is *-nt-*, with preceding thematic vowel or weak grade of *n* (i.e. *-nt-*), e.g. Sanscrit *bhárant-* 'carrying', which is associated with a thematic verb stem *bhara-* (cf. Latin *ferent-* 'carrying') (Greenberg, 182). He identifies other uses of *-nt-* in Uralic languages, in the extinct Anatolian languages Hieroglyphic Hittite, Palaic, and Luwian, and almost certainly in Gilyak, Sirenic (in Siberia), Eskimo and Aleut. He also cites Brugmann's (1892-1900) suggestion that this ancient *-nt-* is also the source of the *-nt-* third-person plural marker of the present-aorist system of the [Indo-European] verb (Greenberg, 183), e.g. Latin *sunt* 'they are'. I am not very sure, but I would like to suggest that the Korean declarative stem *-nda* may be connected to this *-nt* (e.g. *kanda* 'go, goes'), analogous to Brugmann's observation that 'it "is a credible hypothesis that the [Indo-European] third-person plural of the verb is simply a predicative use of the participle"' (Greenberg, 183) (cf. the Korean honorific ending *-da*). If my conjecture is correct, Japanese declarative *da* apparently belongs here as well. Participle *-nt* as the supposed source of the Japanese copula *da* would seem to explain why the *no* in *te iru-n da* (cf. 2.1.2 above) is not the typologically expected locative form to be found in progressive constructions.

### 2.1.4. First-Person N

In Basque, Ainu, and Korean, but not Japanese, the first-person singular pronoun is *ni* 'I'. In the Romance branch of Indo-European the first-person plural pronoun is built on *n-*, e.g. Spanish *nosotros* 'we', French *nous* 'we'.

### 2.1.5. Genitive N

Basque suffix *-en/-ren*; Japanese postposition *no*

### 2.1.6. Locative N

Basque suffix *-n*; Japanese postposition *ni*

### 2.1.7. Ablative T

Basque suffix *-tik, -dik*; Old Japanese *tu*

Greenberg cites the archaic Japanese formula *ama-tu-k[a]mi* 'the god of heaven' (Greenberg, 159).

### 2.1.8. Adverbial Participle P

Basque prefix *ba-*; Japanese conjunctive particle *-ba*

Basque prefixes *ba-* to the auxiliary or, in its absence, to the main verb to form 'if'-clauses; Japanese suffixes the conjunctive particle *-ba* to the main verb to form hypotheticals or conditionals, e.g. *ikeba* 'if one goes'.

### 2.1.9. Interrogative N: Basque *non*; Japanese *nan*

Basque *non* 'where?' consists of the stem *no-* (Trask, 97) plus the locative suffix *-n*. The Japanese interrogative 'what' consists, in my opinion, of the stem *na-* + attributive *n*.

## 2.2. Possible Additional Grammatical Parallels (not in Greenberg 2002)

### 2.2.1. Perfective Participle -I

Basque ‘shows traces of an ancient adjective-forming suffix *-i*. The clearest case is *gatz* ‘salt’, *gatz*i** ‘salty’. Since perfective participles are conspicuously adjectival in nature, it may be that an ancient adjective-forming suffix was pressed into service to derive participles both from ordinary nouns and from verbal nouns, but here I confess I am stretching the evidence to the limit’ (Trask, 212).

The Japanese adjective-forming suffix *-i* may be of the same origin. An example is *utukusi-i* ‘beautiful’; it contrasts to the attributive particle *na*, which derives adjectival phrases such as *kirei na* ‘pretty, clean, clean-cut’. The suffix *-i* appears to me to be the more ancient of the two.

### 2.2.2. ‘Mysterious’ Prefix I-

Both Basque and Old Japanese exhibit a verbal prefix *i-* whose origin or function is ‘mysterious’ (Trask 1997, 211; Murayama 1976, 422 respectively).

Basque: ‘Virtually all ancient verbs show a prefix *\*e-* in all their non-finite forms; this appears today variously as *e-*, *i-*, *j-* or zero. . . The function of this prefix is not known. . . [Elsewhere] I argue that it originally derived a verbal noun from a verbal root’ (Trask 1997, 211).

Japanese: Old Japanese had a ‘somewhat mysterious and unclear prefixed *i-* that appears in a variety of Old Japanese verbs’. Example: *i-tu-k-u* ‘build’ alongside the more usual *tu-k-u* ‘build’ (Murayama 1976, 423).

## 3.0. Phonological evidence

### 3.1. Tone and accent

José Ignacio Hualde shows in a symposium paper that the accentual system of Basque found in the Northern Bizkaian area of the Basque country, a very conservative system, is ‘surprisingly similar’ to Tokyo Japanese. What follows, unfortunately, is limited to a brief notation of a few of Hualde’s points of comparison and contrast. Hualde identifies ‘at least three basic prosodic properties’ that the dialects of the two areas of Basque and Japanese share:

- a. ‘a lexical contrast between accented and unaccented words’, with most words being unaccented;
- b. ‘a phrase-initial tonal rise (LH), which produces a high plateau from the second syllable up to the accented syllable’;
- c. ‘Accents are always falling contours (HL)’. (Hualde 2002, 4)

However, [o]ne aspect in which Northern Bizkaian Basque differs from Japanese is in the assignment of phrase-final accents to lexically unaccented words in certain cases’ (Hualde 2002, 4). Basque is a focus-prominent language; Japanese is considered not to have this feature, although one might argue that it faintly displays the very beginnings of such a feature.

In addition, Hualde points out that ‘Northern Bizkaian Basque also appears to share with Tokyo Japanese the property of not using duration as a correlate of accent. As in Japanese . . . , accent in

these Basque dialects seems to be mostly a tonal phenomenon, without durational correlates. . . ' (Hualde, 5).

He observes:

On balance, the extent to which the Northern Bizkaian Basque and the Tokyo Japanese accentual system resemble each other is surprising, given the lack of genetic relationship or geographical contact between these two languages. But perhaps even more surprising is the fact that these two languages appear to have arrived at very similar endpoints starting from quite different beginnings. (5)

Rei Fukui in a typological comparison of the Hamgyeongdo accent system of Korean, the system showing 'closer correspondences to the Middle Korean accent system than any other dialects,' states: 'From the synchronic and typological points of view, it is also striking that this system is quite similar to that of the Tokyo dialect of Japanese' (Fukui 2002). One of the similarities Fukui points out is that 'the distinctions between unaccented and final-accented nouns can be made only when an enclitic particle is attached. Otherwise they have identical pitch shapes such as LH, LLH, LLLH, and so on, and this is another similarity to the Tokyo dialect of Japanese' (symposium paper, 2).

We can make the observation that a common point of the Northern Bizkaian Basque, Korean Hamgyeongdo, and Tokyo Japanese dialects is the presence of both lexically accented and unaccented words, noting that these dialects are the more conservative ones in Basque and Korean, and the Kanto dialect being among the most conservative of the Japanese dialects.

In a new two-part study on linguistic change Jonathan Morris challenges the general belief that languages everywhere tend to change at a somewhat regular rate over the centuries and millennia. In the first part he presents evidence from the Romance languages, recapitulating in the opening of the second part his reason for doing that:

. . . to demonstrate that the major phonological changes between Classical Latin and the modern Romance languages had already occurred well before the fall of the Roman empire, in some cases, as early as the 1<sup>st</sup> and 2<sup>nd</sup> centuries CE. This was corroborated by the evidence from Swadesh lists, which showed that apparent lexical changes were merely an inheritance of a Vulgar Latin vocabulary which already differed from classical Latin and that subsequent borrowing or lexical change was extremely minor. (Morris 2009, 51)

'If this model is correct', he continues, 'then it argues for linguistic conservatism and a very different process to a Saussurean view of language as having a natural tendency to change in an arbitrary way. In other words, languages only change when confronted by a well-defined stimulus'. (Morris 2009, 51).

The stimulus Morris refers to is immigrant invasion, and his point is 'to demonstrate that [the major phonological "changes" between Classical Latin and the modern Romance languages] did not represent *in situ* language change so much as the adoption of forms which have been preserved

largely unchanged in [certain] Italian dialects . . .'. His findings indicate that 'wholesale language replacement occurs only when there is a critical ratio of immigrants to natives. It is evidently impossible to specify the ratio of immigrants to natives precisely since we are dealing with estimates and probably many contingent factors, but it is somewhere between 1:3 and 1:6 (I have called it the "1:5" rule)' (62).

#### 4.0. Conclusion

In conclusion, while we can propose that Japanese is related to Korean and Ainu, for practical purposes we cannot very well state that Japanese and Basque are related in any conventional sense of the term 'related', at least as we presently employ it. But we should not insist on using language such as Trask's 'there is not the slightest shred of evidence that [Basque] is related to any other living language' (Trask, 35).

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