

A. Implications of non-linguistic data

- 1) *A major population replacement occurred in Japan starting during the 1<sup>st</sup> millennium BCE.*
  - a) From no later than 7000 BCE, the inhabitants of Japan, from Hokkaidō to Okinawa, were of a distinctive physical type, not found elsewhere in Asia, that resulted from the convergence of northern and southern paleolithic groups. Despite regional variations and climate changes that affected the size of this population, it maintained a fairly homogenous “affluent forager” culture, called Jōmon, until ca. 300 BCE in most of Japan, persisting many centuries longer in the Tōhoku region.
    - i) The succeeding Yayoi culture is distinguished by new practices (new pottery styles, wet-field rice cultivation, bronze, dolmen-building, etc.) as well as new diseases, plants, and animals.
    - ii) The Jōmon genetic contribution to the gene pool of present-day Japanese speakers is small.
      - (1) Yayoi and Jōmon remains differ in bones, teeth, and other markers.
      - (2) Yayoi remains show close affinities to both present-day speakers of Korean and Japanese, who are very similar genetically.
      - (3) Jōmon remains show the greatest similarity to the Ainu of Hokkaidō, whose culture incorporates Epi-Jōmon, Satsumon, Okhotsk, and Japanese elements.
      - (4) The Yayoi migrants first appear in northern Kyūshū, from where they spread rapidly into Honshū, Shikoku, and the rest of Kyūshū starting ca. 200 BCE.
      - (5) A rapid population increase in the main islands of Japan, to which both more efficient food production and immigration probably contributed, began around the same time.
  - b) Jōmon settlements on the Korean peninsula have not been found despite signs of trade.
    - i) Only one Jōmon body, on an island off the southeastern coast facing Kyūshū, has been found.
    - ii) Archaeological and osteological data show no discontinuity in the peninsular population from the Chūlmun neolithic into the Mumun megalithic/bronze period.
- 2) *The population replacement was due to a migration from southern Korea that began after the Mumun cultural complex was well-established there.*
  - a) Present-day Korean and Japanese speakers are physically more similar to one another than either are to speakers of any other adjacent language.
  - b) A complex of wet-field rice, bronze, and dolmen-building had spread throughout most of the Korean peninsula by ca. 950 BCE.<sup>1</sup>
    - i) Some influence of Mumun culture in Japan is seen in Late and Final Jōmon sites mostly in northern Kyūshū, which later was the initial locus of Yayoi settlement.
    - ii) The earliest Yayoi sites show that some Jōmon type individuals lived in a transitional or Early Yayoi cultural context.
    - iii) Radiocarbon dates for the earliest Yayoi artifacts predate the last material evidence for Final Jōmon settlements by several centuries in those areas where both are found. Immigration is the most natural explanation for this chronological overlap.
- 3) *The later transition from Yayoi to Kofun culture proceeded gradually and did not involve a single or sudden disruption of the Late Yayoi culture.*
  - a) The earliest tumuli date from the 4<sup>th</sup> century CE, but artifacts indicative of the new culture do not begin to appear in burials goods until the 5<sup>th</sup> century.
  - b) The transition from small- to large-scale tumulus building was gradual, not abrupt.
  - c) The dates inferred from the surviving histories of early “emperors” and warriors indicate that the 4<sup>th</sup> and 5<sup>th</sup> centuries CE were a time of transition.

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<sup>1</sup> John Whitman, Northeast Asian Linguistic Ecology and the Advent of Rice Agriculture in Korea and Japan, *Rice* 4:149–58 (2011).

### B. Implications of linguistic data

- 4) *Place-names recorded in both logographic and phonographic forms show that a Japanese-like language was spoken on the Korean peninsula as late as ca. 700 CE.*
  - a) Archaeological data show that Paekche and Silla were founded no earlier than the 4<sup>th</sup> century CE. Koguryō arose on the lower reaches of the Yālǔ river no earlier than the 3<sup>rd</sup> century, but did not expand southward until the 4<sup>th</sup>.
  - b) Most places with names containing Japanese-like morphemes are located in central or southern parts of the peninsula controlled only briefly by Koguryō.
  - c) No place-name containing Japanese-like morphemes refers to a place in the homeland of Koguryō north of the Yālǔ.
  - d) Japanese-like morphemes occur in place-names associated with each of the Three Kingdoms (Koguryō, Paekche, Silla).
  - e) Korean-like morphemes appear even in some place-names ascribed to Koguryō and Paekche.
  - f) Chinese sources note that some commoners in Paekche spoke a language (implicitly not Chinese) different from the language of the rulers.
- 5) *The first variety of Japanese spoken in the islands, proto-Japanese (reconstructed through dialect comparisons), dates from the Yayoi period, and began to split into dialects at the time of the Yayoi expansion ca. 200 BCE.*
  - a) It could not have been introduced as part of the rise of Kofun transition in the 5<sup>th</sup> century.
    - i) At least two dialects—Yamato (central) and Azuma (northeastern)—are recorded in 8<sup>th</sup>-century texts, and proto-Ryūkyūan was arguably a dialect of southern Kyūshū of the 7<sup>th</sup> century.<sup>2</sup> A century or two is not enough time for such a degree of dialect differentiation.
    - ii) There is no compelling evidence of either a military invasion of the kind typically needed to force a subdued population to learn a new language or of a subsequent transitional period of bilingualism.
  - b) It could not have been a pre-Yayoi language. If proto-Japanese had been a Final Jōmon language, unlikely conclusions or unanswered questions follow.
    - i) Either the Yayoi agriculturalists gave up their own language and adopted the language of hunter-gatherers, or the language of the Yayoi migrants had separated much earlier from the language of a much older and genetically dissimilar population.
    - ii) There should be many distinct languages in the islands, but we find only Japanese and Ainu. Even treating Ryūkyūan as a distinct language raises the number only to three. *Nihon shoki* and other early texts that describe only a few groups (the Kumaso, Hayato, and Emishi) as not speaking Japanese.
  - c) Of all dialects, the Ryūkyūan now seem to be the oldest, but even proto-Ryūkyūan was probably not a FIRST-ORDER daughter of proto-Japanese (alias proto-Japonic).
    - (1) Not all distinctive Ryūkyūan linguistic features suggest great antiquity.
      - (a) Ryūkyūan pitch accent seems historically to be descended from the so-called Tōkyō Gairin type, to which several widely scattered main-island dialects also belong.<sup>3</sup>
      - (b) Mid-vowel raising, common to all Ryūkyūan dialects, has affected mid vowels in Sino-Japanese words and mid vowels believed to have originated as diphthongs.

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<sup>2</sup> Thomas Pellard, “Japanese and the other Japonic languages: The historical position of the Ryukyuan languages,” International symposium *Historical linguistics in the Asia-Pacific region and the position of Japanese* (Senri: National Museum of Ethnology, 30 July 2011).

<sup>3</sup> Elisabeth de Boer, *The historical development of Japanese tone: from proto-Japanese to the modern dialects [and] the introduction and adaptation of the Middle Chinese tones in Japan* (Wiesbaden: Harrassowitz, 2010).

- (c) Documentary evidence shows that some features of Ryūkyūan verb morphology claimed to be ancient are in fact late innovations.<sup>4</sup>
- (2) Founder effects on many small, remote islands undoubtedly accelerated and intensified dialectal divergence.
  - (a) Robust, continuous contact between the Ryūkyū and main Japanese islands only began in the 17<sup>th</sup> century.
  - (b) Jōmon culture is not found south of Okinawa, and Ryūkyūan speakers did not settle in the Sakishima islands until the 13<sup>th</sup> century, yet the Sakishima dialects are the most divergent in the group.
- (3) Archaeology suggests late permanent settlements by Japanese speakers.
  - (a) Yayoi culture is found nowhere in the Ryūkyūs despite evidence of long-distance trade between Okinawa and Kyūshū in the Middle Yayoi.
  - (b) Wet-rice agriculture does not appear in the Ryūkyūs until the 10<sup>th</sup> century.
- 6) *Final Jōmon languages influenced proto-Japanese only marginally.*
  - a) There is no single isogloss dividing Japan with large numbers of synonymous non-cognate, non-foreign words on either side. Observed lexical differences define many intersecting isoglosses.
  - b) Borrowings from Ainu are few in number and fairly easily identifiable. If any language is likely to be the last surviving Final Jōmon language, it is Ainu.
  - c) The lower registers of a creole typically retain more of the syntax of the relexified language than do its upper registers. But the lower registers of Japanese differ from its upper registers mostly in lexicon and phonology rather than syntax. Japanese is thus unlikely to have originated as a result of creolization.
- 7) *If Korean and Japanese are genetically related languages, they must have separated before the rise of Megalithic culture on the peninsula.*
  - a) There are almost no cognates referring to wet-field rice agriculture and bronze metallurgy.
  - b) Contacts between the peninsula and islands were not severely attenuated during the Yayoi period, and were resumed during the Yayoi-Kofun transition. There would not have been enough time for Korean and Japanese to have become distinct languages if they had been dialects of a single language as late as the Yayoi period.
  - c) Flaws in individual pKJ etymologies proposed so far do not invalidate the hypothesis but rather suggest that the degree of semantic and phonological change in the daughter languages has been underestimated.
  - d) About three dozen easily identified loans from Korean can be distinguished from etymologies that support a genetic relationship.
    - i) These loans include words used in connection with Buddhism and other innovations of Kofun/Asuka culture.
    - ii) They stand out because of their length, complexity of phoneme correspondences, limited distribution, and/or narrowed meanings.
    - iii) Common OJ words that lack a K match often have uncommon OJ synonyms that do match K words. In such cases, the matching OJ word is a likely borrowing from Korean.
- 8) *East Asian languages typologically similar to Korean and Japanese of the 1<sup>st</sup> millennium CE were spoken only in the transfluvial region north of present-day Korea.*
  - a) Amuric (Nivkh), Kamchukotic (e.g. Chukchi), and Ainu are SOV languages but have ergative-absolutive and/or incorporating morphology.
  - b) Sino-Tibetan, Austroasiatic, Austronesian, Daic, or Hmong-Mien languages are generally have SVO or VSO syntax.

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<sup>4</sup> Sakiyama Osamu, Ryūkyū-go dōshi no tsūji-teki kōsatsu, *Okinawa bunka ronsō dai-5-kan: gengo-hen*, ed. Hokama Shuzen (Heibonsha, 1972), pp. 343–56.

- c) There is no evidence that the ranges of Turkic, Mongolic, or Yeneseic languages (SOV) extending into this area during this period.
  - d) Since Korean-Tungusic comparisons have produced fair results, Korean seems at least to have been in contact with Tungusic languages for some time.<sup>5</sup>
  - e) The next nearest family of typologically similar SOV languages is Dravidian. Comparisons of Dravidian languages with Korean and Japanese have produced tantalizing results but no accepted demonstration of genetic relationship.
- 9) *Conditions for metatypy, in which the gross syntactic structure of one language adapts to that of another, were not present on the Korean peninsula prior to the Yayoi migrations.*
- a) We find little evidence of calquing or lexical borrowing, both of which we would expect in a case of metatypy.
  - b) The mixture of dissimilar Japanese-like, Korean-like, and as yet unidentified morphemes in Three Kingdoms place-names is more indicative of short-term contact than an extended period of the intense multilingualism in a compact range characteristic of metatypy environments.

### C. Tentative conclusions

- 10) *The proto-Korean-Japanese hypothesis is the best working hypothesis available.*
- a) It is the most parsimonious hypothesis.
    - i) As invalid etymologies are weeded out, new matches can take their place.
    - ii) Removing early loans from Korean into Japanese removes complications in sound correspondences. They are few in number, readily identified, and not suggestive of intimate, long-term contact.
    - iii) Grammatical morphemes are poor candidates for borrowing.
      - (1) Syntactic calquing is not observed.
      - (2) Both languages have focus particles that are similar in function and not found in nearby SOV languages. Though the attested reflexes are not directly cognate, they can be accounted for etymologically; focus particles thus appear to be common innovation of Japanese and Korean.
  - b) Tungusic at least is an indisputable language family. Whether or not there was a Transeurasian family including Turkic, Mongolic, and Tungusic, a Macro-Tungusic, of which pKJ was one branch, is plausible.
  - c) To explain the separation of pre-Korean and pre-Japanese, it is sufficient to assume that the pKJ range came to cover the peninsula and a part of southern Manchuria, attenuating communications between its northern and southern extremities. This assumption is consistent with the non-linguistic evidence.
  - d) Claims that Japanese or Korean is a true isolate must be affirmatively reconciled with non-linguistic data from archaeology and human genetics.
- 11) *Pre-Korean began to (re)enter the peninsula in the 3<sup>rd</sup> to 1<sup>st</sup> centuries BCE, after which it can properly be referred to as proto-Korean.*
- a) This move coincides with the start of the Korean Iron Age.
  - b) There is a hiatus in archaeological evidence of rice-farming villages on the peninsula from the 3<sup>rd</sup> to 1<sup>st</sup> centuries BCE.
  - c) The continued advance of Korean speakers was partially checked by the Chinese commanderies during the Hàn dynasty.
  - d) The intrusion of Korean and Chinese speakers into the peninsula trapped pre-Japanese speakers in a natural cul-de-sac and stimulated the Yayoi migrations.
    - i) Para-Japanese speakers who remained behind on the peninsula fared differently in different regions.

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<sup>5</sup> Lee Ki-moon & S. R. Ramsey, *A History of the Korean Language* (Cambridge, 2011).

- (1) Those in the Yemaek-Silla area maintained contact with the Izumo-Kibi region in Japan.
  - (2) Those in the Paekche-Kaya area maintained contact with northern Kyūshū.
  - (3) Long-established para-Japanese place-names were retained by newcomer Korean speakers.
- ii) The politically disorganized Korean and para-Japanese groups to the south of the commanderies were given the recycled name for non-Chinese \*γan 韓 by the Chinese because that syllable satisfactorily transcribed a Tungusic word, cognate with later *xala* ‘tribe’, used by non-Chinese to the north as a name for the southern groups. This name is also the source of K *kaya* ~ *kala* and J *kaya* ~ *kara*.
- 12) *The decline of the Chinese commanderies increased the spread of pre-Korean into the southern peninsula.*
- a) The first state to form was Koguryō, followed by vanguard kingdoms Paekche and Silla. The elite of all three kingdoms spoke varieties of Old Korean.
  - b) Para-Japanese survived throughout the southern peninsula, most prominently in Paekche and Kaya. Spared para-Japanese speaking males absorbed into Korean armies learned Old Korean as a second language.
- 13) *Speakers of late para-Japanese introduced Old Korean and Early Middle Chinese words to Japan during the Kofun period.*
- a) Japan was not invaded by Puyōans, Paekcheans, or other non-Japonic peninsular peoples. Rather, para-Japanese speakers who had learned the rudiments of Korean culture used their knowledge to gain power and wealth in the islands. The history of this secondary development is reflected in the *Nihon shoki* records from the reign of Emperor Sujin onward.
  - b) Some Chinese stragglers who remained in Korea after the collapse of the commanderies (e.g. Aya) joined para-Japanese speakers who struck out to seek their fortune in the islands. Even a few Korean-speaking renegades may have cast in their lot with the para-Japanese speakers.
  - c) Para-Japanese persisted longer in Paekche and Kaya than in other parts of the peninsula.
- 14) *There was never a period of interaction between Japanese and Korean of sufficient duration to alter the Japanese lexicon radically.*
- a) Assuming the languages are unrelated, pre-Yayoi interaction on the peninsula is not indicated (see 9).
  - b) Significant interaction in the islands during the Yayoi period is not indicated (see 5a).
  - c) Interaction from the Kofun period to the Nara period certainly occurred, but was limited in extent (see 7e).

### Hypothetical Linguistic Geography of Northeast Asia from the Late Neolithic to Rise of the Three Kingdoms of Korea

