

Yayoi Wave, Kofun Wave, and Timing: The Formation of the Japanese People and Japanese Language

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A sudden change in climate, such as the commencement of a Little Ice Age, may have prompted the southern peninsular rice farmers to cross the Korea Strait ca. 300 B.C.E. in search of warmer and moister land. This may answer the timing of the “Yayoi Wave.” Evidence confirms the seminal role played by peninsular peoples in the formation of Middle and Late Tomb culture and the inadequacy of the “evolutionary” thesis, restoring our attention to the “event” thesis. Around 300-400 C.E., a drought may well have forced the Paekche farmers around the Han River basin to search for a new territory. This may answer the timing of the “Kofun Wave.”

By the 1990s, modern biological anthropology has shattered the transformation theories whereby Jōmon populations evolved into the Yayoi and then modern Japanese. Recent progress in molecular genetics has convincingly established that the proto-Japanese people and proto-Japanese language were formed not during the Neolithic Jōmon period (10,000-300 B.C.E.) but during the Yayoi period (300 B.C.E.-300 C.E.) of rice cultivation.¹

The people of Korea proper began cultivating millet in the north and rice in the south before 2,000 B.C.E. They started using bronze between 1,500-1,000 B.C.E., and iron ca. 400 B.C.E. Jared Diamond has raised the following question: With all these developments going on for thousands of years just across the Korea Strait, doesn't it seem astonishing that the Japanese islands were occupied by stone-tool-using hunter-gatherers until 300 B.C.E.? How did the Jōmon culture survive so long? Why did the Korean rice farmers wait so long to cross the Korea Strait and commence the Yayoi era in the Japanese islands?² He gives an answer, but it does not ring true in the context of the times. One of my objects in this paper is to give a more plausible answer to this puzzle.

Observing an “archeological break” including the sudden appearance of

horse bones and trappings in the late fourth century, Egami Namio has contended that some horseriding people from the continent had conquered the Japanese islands and established the Yamato kingdom.³ Gari K. Ledyard has specified the Puyō people as a plausible candidate for the conquerors.⁴ On the basis of *Kojiki* and *Nihongi* records, Wontack Hong has contended that the Paekche people from the Korean peninsula conquered the Japanese islands ca. 370-390 C.E., and Homuda (Oujin) ascended to the throne as the founder of the Yamato kingdom in 390 C.E., though there may be some time lag between the commencement of conquest and the burial of conquerors in gigantic tombs with horse paraphernalia.⁵

Walter Edwards has argued that changes in the contents of the tombs can be explained in terms of "process" rather than as the product of a discrete "event" that created the Yamato kingdom.⁶ Quite a few scholars seem to have seized on the Edwards thesis fairly uncritically, and contended on the basis of it that the Middle and Late Tomb culture (ca. 400-650 or 700 C.E.) had emerged as a result of internal evolution, eliminating the idea of a second wave of people from the Korean peninsula, the "Kofun Wave." This paper intends to show why the "evolutionary" thesis of Edwards is inadequate and to restore to our attention the "Kofun Wave" thesis, accounting for its timing.

Diamond has raised another question. If the Japanese people are descended from the more recent arrivals from the Korean peninsula, why are not the Korean and Japanese languages as similar as their genes?⁷ This paper shows why genetic affinity would not be incompatible with some lexical and phonological distance in this pen/insular case.

The Jōmon Culture of the Ainu and Malayo-Polynesian People

Eiichiro Ishida raised a very fundamental question: "basic Japanese culture undoubtedly took shape in the Yayoi period, and the formation of the Japanese people was complete by the fifth century. Who then, one may ask, were the people of the preceding Jōmon period?"⁸

Some have said that practices in the Jōmon culture associate it with the Malayo-Polynesian culture-practices such as tooth-blackening and tattooing.⁹ Genetic studies, however, show that the Ainu are much closer to northern Mongoloid than to Southeast Asian populations.¹⁰ Many place-names in Hokkaidō and the northern mainland include Ainu words, but such Ainu-like names never occur in the southwestern area and Kyūshū.¹¹ It may account for the contrast in Jōmon pottery traditions between southwestern and northeastern Japan, the boundary being located around the Nagoya region. Ishida mentions the "contrast between eastern and western Japan" and the "unmistakable dividing line running north-south in central Honshū" from the pre-Jōmon non-pottery period throughout the whole of prehistoric times.¹²

It seems that the Ainu people from Siberia came by foot to the Sakhalin-

Hokkaidō area toward the end of the glacial period and then spread over the whole archipelago, commencing the pre-pottery Paleolithic life.¹³ It seems that, before the end of the glacial period, the Malayo-Polynesian people also came from Southeast Asia via the sea route of the Philippines-Taiwan-Ryūkyū Islands, settling mostly in the Kyūshū area and some of them moving into the western mainland.

With the advent of the Neolithic Jōmon period (10,000-300 B.C.E.), people on the Japanese islands were fishing with harpoons and fishhooks, hunting and gathering with polished stone and bone implements, and boiling foods in cord-marked pottery in sunken pit dwellings. It is usually sedentary societies that own pottery. In the Middle East, pottery appeared about one thousand years after the invention of farming in 8,000 B.C.E. Amazingly enough, the Jōmon people commenced the Neolithic era with the simultaneous manufacturing of pottery. Jōmon pottery is claimed to have been the world's earliest-known earthenware at 10,000 B.C.E. Agriculture would not reach the Japanese archipelago for another 9,700 years.

The Japanese islands were so rich in food resources that even hunter-gatherers could settle down and make pottery; the Japanese forests were abundant in edible nuts, and the rivers and surrounding seas were teeming with fish, shellfish and seaweeds. A Jōmon family could enjoy hearty meals in a settled dwelling without really trying. They did not have to move around carrying the heavy, fragile earthenware.¹⁴ They were sedentary, rather than mobile, hunter-gatherers. There was absolutely no need for the Jōmon inhabitants, estimated to have numbered less than 75,000 persons by the end of the period, to seek for any alternative form of subsistence such as planting crops.

Neither the Ainu nor the Malayo-Polynesian people seem to have been closely related with the Ye-maek Tungus inhabiting the Korean peninsula in those Neolithic days. There seems to have been slight contact between them during the Jōmon period.

The Timing of the "Yayoi Wave": Why Did They Move in Circa 300 B.C.E.?

Rice, be it aquatic or dry land, does not originate from the Japanese islands. The Japanese archeologists have submitted carbonized rice grains from several Jōmon sites in northern Kyūshū to C-14 dating and come up with a tentative date of 900 B.C.E. The rice cultivation on a full scale, however, was introduced into the Japanese islands together with new cultural elements, including the stone tools, pottery and pit-dwelling similar to those found in the Korean peninsula around 300 B.C.E.¹⁵

Circa 300 B.C.E., people from the southern part of the Korean peninsula, who had been cultivating rice in paddy fields and using pottery fabricated on potters' wheels, began to cross the sea to the northern Kyūshū coastal plain.¹⁶

They were from the area of Three Han (Ma-han, Chin-han, and Pyŏn-han), but mostly from the Kaya (Karak) area of Pyŏn-han. In due course, they started to move into the western extremity of Honshū and then kept moving east and north. They joined the Ainu and Malayo-Polynesian people on the Japanese archipelago to commence the six-hundred-year Yayoi period (ca. 300 B.C.E.-300 C.E.).¹⁷ An ethnic bridge was at last formed between the Korean peninsula and the Japanese islands.

On a clear day, one can see Tsushima island with the naked eye from the Pusan area in the southeastern corner of the Korean peninsula. From the southern part of Tsushima, one can in turn clearly see Iki island, only a short distance from Kyūshū. People, it is said, are naturally lazy like most animals, and this explains why the peninsular people simply watched the scene over the horizon. What, however, made them stop watching around 300 B.C.E. and decide to cross the sea?

Diamond tries to answer the question in terms of four possible developments: “the farmers began raising rice in irrigated fields instead of in less productive dry fields; they developed rice strains that would grow well in cool climate; their population expanded in Korea, putting pressures on Koreans to emigrate; and they invented iron tools that allowed them to mass-produce the wooden shovels, hoes, and other tools needed for rice-paddy agriculture.”¹⁸ While Diamond’s answer contains elements of truth, it does not provide an exact answer to the matter of timing, to the question of why southern peninsular farmers decided to cross the sea when they did.

Harvey Weiss offers a history of climate change that leads us to answer the question of timing.¹⁹ Weiss contends that abrupt climate changes forced radical social adaptations such as societal collapse, habitat-tracking, or innovation of subsistence technology. The world’s climate was temporarily colder and drier on several occasions after the end of the most recent Ice Age. The first of these (known as the Younger Dryas) occurred abruptly about 10,700 years ago. The global climate change modified the fauna and flora, adversely affecting the food supply to hunter-gatherers. This created an urgent need for homo sapiens to find new ways to feed themselves, and induced them soon to invent agriculture, relying on rain to water their crops. Around 8,200 years ago, the rainfall abruptly fell below the level needed to sustain primitive farming techniques, and this sudden climate change induced farmers to adopt irrigation, planting wheat, barley or millet near rivers and digging canals. Another period of cooling and drying occurred about 4,200 years ago, and it caused a widespread adoption of pastoral nomadism across West Asia.²⁰

Although the Holocene (last 11,500 years) has a significantly milder climate than the glacial period, natural climate variability still plays a key role.²¹ Change in sea ice extent is determined from the measurements of chloride in the

GISP2 (Greenland Ice Sheet Project Two) site. Chloride is transported as sea salt from ocean to the GISP2 site. Increased levels of chloride in the GISP2 ice core characterize the Little Ice Age. The marine sediment record and ice core records reveal similarities as they did for the worldwide glacial expansions.²² Minor advances or retreats of mountain glaciers provide a sensitive climatic indicator, because small changes in ice mass balance produce a relatively large effect in the ice tongue. There was a readvance of mountain glaciers circa 400 B.C.-A.D. 300.²³

There occurred a Little Ice Age ca. 400 B.C.E., with cooler conditions persisting until 300 C.E.²⁴ The sudden commencement of a glacial advance coincided with the Warring States period (403-221 B.C.E.) in mainland China and the rise of nomadic Xiong-nu, as manifested by the building of the first wall by Han Chinese (in 356 B.C.E.), in the eastern world, and the great Celtic migrations in the western world. In 390 B.C., the fierce Celtic warriors known as Gauls had besieged Rome itself.²⁵ According to the *Dongyi-zhuan* (the Eastern Barbarian section in the *Wei-shu* of San-guo-zhi compiled by Chen Shou, 233-297 C.E.), after the disintegration of the Eastern Zhou dynasty in 403 B.C.E., the hitherto vassal state (Old) Yan claimed kingship, and then the ruler of (Old) Chosŏn also declared himself king, and these two states were on the brink of fighting each other. The armed conflicts between the Yan and Chosŏn at last occurred ca. 300 B.C.E.

The advent of global cooling and drying seems to have been associated with Malthusian warfare, giving ascendancy to the nomadic force over the suddenly disrupted sedentary empire. Such a sudden change in climate may have prompted the inhabitants in the eastern extremity of the Eurasian continent at the southern shore of the Korean peninsula to cross the Korea Strait in search of warmer and moister territory.

Human populations tend to multiply rapidly when living conditions become favorable. Even with a primitive technique of cultivating rice on or near swampy fields relying on rainfall, populations can double with each new generation. More than a millennium after starting rice cultivation in the southern peninsula, the population may have reached a sort of saturation. A sudden drying and cooling at this juncture would surely destroy the ecological balance and communal equilibrium. Rainfall abruptly falls below the level needed to sustain the primitive rice-farming technique, and this sudden change forces those rice farmers to search for new land, a more enticing endeavor than urgently and therefore rapidly improvising an innovation in agricultural technology. And here is the answer to the timing of the southern peninsular farmers' decision to cross the sea. A hazy but familiar image of islands on the horizon in the south would likely have recalled to the mind of those desperate rice farmers, collectively, a warmer and wet dreamland. The shock of cooling and drying made them see and pay attention to what had been before their very eyes for a long time.

The beginning of agriculture in the Japanese islands was much later than that in mainland China or Korea proper and, consequently, a relatively advanced form of agriculture arrived rather suddenly in the Neolithic Japanese islands. Yayoi culture, including Korean-style pit-dwelling and storage pits, gradually spread over the mainland.²⁶ The tradition of Jōmon culture, however, persisted until fairly late, especially in eastern and northern Japan. According to Keiji Imamura, chipped stone tools of the Yayoi period were undoubtedly a continuation of the Jōmon stone tool tradition, “because the production of chipped stone tools had become extinct in China and Korea by the beginning of the Yayoi period.”²⁷

The earliest Yayoi pottery, including the narrow-necked storage jars, wide-mouthed cooking pots and pedestalled dishes, was excavated in northern Kyūshū together with the Final Jōmon pottery, and its appearance reveals some influence of the latter. Much of the latter-day Yayoi pottery is, however, virtually indistinguishable from the plain red-burnished Korean Mumun pottery. Imamura points out the quantity of the Yayoi pottery discovered at the southern extremity of the Korean peninsula: “At one Korean site, Neokdo, Yayoi pottery accounted for 8 percent of all the pottery [... and] at the Yesoeng site (Pusan City) as much as 94 per cent of all pottery was Yayoi.”²⁸

The hunting-fishing-gathering Neolithic culture was replaced by the rice farming one. There occurred a drastic change in eating habits and mode of life in general. Even the ritual of attaching pig jawbones to wooden poles arrived together with domesticated pigs as part of the new cultural system.²⁹ According to Gina Barnes, the transition from Jōmon to Yayoi was an entire restructuring of the material economy on the Japanese islands, and “North Kyūshū acted as an incubator for the formation of the Yayoi culture.”³⁰

The Bronze-Iron Yayoi Culture

Bronze and iron were introduced to the Japanese islands at the same time as agriculture. Quite a few bronze daggers, halberds, mirrors and bells of the Yayoi period were excavated. Not only the bronze mirrors and bells, but also the bronze daggers and halberds seem to have been mostly religious ceremonial objects rather than functional weapons. According to Imamura, “weapons were transformed from the thick and narrow original forms into thin and wide forms at the expense of their actual functionality.”³¹ Weapons were too thin to have been functional.

According to the *Dongyi-zhuan*, the Pyōn-han people supplied iron ores to the Wa people (i.e., to the Kaya cousins who had crossed over the sea to settle in Kyūshū). A few iron smelting sites were indeed discovered in southern Korea. According to Imamura, “as of yet there has been no positive discovery of Yayoi iron smelting sites that would provide evidence of the domestic production of raw iron” in the Japanese islands.³²

Although bronze artifacts have been discovered in sizable quantities,

there is a scarcity of iron tools found in Yayoi sites. Yayoi people made hand-axes by grinding stones and cut trees with the same (gouged chisel-shaped) stone axes. They also manufactured wooden farming tools such as plows, hoes, knives, and shovels, as well as wooden instruments such as vessels, shoes, and mortars. Virtually all of the Yayoi farming tools that have been excavated were made of wood, but it is very likely that iron instruments were used for the production of such wooden tools.

The Yayoi people did not cut the lower part of the rice stalk with a sickle, but cut the ear of rice with a semicircular stone knife with a string running through a small hole. Rice harvesting with ear-cropping stone knives must have taken enormous time and effort. The level of rice-cultivating technology of the Yayoi farmers must have reflected that of the contemporary southern peninsular rice farmers. The Yayoi culture seems to have been the product of a gradual fusion (among the people from the Korean peninsula, Ainu, and Malayo-Polynesians) rather than the product of war and conquest.

The Formation of Proto-Japanese People and Proto-Japanese Language

A large and growing mass of data from physical anthropology and molecular genetics shows that “the Jōmon, Ainu, and Ryūkyū populations were genetically remote from the population of the Yayoi-period and present-day main-island Japan.”³³ According to Imamura, “from skeletal morphology, the similarity of the past Jōmon population to the present Ainu and to the Ryūkyūans is closer than to the mainland Japanese. The mainland Japanese are more similar to the peoples on the Northeast Asian continent.”³⁴ Phylogenetic analysis revealed the closest genetic affinity between the mainland Japanese and Koreans, suggesting that about 65 percent of the gene pool of the former was derived from the latter gene flow.³⁵

Barnes notes that Yayoi excavations in western Japan have revealed two distinct skeletal types, that is, the indigenous Jōmon skeletal genotype and the Korean skeletal type. According to Barnes, “physical anthropological studies of modern Japanese show that continental effects on skeletal genetics rapidly diminish as one travels eastwards from Kyūshū—except for the Kinai region, which received many peninsular immigrants directly in the fifth century A.D.”³⁶

Those Ainu clans that were shy of mingling with the newly arrived Pyōnhan (Kaya or Karak) people seem to have joined their old brethren in the northeastern corner of Main Island, surviving as a homogenous group in Hokkaidō until the eighteenth century. The like-minded Malayo-Polynesian clans clung together at the southwestern corner of Kyūshū, still surviving in the Ryūkyū Islands.³⁷ It may well remind us of the Celts that had been driven to Scotland or Wales by the newly arrived Anglo-Saxon tribes in fifth-century Britain. The history

of the Yamato court records inveterate conflicts with the Malayo-Polynesian and especially with the pureblooded Ainu tribes, whose ferocity was apparently comparable to the barbaric Germans or Scots portrayed in the Roman chronicles.

Many Japanese place-names in Hokkaidō and northern Honshū include Ainu words.³⁸ The Ainu language was indeed spoken until very recently on the northern island of Hokkaidō. The Jōmon inhabitants of the eastern and northern archipelago did likely speak a proto-Ainu language, unlike those of the western and central regions, especially the people of Kyūshū, who likely spoke a proto-Malayo-Polynesian language.³⁹

Unger states that: “Proto-Japanese was not spoken in Japan during the Jōmon period, proto-Korean-Japanese accompanied the introduction of Yayoi techniques, and the earliest plausible date for a Tungusic or, more precisely, a Macro-Tungusic language in Japan is therefore the start of the Yayoi period.”⁴⁰

The prototype of the Japanese race sharing the proto-Japanese language was formed during the Yayoi period, going through a relatively peaceful process of generic mixture over an extended period of time. The proto-Japanese language seems to have evolved on the basis of the Kaya (Karak) dialect of the Korean language, spreading from northern Kyūshū to eastern Honshū. Both Korean and Japanese belong to the Macro-Tungusic branch of, say, the Altaic language, but lexically and phonologically, the Japanese language seems to have been heavily influenced by the languages of Ainu and Malayo-Polynesian. The linguistic influence of the Jōmon aborigine seems to have matched their genetic share in the formation of the Japanese people.

To the Pyōn-han (Kaya) people, however, those fellows who had crossed over the sea to Kyūshū island may at first have looked very much like brothers and sisters, but with a lapse of time they came to look more like distant cousins.

The Advent of Tomb Culture

The six-hundred-year Yayoi period was followed by the Tomb period. Egami regards the period extending from the beginning of the fourth century down to about the middle of the second half of the fourth century as the Early Tomb Period (ca. 300-375 C.E.) and the period extending from that time down to the latter half of the seventh century as the Late Tomb Period. The usual periodization is the Early (300s), the Middle (400s), and the Late (500-650 or 700). In order to minimize the wasteful use of the nation's resources, the Yamato court proclaimed, as one of the Taika Reform measures, the prohibition of large tomb construction (as well as the sacrifice of horses at funerals) on March 22, 646, C.E. Although the construction of Buddhist temples, rather than of the gigantic tombs, had already begun to deplete the energy and resources of the Yamato ruling clans, the practice of constructing large tomb mounds seems to have continued long after that date. Cremation became the fashion only after 700 C.E.

After carefully examining the shape of tombs and the contents of excavated artifacts, Egami concludes that the character of the Middle and Late Tomb Periods is essentially identical and hence may be combined into one period covering approximately the three-hundred-year period, say, between 375 and 675 C.E. Egami contends that there is chronological continuity between the later Yayoi culture and the Early Tomb culture and that the change that took place can be understood as a result of the increasing social stratification in the late Yayoi period and the associated social evolution.⁴¹ The formation of a state, however, had to wait until the subsequent Late Tomb Period.

The *Dongyi-zhuan* states that there were no horses on the Japanese islands. Indeed, horse bones or any artifacts related to horses are never found in the early period tombs. J. Edward Kidder, Jr., states: "So far no horse bones have been discovered in any Early Kofun period sites."⁴²

The culture of the Early Tomb Period retained many elements of Yayoi origin, such as high esteem for bronze swords, mirrors, and jewels as ritual objects rather than for practical utility. According to Egami, the burial customs of the early period were tinged with religious symbolism and magical mysticism. It was a tradition continued from the Yayoi period.⁴³ The tombs of the early period were relatively small. However, since a tomb was usually located on top of a natural hill or along a ridge overlooking paddy fields, a large imposing tomb could be constructed with a relatively small labor force. People usually dug a hole on top of a hill, placed a wooden coffin in the hole, surrounded the coffin with stones, and then capped the top with stone panels.⁴⁴

Tombs of the Middle Period (400s), however, were usually on level plains, enormous in size, and in either a keyhole shape or a round shape. The beginning phase of the middle tomb period is represented by the tombs of Oujin and his son Nintoku. Employing a large labor force to pile up earth, they constructed a gigantic burial mound on a level plain and surrounded the tomb with a moat and embankment. In case of a vertical-pit-style chamber tomb, stones were piled up to form a simple stone chamber, which was then covered with long stone slabs or logs, overlaying the top of the mound with layers of soil.⁴⁵ In case of a horizontal-hole-style chamber tomb, they constructed a stone passageway inside the burial mound and moved the coffin into the stone chamber.⁴⁶ From ca. 500 C.E., tombs became more common but much smaller.

Barnes states that "the horizontal chamber tomb was introduced into the Japanese islands by Paekche elite in the early fifth century."⁴⁷ Other artifacts show, as well, a Korean influence. Kidder shows horse-trappings such as bridle-bits, cheek plates, stirrups, flank and rump ornaments, saddle bows, horse bells, strap buckles, and the horse helmet excavated from the "fifth" century tombs, together with those artifacts found from the "sixth and seventh" century tombs.⁴⁸ According to Kidder, the saddles with gilt-bronze bows fitted over a decorated

wooden frame are “similar to Korean products and came from the same workshops” and that “all trappings prior to the middle of the 5th century were foreign-made,” that is, made in the Korean peninsula.⁴⁹ W. Wayne Farris also notes that: “The earliest examples [of horse paraphernalia] are simple, two-piece bits and stirrups of iron and wood, both of which were recovered in northern Kyūshū, a sure sign of Korean import. Along with a few saddle parts, these primitive trappings predominated in the first half of the fifth century; many were probably peninsular products.”⁵⁰

In September 1989, the first-century Paekche kilns were excavated near Puyō and Kongju, together with various earthenware fired above 1000° C. According to Barnes, the people of the Korean peninsula started producing the hard-fired grayish or red Wajil earthenware (fired at 900-950° C) during the first century A.D. and then the high-fired stoneware (fired at higher temperatures of 950-1150°) some time during the first century and third century.⁵¹ The techniques of high-firing kilns for iron production were apparently transferred to pottery making. Farris states that: “it is no accident that stoneware entered Japan approximately when iron goods and the ferrous industries became more widespread. Each technology required heating and working materials at high temperatures.”⁵²

Sue pottery (stoneware) represents the Middle and Late tomb periods, just as the cord-marked pottery and Yayoi pottery represent the previous periods. Kidder notes that the sue pottery was a Korean product initially and coincided in the Japanese islands with the appearance of horse-trappings in the tombs. He further notes that the oldest sue pottery was discovered from the Ikenoue and Furudera tomb groups (in Amagi city, Fukuoka prefecture, in Kyūshū) together with a nearby kiln site that was dated by the presence of Haji pottery (of soft Yayoi tradition) to the late fourth or early fifth century.⁵³ According to Barnes, sueki was known as Chosōn (Korean) pottery until the 1950s, when the word sue (derived from a reference to the vessels in the eighth-century anthology *Manyōshū*) was adopted.⁵⁴ It seems to have been an unbearable burden for the contemporary Japanese to keep calling the representative artifact marking the three-hundred-year Middle and Late tomb periods “Korean pottery.”

Yet the traces of a horseriding culture that came from the Korean peninsula do not end there. There occurred a drastic change in costumes after the Early Tomb Period. A large proportion of the haniwa male figures are dressed in jackets and trousers, as prescribed for the tradition of horseback riding.

The *Bei-shi* (History of Northern Dynasties, 386-618 C.E., compiled by Li Yan-shou during 627-659 C.E.), records that men and women in the [Middle and Late Tomb Periods] Japanese islands wore skirts and shirts; the sleeves of men's shirts were short, and women's skirts were pleated. At this point, the *Bei-shi* specifically mentions that “in older days” men wore a wide seamless cloth on the

body. Indeed, the *Dongyi-zhuan* had already recorded that the clothing of [Yayoi] Wa people was like an unlined coverlet and was worn by slipping the head through an opening in the center and that their clothing was fastened around the body with very little sewing.

According to *Bei-shi*, *Zhou-shu*, and *Sui-shu*, not only the language but also the costumes of the Paekche people were identical to those of the Koguryō people. The costumes of the men and women in the Takamatsuzuka paintings closely match those of the Koguryō tomb paintings. Kidder even states that: “The costumes of the women make it abundantly clear that Korean women are shown here.”⁵⁵ The *Nihongi* records that on January 15, 593, C.E., relics of Buddha were deposited in the foundation stone of the pillar of a pagoda at Hōkōji, and the *Suiko* section of *Fuso-ryak-ki* (compiled by Kōen during the early Kamakura period) records that, on that occasion, some one hundred people, including the Great Minister Soga Umako, had appeared wearing “Paekche clothes,” and the spectators were very much delighted.

Farris summarizes the materials, technologies, and religious and political systems that flowed from the Korean peninsula to the Japanese islands during the Tomb Period. First, items essentially originated in the peninsula such as iron ore and iron-working techniques, the cuirass, the oven, bronze bells, court titles and surnames, the district, measurements for the field pattern system, and mountain fortifications. Second items from China that were transmitted with some alteration or refinement, such as the ring-pommel sword, (U-shaped) iron attachments for farming tools, pond- and canal-digging technology, stoneware, silk weaving, the idea for service and producer units (*be*), law codes, and writing.⁵⁶ Third, items from China that were transferred with slight changes, such as lamellar armor, horse trappings, stone-fitting methods and tombs, gold and silver jewelry, Buddhism, and the crossbow. As Farris puts it, “Taken together these three modes of transmission reflect the seminal role played by peninsular peoples in the formation of Japan’s Tomb culture.”⁵⁷ The Tomb culture indicated by Farris obviously implies the “Middle and Late” Tomb culture.

Archeological Break: Event or Process

Egami has contended that the transition from the culture of the Early Tomb Period to that of the Middle and Late Tomb Periods was abrupt and sudden. The most important fact may be the sudden appearance of horse bones and various artifacts related to horses. According to Egami, the change was too sudden and too unnatural to have been an indigenous development of a rice-cultivating society. There could have been no reason for the Yayoi society to have deliberately “imported” an alien culture on such a scale as to fundamentally transform the basic character of its own traditional culture. The transformation must reflect the subjugation of the Japanese islands by the people from the

continent.⁵⁸

According to Hiroshi Mizuno, the appearance of such gigantic tombs (in the Middle Period) implies the unification of numerous traditional communities under one mighty ruler and suggests that the new ruling group constructed such spectacular tombs in order to inspire awe in the minds of people, winning thereby their obedience to the absolute ruler of the new nation.⁵⁹ Barnes states that: "The replacement of ritualistic items, such as bracelets and bronze mirrors, by more utilitarian tools and weapons reflects a basic shift in the source of status and power for the fifth-century elite."⁶⁰

For those scholars who doubt the Theory of Horseriding People, an article written by Walter Edwards seems to constitute sufficient evidence to discredit the entire study of both Egami and such a distinguished archeologist as Kidder. Edwards has contended that the archeological evidence for horse trappings actually occurs in the "late fifth" century rather than the "late fourth or early fifth."⁶¹ He has further posited that the changes were all gradual, and never abrupt, accusing Egami of having created a false sense of discontinuity between Early and Middle Tomb materials. His argument has been all too uncritically seized and enthusiastically echoed ever since, witness, for example, the work of Farris, who claims: the horse "trappings appeared too late to have been associated with an invasion in the mid- or late fourth century; moreover, their spread across Japan was too gradual."⁶²

Edwards presents the archeological data of 137 tombs in order to refute Egami's thesis, but somehow the data as staged by Edwards himself look more consistent with Egami's two-fold division of the Tomb Period. Edwards tries to refute Egami by insisting that the traditional Middle Period tombs have to be analyzed in combination with the Early tombs, and that the strong political power the huge Middle-Period tombs represent cannot be understood to derive from the "event" of a conquest by horseriders.

Although the archeological data prepared by Edwards himself show the appearance of a few tombs that contain continental materials at around the "beginning of the fifth century," Edwards insists that the content of burials became distinctly continental only "after the middle decades of the fifth century;" and therefore, he claims, the tombs of Oujin and Nintoku cannot be classified as those of the horseriders. Edwards admits the possibility that the continental influx he places in the mid-fifth century may actually belong to the fourth, which would relate it to historical contexts of the fourth century. But he insists that the traditional Middle Period tombs, including the tombs of Oujin and Nintoku, still precede the continental influx, and hence these tombs could not contain any equestrian paraphernalia or anything conspicuously continental.⁶³

Edwards himself quotes Kobayashi Yukio, who has argued that the huge middle tombs could not have been built without the advanced methods of

surveying and construction learned from the continent, and also quotes Mori Koichi, who has pointed out the dramatically increased number of iron objects in the Middle Period tombs. Surprisingly, however, Edwards ends up quoting Inoue Mitsusada, implying that the emerging indigenous force in the Kinai region first invaded southern Korea, acquired iron there, and then, using the weapons and armor made from the iron, unified Japan.⁶⁴

Egami had already pointed out that “the idea that these people of the early tombmounds period (that lack the military element required in carrying out subjugation activities) should have landed in south Korea, the inhabitants of which were better armed, should have succeeded in subjugatory activities and should have returned home after fostering their horseriders’ culture is clearly contrary to the universal laws of history.”⁶⁵

I postulate that the conquest of the Japanese islands by the Paekche people occurred some time ca. 370-390 C.E., and there may be some time lag between the commencement of conquest and the burial of the conquerors in gigantic tombs with horse trappings. I take my evidence from the *Nihongi*, Barnes, Kidder, and Farris to show why the “evolutionary” thesis of Edwards is inadequate.

First, the *Nihongi* records the official arrival of horses from Korea in the fifteenth year of Oujin (404 C.E.). The *Harima Fudoki* records the story that, while Homuda (Oujin) was hunting, he noticed a horse running away. He asked attendants whose horse that was and was told that it was Homuda’s own horse. In this way, the *Harima Fudoki* notes, the name of the place became “my-horse-plain.”⁶⁶

Still in the *Nihongi*, a story of the time of Yuryaku refers to haniwa horses on the tomb of Oujin. That is, a person called Hiakuson rode past Oujin’s tomb one night on his return from visiting his daughter, who had given birth to a child; a red courser dashed alongside his piebald horse, and its rider offered an exchange of horses. Hiakuson greatly rejoiced at obtaining such a steed; he put this courser in the stable when he arrived home and went to sleep. The next morning, to his surprise, he found that the red courser had changed into a haniwa horse. Retracing his route, he found his own piebald horse standing among the haniwa horses on the tomb of Oujin.⁶⁷

Second, Barnes notes that, in 1872, part of the front mound of the Nintoku Mausoleum collapsed in a small landslide, exposing a pit-style stone burial chamber. She further notes that some iron armor and weapons, gilt-bronze ornaments, a mirror, a ring-pommeled sword, and a horse bell that were recorded as having been recovered from the tomb of Nintoku are preserved in the Boston Museum of Fine Arts.⁶⁸ Kidder thinks their preservation is indeed a fortuitous occurrence, considering the strict prohibition of excavating any imperial tomb. According to Kidder, the small bronze bells and a haniwa horse head (with

simulated metal strap joints at the bit and throatlatch) that are said to come from the tomb of Nintoku constitute the archeological evidence for equestrianism.⁶⁹

Third, Kidder lists a specific collection of archeological evidence for equestrianism from tombs believed to be connected with the “early fifth century” Oujin-Nintoku stage of the Yamato kingdom: a gold saddle bow from the Maruyama tomb, a bronze horse bell and a haniwa horse head from Nintoku tomb, two wooden (front and back) saddle bows and a dumpy haniwa horse from the Ryōnan site, and remains of a saddle, bit, stirrups and bronze ring from a satellite tomb of Richiu.⁷⁰

The number of iron objects, iron ingots, and blacksmith’s tools as well as evidence of new metal-working techniques such as the use of hinges and riveting and the ability to forge difficult shapes, increased dramatically with the beginning of the fifth century. According to Barnes, the Ariyama tomb (a subsidiary tomb of the Oujin Mausoleum) alone held more than three thousand iron swords and tools.⁷¹ The oldest saddle with gilt bronze bows that were fitted over and decorated with a wooden frame was excavated from the Maruyama tomb that is, according to Kidder, also likely a satellite tomb (or a retainer’s tomb) of the Oujin Mausoleum.⁷² Gold was not discovered in the Japanese islands until the eighth century, and Japan had very much depended on Korea as the source of raw iron also.

According to Farris, the quantity of iron from sites of all types in Japan grew dramatically in the early fifth century (specifying the “era 425-450” C.E.) and, what is more, the source for almost all of this iron must have been Korea, at least until iron sand was discovered in the Japanese islands in the sixth century.⁷³ Farris states that “the implications of early Japan’s near-total reliance on the southern Korean states for iron, iron tools and weapons, and iron workers are profound.” Farris further maintains that: “Nomads did not gallop through Korea and Japan founding kingdoms, but inhabitants of Korea did play an essential role in transferring horseriding technology to Japan.”⁷⁴

Kaya (Karak) vs. Paekche

According to Kim Ki-Woong, the fact that the early tombs were located on hilltops and had vertical-pit-style chambers suggests that they correspond to the third or fourth century Kaya (Karak) tombs, while the fact that the middle and late tombs were located on level plains and had horizontal stone chambers suggests that they correspond to Paekche tombs. Furthermore, the ornaments found in the early tombs are similar to those found in Kaya tombs, while the ornaments found in the middle and late tombs are similar to those found in Paekche tombs. According to Kim, the oldest iron stirrups excavated in Korea are mostly dated to the third and fourth centuries, while the oldest stirrups discovered in the Japanese islands are mostly dated to the fifth and sixth centuries.⁷⁵

The Pyōn-han (Kaya) people, who crossed over the sea from the southern peninsula to the Japanese islands, commenced the rice-farming Yayoi era together with the Ainu and Malayo-Polynesian aborigines. By the turn of the fourth century, possibly coinciding with some fresh inflow of Kaya people, the Yayoi people began to construct the genuine Kaya-type tombs on hilltops, looking down on rice paddies. The Paekche conquerors, who arrived at the Japanese islands by the end of the fourth century, were duly impressed by the native burial practices. The new rulers started to build dramatically exaggerated gigantic tombs on level plains, surrounding them with moats, earth embankments, and small repository tombs for funeral artifacts. But how did they manage to build on such a scale?

I postulate that the Little Ice Age (that began at around 400 B.C.E.) induced the southern peninsular people to seek a warmer and rainier place across the sea. While the southern peninsular rice farmers tried to resolve the sudden climate change by moving south to Kyūshū, the middle peninsular farmers cultivating rice (around the Han River basin) below the millet-barley line seem to have tried to resolve the problem by time-consuming methods of developing rice strains for a cool climate, constructing large irrigation ponds, digging deep and long canals to divert river water, and clearing the heavy soil with iron-edged (in U-shape) wooden hoes and spades to expand the irrigated paddies.

Yayoi farmers in the Japanese islands, just like their southern peninsular Kaya cousins, had been cultivating rice either on a natural marshland, digging canals for drainage, or on a low terrace of dry land above the swampy lowland, supplying water by canal from the natural swampy fields which rainfall submerged under water throughout the year.⁷⁶ The middle peninsular Paekche farmers, however, brought in more advanced agricultural techniques that systematically utilized the large man-made reservoirs and deep canals, and extensively used the sharpened iron sickles, plows, and wooden spade and hoes with U-shaped iron edges.

With the beginning of the Iron Age (ca. 400 B.C.E.), the entire Liaodong area and the Korean peninsula north of the Chongchon River started to use iron tools. In the southern peninsula, however, wooden agricultural tools dominated even until the first century B.C.E., and the iron sickles started to appear only by the beginning of the first century C.E. The U-shaped iron edges appeared in the northern peninsula by the early first century C.E. and began to appear in the south by the third century C.E., first in the Paekche area of the middle peninsula and then eventually in the Silla and Kaya area further south. It was during the third and fourth centuries that the middle peninsular farmers began to utilize various new iron implements and also irrigation ponds, drastically changing the agricultural technology. There followed some native innovations in farming tools around the Han River basin. The U-shaped iron shovel fittings (as well as iron plowshares) are

recovered from the fourth century sites of Paekche. Silla in the south was a little bit late in plowing.⁷⁷ Spades and hoes with these edges have been extensively used by Korean farmers until the mid-twentieth century.

In the Japanese islands, hoes and spades with U-shaped iron edges are discovered only from the Middle and Late Tomb Period sites, never from the Yayoi or Early Tomb Period sites. The U-shaped iron edges for wooden hoes and spades could bite more deeply into the earth, dig deeper irrigation ponds and ditches (piling up more earth for dams), enable the clearance of land with heavy soil, and hence enable more land (far from the naturally swampy fields) to be brought into rice cultivation. The large irrigation ponds enabled access to fertile soils at higher elevations. The very idea of iron shoes folding around wooden blades was brought into the Japanese islands by the Paekche people.⁷⁸

With greatly improved productivity, a large labor force on the Japanese islands could be released from the traditional rice farming activities and mobilized for the construction of gigantic tombs. A rapid increase in rice production implies a rapid increase in population also. The skills acquired from digging deep ponds and canals and piling up a large amount of earth for dams were in no time applied to the construction of large tomb mounds surrounded by moats. The new agricultural technology produced a sufficient surplus to feed a large number of new rulers, administrators, soldiers, craftsmen, and ditch-diggers, and their activities are collectively thought of as “middle and late tomb culture.”

Farris states that “Archaeological evidence suggests that beginning in the early to mid-fifth century, inhabitants of the Japanese archipelago began to adapt all these new ideas to their environment. Most iron hoes and spades have appeared in tombs in northern Kyūshū, Okayama, and especially the Kinai and are nearly indistinguishable from southern Korean prototypes.”⁷⁹ The *Kojiki* and *Nihongi* conspicuously record extensive construction of dikes, ponds, and irrigation canals, particularly during the reign of Homuda and his son, Nintoku. According to Farris, “Scholars have also noted signs of canal digging at the Furuichi site in Ōsaka on a scale unimaginable to Yayoi tillers.”⁸⁰

Apparently, Egami could not distinguish the people from Pyōn-han (Kaya), who commenced the Yayoi era, from the Paekche people who commenced the Middle and Late Tomb era. J. Russell Kirkland refutes Ledyard and states that “the people who crossed to the islands from Korea would not have been horseriders from Manchuria, but natives of southernmost Korea who possessed the same Yayoi culture that was current in Japan.”⁸¹ Neither Ledyard nor Kirkland clearly differentiates the Kaya-Wa connection from the Paekche-Yamato connection.

Taryō Ōbayashi reiterates Oka Masao’s idea (published in Japanese in 1956 and 1958) that the Altaic kin term *kara* (having its cognates in the Tungus dialect *xala*, implying exogamous patrilineal kin group) was introduced to the

Japanese islands at the beginning of the Yayoi period, and then another term, *uji* (implying “kin group” *ul* in Korean and “descendants” *uru* in Tungus), was introduced with the Altaic royal culture in the fourth century. Oka apparently postulates two different waves of people from the Korean peninsula.⁸²

According to the *Dongyi-zhuan*, compiled in the late third century, since the men and women of twelve *Pyōn-han* states were very close to the *Wa* (people), many of them had tattoos. On the other hand, according to the *Liang-shu*, which was compiled in the early seventh century, since the *Paekche* state was close to the *Yamato* (state), there were many *Paekche* people who had tattoos. (Since both the *Kojiki* and *Nihongi* record *Wa* in a Chinese character and read it *Yamato*, we may have to read the *Wa* in *Liang-shu* as *Yamato*.) The fact that it was the *Pyōn-han* (*Kaya*) people who had commenced the six-hundred-year Yayoi era on the Japanese islands and that it was the *Paekche* people who had established the *Yamato* kingdom and commenced the three-hundred-year (Middle and Late) Tomb era came to be recorded in the Chinese chronicles with such a subtle differentiation of expression.

The “Timing” of the Kofun Wave: Why the Fourth Century?

The timing of the “Yayoi wave” from the Korean peninsula is explained by the abrupt commencement of a Little Ice Age ca. 400 B.C.E. that in turn induced the southern people to seek a warmer and rainier place across the sea. Well then, how do we explain the timing of the “Kofun wave” from the Korean peninsula? What made the *Paekche* people suddenly cross the Korea Strait in the late fourth century? Was the appearance of conquerors a purely historical accident or a product of a changed environment? Is it possible to establish a causality that looks more consistent with Korean history than that of *Ledyard*? I shall offer a motivation of sorts for the timing of the *Paekche* crossing, albeit this is a hypothesis impossible to test.

William F. Ruddiman contends that a Little Ice Age can be followed by an outbreak of plague.⁸³ The period immediately following the Little Ice Age of 400 B.C.E.-300 C.E. coincided with the demise of the Han Chinese empires and the beginning of the era of Five Barbarians and Sixteen States (304-439 C.E.) in the eastern world and the Hunnish invasion (in 375 C.E.) causing *Völkerwanderung* and the ensuing split of the Roman empire (in 395 C.E.) followed by the downfall of the Western Roman Empire (in 476 C.E.) in the western world. H. H. Lamb quotes Huntington: “it was the drying up of pastures used by the nomads in central Asia that set off a chain reaction of barbarian tribes and unsettled peoples migrating westwards into Europe, where they ultimately undermined the Roman empire.”⁸⁴ The *Samguk sagi* posits intensified armed conflicts between the *Murong Xianbei* and the *Tungusic Koguryō* ca. 293-342 C.E., and hence *Farris* notes that “the first Koreans to use the horse in combat were soldiers of *Koguryō* doing

battle with the Xian-bei,” spreading the new technique of using stirrups.⁸⁵

In the aftermath of the Little Ice Age, a series of plagues or some disastrous irregularities in climate such as frequent droughts could have occurred in the eastern extremity of the Eurasian continent. According to Lamb, the period of drought had two maxima, not only in the Mediterranean but also far to the east into Asia, around 300-400 C.E. and 800 C.E., and such a drought could have devastated the places where agriculture had been carried on with the aid of elaborate irrigation works.⁸⁶ Such an abrupt change in climate may well have had a serious impact, also, on the Paekche farmers around the Han River basin.⁸⁷

The following are the records of the *Samguk sagi* on droughts and famines in Paekche. There was a drought in the spring of 316 C.E. and crop damage due to desert locusts in July 321 C.E. In 331 C.E., severe droughts in spring and summer dried up the river, and the famine resulted in the practice of cannibalism. An epidemic spread in 380 C.E. In 382 C.E., there was a severe drought in spring, rain did not fall until June, and the starving people sold their own children. In 386 C.E., frost formed in July and damaged crops. A severe drought in summer 402 C.E. dried out rice sprouts, and the king of Paekche offered prayers for rain. The *Annals of Silla* record droughts and famines in 302, 313, 317, 372, 381, 397, and 401 C.E. and also crop damage due to desert locusts in July 389 C.E. and in 399 C.E.

Due to the long spell of drought following the Little Ice Age, the Kaya farmers on the southern shore of the Korean peninsula could have renewed, by the turn of the fourth century, their emigration effort into the Japanese islands to join their distant cousins (coinciding with the beginning of the Early Tomb Period of 300-375 or 400 C.E.), while the more innovative farmers led by the martial rulers of the Paekche state in the Han River basin could have decided to conquer the Ma-han in the southwestern quarter of the peninsula (in 369 C.E.) and then to branch off in the direction of the Japanese islands in the late fourth century.⁸⁸ They could have anticipated, quite correctly, that their advanced agricultural technology would pay them better in the southern peninsula, but much more handsomely in the warmer and rainier Japanese islands.

Genetic Affinity with Linguistic Distance

Juha Janhunen states that “the ultimate homeland of Japonic is in Korea, more specifically somewhere in the southern (Kaya), western (Paekche) and central (Koguryō) parts of the Korean Peninsula.”⁸⁹

According to Diamond, “some skeletons of the Yayoi period were still Jōmon-like in appearance,” but “by the time of the kofun period, all Japanese skeletons except those of the Ainu form a homogenous group, resembling modern Japanese and Koreans.”⁹⁰ The proto-Japanese people that were formed out of the Ainu, Malay-Polynesian, and Kaya people during the Yayoi period may

be called “Wa-jin,” while the people who evolved from this proto-Japanese people and the Paekche newcomers of the Middle and Late Tomb may be called “Yamato-jin.” The Yamato people were bound to have much more amplified genetic affinities with the people of the Korean peninsula than the Yayoi proto-Japanese. They were the ancestors of the modern Japanese people.

J. Marshall Unger contends that, either by conquest or by extensive contacts, the “Yayoi-Kofun transition” witnessed significant linguistic change for the Japanese to show affinities to the Tungusic (implying Koguryō-Paekche) languages. According to Unger, “a number of uncommon or semantically narrow Japanese words have Korean [better read Kaya or Chinhan-Pyōnhan] cognates, yet more common or broader near synonyms” often have “Koguryō, Paekche, or Tungusic cognate.”⁹¹ Unger defines the proto-Korean-Japanese as an early southern Tungusic language from which a dialectal split had developed between the Chinhan-Pyōnhan Korean and the Yayoi Japanese. Unger believes that the proto-Korean-Japanese (the Chinhan-Pyōnhan variety) of the Yayoi period was an early offshoot of the Macro-Tungusic and hence, by the Early Tomb Period, it must have diverged significantly from the Puyō-Koguryō-Paekche language that broke off much later from the Macro-Tungusic.⁹²

According to the *Dongyi-zhuan*, the language of Koguryō was identical to that of Puyō. The *Liang-shu* states that the language of the Paekche was identical to that of the Koguryō. Some linguists have tried to explain the parallels and similarities between Korean and Japanese solely by invoking loanwords and wholesale borrowing because both geography and chronology seem to be lesser stumbling blocks. Many linguists, however, have stressed the apparent genetic relationship between Puyō-Koguryō-Paekche language and the old Japanese language, as well as the Altaic connections of all these languages.⁹³

According to Yi Ki-mun, although the Altaic languages seldom share identical numerals, the Koguryō language and the old Japanese language share a surprisingly large number of identical numerals: the Koguryō numerals mil (3), üc (5), na-nin (7), and tōk (10) correspond to the Japanese numerals mi (3), i-tsu (5), na-na (7), and tō-wō (10). Yi concludes not only that the Koguryō language was genetically very closely related to the old Japanese but also that the separation of these two languages occurred relatively recently.⁹⁴

Diamond raises this question: If the Japanese people are descended from more recent arrivals from Korea, why are not the Japanese and Korean languages as similar as their genes?⁹⁵

Korean and Japanese diverged from one another fairly recently. Although genetic similarity is not incompatible with some linguistic distance, we still have to explain the apparent lexical and phonological distances observed between the modern Korean and modern Japanese. A possible answer to the puzzle of language difference might be rooted in notable lexical differences among the

dialects of Puyŏ-Koguryŏ-Paekche, Ma-han, Chin-han (Silla) and Pyŏn-han (Kaya). The *Samguk sagi*, however, never mentions a need for an interpreter for people in the Korean peninsula to communicate with each other. An interpreter is required only when it is necessary to deal with the Chinese. In fact, the *Samguk sagi* never mentions any kind of language problem among the people of Paekche, Koguryŏ, Silla, and Kaya. One may not, therefore, be obliged to assume an insurmountable difference among the dialect of the Pyŏn-han (Kaya) people that had commenced the Yayoi era in the Japanese islands, the dialect of the Paekche people who had conquered the Ma-han area and also founded the Yamato kingdom, and the dialect of the Silla people who had unified the Korean peninsula in order to account for the lexical and phonological differences between modern Korean and modern Japanese.⁹⁶

The *Nihongi* never records the presence of an interpreter when the rulers of the Yamato kingdom encountered the people from Paekche or even from Silla or Koguryŏ. According to the *Nihongi*, the king of Silla sent messengers to bring condolences when Ingyou died (in the mid-fifth century), but since “they were unpracticed in the common speech,” there occurred some misunderstanding and they got into trouble.⁹⁷ The *Nihongi*’s statement implies that the only thing needed for the Silla and Yamato people to communicate comfortably with each other in those days was “to be practiced in the common speech.” When sending an envoy to the Chinese court, on the other hand, the *Nihongi* usually records the presence of an interpreter.

According to Unger, the phonological and lexical divergence between Korean and Japanese can be explained by “the influence of Jōmon substrate languages, absent in Korean.”⁹⁸ The linguistic share of Jōmon aborigine in the formation of the Japanese language seems to have matched their genetic share in the formation of the Japanese people. Since a grammar cannot be shared, however, their linguistic influence seems to have been concentrated in lexical and phonological elements.⁹⁹

Syntactically and morphologically, the similarity between the Korean and Japanese languages was very much strengthened. Due to ever-increasing lexical, semantic, and phonological differences, however, the people of the Korean peninsula and the people of the Japanese islands eventually became unable to communicate with each other without interpreters.¹⁰⁰ Even with a minimal change in grammar, under the pressure of phonological and semantic changes, a language rapidly becomes incomprehensible. A few centuries of separation may well be enough to render a language incomprehensible to its first speakers.

Throughout the Middle and Late Tomb periods, the people of both the Korean peninsula and Japanese islands used Chinese characters to express the sounds of their individual words. The Korean alphabet system was invented in 1443 C.E. and is regarded by linguists as the most scientific writing system in the

world. It can express as many as 8,778 sounds with ten vowels, maintaining a strict one-to-one correspondence between a written syllable and sound. Unfortunately, the Japanese syllabic writing system maintains the antiquated form that had appeared among the Yamato womenfolk during the ninth century. It produces, in the Malayo-Polynesian linguistic tradition of minimal sounds, only 201 sounds with five vowels. (Polynesian languages have only three vowels: a, i, and u.) Such a phonological difference between these two writing systems must have caused a rapid differentiation in the pronunciation of words. The poverty of sounds in Japanese could not but change the vowel sounds at high speed. Modern Japanese would sound almost incomprehensible to the Yamato people of sixteen hundred years ago.

Modern Korean derives directly from the Middle Korean that was essentially the Silla dialect. Significant phonological and semantic changes occur in all languages over time, and languages rapidly become incomprehensible. It is the grammar that evolves sufficiently slowly as to aid the recognition of more ancient linguistic connections. Syntactically and morphologically, if not lexically and phonologically, modern Korean and modern Japanese are more closely related to each other than either is to any other language on the earth, revealing exact morpheme-to-morpheme translatability. This could not have occurred if the language of Silla were completely different from the language of Puyō-Koguryō-Paekche. Hence it is correct to insist on a close genetic relationship between the entire Korean language family, including all the languages of Puyō, Koguryō, Paekche, Kaya, and Silla, on the one hand, and the old Japanese language on the other.

The proto-Japanese of the Yayoi period was closer to the dialect of the Kaya area in the southern peninsula, but the Yamato Japanese of the Middle and Late Tomb periods became closer to the dialect of Puyō-Koguryō-Paekche.¹⁰¹ The language of “Yamato-jin” was ancestral to modern Japanese. The language of Silla-Kaya and the language of Puyō-Koguryō-Paekche (that had constituted the two major dialect groups within the Korean language family) as well as the Yayoi-Kofun Japanese languages may all be regarded as descendants of the Macro-Tungusic branch of a common (say Altaic) language family.

The population of the British Isles has changed its linguistic identity first from unknown aboriginal languages to Celtic during the prehistorical period and then from Celtic to Germanic during the proto-historical period. Anglo-Saxon English was able to survive conquest by a Romance language during the historical period. Unlike the Norman conquest of Anglo-Saxon England, the proto-Japanese people speaking the proto-Japanese language were conquered by the speakers of the same Altaic language. The result is quite unlike a Germanic language surviving the onslaught of a Romance language. A new wave of the same Altaic linguistic form entered the Japanese linguistic scene. A new layer of

Altaic language was imposed on top of the Altaic proto-Japanese. (An anti-Altaicist may replace the expression “Altaic” with “Tungusic.”) This fact may account for the morpheme-by-morpheme translatability between modern Korean and modern Japanese that is absent between modern English and modern German.¹⁰²

The proto-Japanese is defined as the common language from which all Japanese dialects have diverged. The speech of the Yamato area, later represented by the Kyōto dialect, became the most prestigious and spread all over the Japanese islands. The presence of Yayoi dialectal traits can, however, be found in the Kyūshū and Tōhoku regions.¹⁰³

Only after absorbing two massive waves from the Korean peninsula could the Japanese at last achieve their present physical and linguistic identity. An early offshoot of Macro-Tungusic (a southern Tungusic of Silla-Kaya variety) went over to the Japanese islands only to be influenced first by the Jōmon aboriginal languages and then go through the linguistic change of the Yayoi-Kofun transition in the aftermath of conquest by the speakers of a later offshoot of Macro-Tungusic (a northern Tungusic of Puyō-Koguryō-Paekche variety) before commencing its definitive evolution into modern Japanese. In the Korean peninsula, on the other hand, Silla conquered the Koguryō, Paekche, and Kaya states, and the southern Tungusic of the Silla variety achieved a linguistic unification, commencing its definitive evolution into modern Korean. It is no wonder that we find substantial lexical and phonological differences between modern Korean and modern Japanese. On the contrary, it is a miracle that, after such linguistic odysseys, these two languages still share a morpheme-by-morpheme translatability.

NOTES

1. See Keiji Imamura, *Prehistoric Japan: New Perspective on Insular East Asia* (Honolulu: University of Hawai'i Press, 1996); Satoshi Horai and Keiichi Omoto, “Peopling of Japan Inferred from Mitochondrial DNA Polymorphisms in East Asians,” *Annual Report of the National Institute of Genetics*, Number 49, 1998 (Tokyo: National Institute of Genetics, 1999), 40-42; Mark J. Hudson, *Ruins of Identity: Ethnogenesis in the Japanese Islands* (Honolulu, University of Hawai'i Press, 1999); and J. Marshall Unger, “Layers of Words and Volcanic Ash in Japan and Korea,” *Journal of Japanese Studies*, 27.1 (2001): 81-111.

2. Jared Diamond, “Japanese Roots,” *Discover* (June 1998): 7.

3. Egami Namio, “Light on Japanese Cultural Origins from Historical Archeology and Legend,” in *Japanese Culture: Its Development and Characteristics*, ed. R. J. Smith and R. K. Beardsley, *Viking Fund Publications in Anthropology*, No. 34 (New York: Wenner-Gren Foundation for Anthropological Research, 1962), 11-16; Egami Namio, “The Formation of People and the Origin of the State of Japan,” *Memoirs of the Toyo Bunko*, 23 (Tokyo: Toyo Bunko, 1964): 35-70.

4. Gari Ledyard, "Galloping along with the Horseriders: Looking for the Founders of Japan," *Journal of Japanese Studies*, 1.2 (1975): 217-54.

5. Wontack Hong, *The Relationship between Korea and Japan in the Early Period: Paekche and Yamato Wa* (Seoul: Ilsimsa, 1988); Wontack Hong, *Paekche of Korea and the Origin of Yamato Japan* (Seoul: Kudara International, 1994).

6. Walter Edwards, "Events and Process in the Founding of Japan: The Horserider Theory in Archeological Perspective," *Journal of Japanese Studies*, 9.2 (1983): 265-95.

7. Diamond, "Japanese Roots," 11.

8. Eiichiro Ishida, "Nature and the Problem of Japanese Cultural Origins," in *Japanese Culture: Its Development and Characteristics*, ed. R. J. Smith and R. K. Beardsley, Viking Fund Publications in Anthropology, No. 34 (New York: Wenner-Gren Foundation for Anthropological Research, 1962), 5.

9. See Ono Susumu, "The Japanese Language: Its Origins and Its Sources," in *Japanese Culture: Its Development and Characteristics*, ed. R. J. Smith and R. K. Beardsley, Viking Fund Publications in Anthropology, No. 34 (New York: Wenner-Gren Foundation for Anthropological Research, 1962), 20. The raised-floor architecture, poncho-type clothing (a one-piece garment with a hole in the middle), the fundoshi-type breechcloth, the hachimaki-type head-covering, and the activities of painting the body with vermilion and fishing by diving with cormorants are also regarded as typical Malayo-Polynesian elements. See also Egami, "The Formation of People," 44.

10. See Imamura, *Prehistoric Japan*, 112. Ainu and Malayo-Polynesians are not genetically close. See Nei Masatoshi, "The Origins of Human Populations: Genetic, Linguistic, and Archeological Data," in *The Origin and Past of Modern Humans as Viewed from DNA*, ed. Sydney Brenner and Kazuro Hanihara (Singapore: World Scientific Publishing, 1995), 71-91; Omoto Keiichi, "Genetic Diversity and the Origins of the Mongoloids," in *The Origin and Past of Modern Humans as Viewed from DNA*, ed. Sydney Brenner and Kazuro Hanihara (Singapore: World Scientific Publishing, 1995), 92-109; and Omoto Keiichi and Saitou Naruya, "Genetic Origins of the Japanese: A Partial Support for the Dual Structure Hypothesis," *American Journal of Physical Anthropology*, 102 (1997): 437-46.

11. Diamond, "Japanese Roots," 11.

12. Ishida, "Nature and the Problem," 6.

13. The skeletal remains of Hokkaidō Ainu share morphologically close relations with northern Mongoloid people such as the Nanai, Ulchi, Nivkh, and Okhotsk people. Some authors suggest that the Ainu people are the descendants of some Upper Paleolithic populations of northeast Asia from which Native Americans are also descended. An analysis of mitochondrial DNA found no shared types between the Ainu and Okinawans. See Hudson, *Ruins of Identity*, 64-67, 71-72, 76-78.

14. See Diamond, "Japanese Roots," 5, and Gina L. Barnes, *China, Korea and Japan: The Rise of Civilization in East Asia* (London: Thames and Hudson, 1993), 27.

15. Barnes (*China, Korea and Japan*, 170-71) notes that "rice grains have been recovered from several Late and Final Jomon sites dating between the late 2nd and middle 1st Millennium B.C.," but this fact does not prevent her from stating that: "The establishment in c. 300 B.C. of the Yayoi culture, the first fully agricultural society in the Japanese Islands, set the stage there for the development of complex society. Within a mere six hundred years, society became stratified into elite and commoner social classes, with state formation following on in the subsequent Kofun period from A.D. 300." Barnes specifies A.D. 300-710 as the Japanese Kofun period (p. 222). Farris notes that "Beginning in the fourth century B.C., the technologies of wet-rice agriculture and metallurgy entered northern Kyushu from southern

Korea, initiating an epoch identified archaeologically as the Yayoi (conventionally 300 B.C.-A.D. 300).” See William Wayne Farris, *Sacred Texts and Buried Treasures: Issues in the Historical Archeology of Ancient Japan* (Honolulu: University of Hawai'i Press, 1998), 6. See also Imamura, *Prehistoric Japan*, 131-2). I take the conventional dates 300 B.C.E.-300 C.E. for the Yayoi period.

16. See Barnes, *China, Korea and Japan*, 170. Rice cultivation began spreading from the northern Kyushu area, reaching as far north as the southern part of the Ou district (the former provinces of Mutsu and Dewa, comprising the whole northern part of Honshu). Red burnished pottery, polished stone tools, cylindrical beads, tanged stone daggers, polished untanged arrowheads of triangular cross-section, disk axes, laurel-shaped and triangular reaping knives, grooved reaping knives, grooved adzes, and the technologies of spinning and weaving, lathe-working, and bronze-casting were brought to the Kyūshū area.

17. According to Hanihara, the Japanese population increased from 75,800 at the beginning of the Yayoi period to about 5.4 million in the early Historical period, and such a high rate of growth could not have been achieved by natural increase alone but only in combination with large-scale migration into Japan. See Kazuro Hanihara, “Estimation of the Number of the Early Migrants to Japan: A Simulative Study,” *Journal of the Anthropological Society of Nippon*, 95.3 (1987): 391-403, and Imamura, *Prehistoric Japan*, 156.

18. Diamond, “Japanese Roots,” 11.

19. Harvey Weiss, “Holocene Abrupt Climate Changes: Altering the Trajectory of History,” paper presented at the XVI INQUA Congress held at Reno on July 30, 2003.

20. See Sarah H. Parcak, “Archaeological Evidence for Abrupt Climate Change,” presented at the American Geophysical Union Fall Meeting held at San Francisco December 8-12, 2003. Parcak contends that this event destroyed the well-irrigated Egyptian kingdom by drying out the headwaters of the Nile. A sudden change in climate devastated both rain-fed (such as northern Syria) and irrigated agriculture, reducing population drastically and letting nomadic herds graze on wild plants, which required less rainfall than farmed crops. The nomadic sphere expanded at the expense of the devastated farmlands.

21. P. A. Mayewski and F. White, *The Ice Chronicles: The Quest to Understand Global Climate Change* (Hanover: University Press of New England, 2002), 114.

22. Mayewski and White, *The Ice Chronicles*, 115, 121.

23. See K.W. B., ed., “Climate Variations and Change,” *The New Encyclopedia Britannica* (Chicago: Encyclopedia Britannica, 1986), 16: 554.

24. See K.W. B., ed., “Climate Variations and Change,” 534 (Table 14); Mayewski and White, *The Ice Chronicles*, 121. According to Lamb, “The climate became once more slightly warmer than today after about 800 B.C. and still more after 500 B.C., making it possible to grow two crops of millet a year in the southern part of Shantung province (36° N) in eastern China, though a colder regime returned by around 200 B.C. Much of this period was, however, a time of confusion in China known as the Warring States Period.” See H. H. Lamb, *Climate, History and the Modern World* (London: Routledge, 1995), 150.

25. The beginning of the Little Ice Age also coincided with the fall of the well-irrigated Persian empire (525-330 B.C.E.), followed by the disintegration of the ephemeral empire of Alexander the Great (336-323 B.C.E.). The Romans unified the Italian peninsula in 272 B.C.E. only to engage in the First Punic War (264-241 B.C.E.).

26. According to Imamura (*Prehistoric Japan*, 150), the square pit dwellings in the Jōmon tradition and the round pit-dwellings in the Korean tradition (i.e., the Songgunni type with a large central pit and one or two small post-hole-like pits on either side of the central pit) coexisted at the very beginning of the Yayoi period within a small central part of northern

Kyushu. Imamura states that: "There is an important possibility that round pit-dwellings, which are very common to the Yayoi period of southwestern Japan, although admittedly without prominent features of the Songgungni type, may have originated from or been affected by this type."

27. Imamura, *Prehistoric Japan*, 149.

28. Imamura, *Prehistoric Japan*, 164-65.

29. Hudson, *Ruins of Identity*, 130.

30. Barnes, *China, Korea and Japan*, 171, 176.

31. Imamura, *Prehistoric Japan*, 171.

32. Imamura, *Prehistoric Japan*, 169.

33. Unger, "Layers of Words," 95.

34. Imamura, *Prehistoric Japan*, 171.

35. Horai and Omoto, "Peopling of Japan," 40-42. According to Hudson, although the Jōmon people were not totally replaced by the incoming Yayoi migrants from the Korean peninsula, their genetic contribution to the later Japanese was probably less than one quarter. See Hudson, *Ruins of Identity*, 81.

36. Barnes, *China, Korea and Japan*, 171, 176. See also Hudson, *Ruins of Identity*, 68.

37. Malayo-Polynesian skeletal morphologies continued in northwest coastal Kyūshū (west Saga Prefecture, Nagasaki, and Goto islands), southern Kyūshū (south Kagoshima, Kumamoto, and the Tanegashima and Amai islands), and the Ryūkyū islands. The skeletal remains of Hokkaidō Ainu, on the other hand, share morphologically close relations with northern Mongoloid people. See Hudson, *Ruins of Identity*, 64-67, and Katayama Kazumichi, "The Japanese as an Asia-Pacific Population," in *Multicultural Japan: Paleolithic to Postmodern*, ed. D. Denoon, M. Hudson, G. McCormack and T. Morris-Suzuki (Cambridge: Cambridge University Press, 2001), 23.

38. See Hudson, *Ruins of Identity*, 98.

39. Ono has contended that in western Japan, the people of the Jōmon period spoke a language of southern origin with a phonetic system like that of present-day Malayo-Polynesian, while a language with a grammatical system and vowel harmony like the Altaic was introduced with the Yayoi culture and spread eastward from northern Kyūshū along with rice cultivation. The open syllable structure of the Japanese language (each syllable consisting of consonant plus vowel, except for the independent vowels and the syllabic consonant *n*) is thought to reflect Malayo-Polynesian affinities. See Ono, "The Japanese Language," 20.

40. Unger, "Layers of Words," 81, 96. Janhunen notes that "the Altaicization of Japanese may well have been induced by the structural impact of some early form of Koreanic." Juha Janhunen, *Manchuria: An Ethnic History* (Helsinki: Finno-Ugrian Society, 1996), 201, 210. Janhunen declares: "Indeed, by most of its structural characteristics, including morphology and morpho-syntax, Japanese belongs to the context of the Altaic language type. Typological parallels between Japanese and Ainu are mainly limited to the phonological structure, whose exceptional simplicity has closest parallels in some of the Malayo-Polynesian language." Janhunen, *Manchuria*, 198.

41. Egami, "The Formation of People," 48.

42. J. Edward Kidder, Jr., "The Archeology of the Early Horseriders in Japan," *Transactions of the Asiatic Society of Japan*, 3d series, 20 (1985): 89-123.

43. Egami, "Light on Japanese Cultural Origins," 11.

44. Grave goods of vertical pit-style tombs consist of such as bronze mirrors, stone bracelets, beads, some iron tools, bronze arrowheads, and sheathed knives.

45. It has been suggested that the north Korean unit of measurement (*koma-jaku* of

35-36 cm.) was employed for the construction of a mound. See Kidder, "The Archeology of the Early Horseriders," 95.

46. They put grave goods such as iron farming tools, iron weapons (swords, arrowheads, spearheads, armor, or helmets), gold crowns, jade or gilt-bronze earrings, stone beads, bronze mirrors, belt buckles, and sue pottery in and around the coffin.

47. Barnes, *China, Korea and Japan*, 227.

48. See Kidder, "The Archeology of the Early Horseriders," 98-99.

49. Kidder, "The Archeology of the Early Horseriders," 100, 121.

50. William Wayne Farris, *Sacred Texts and Buried Treasures: Issues in the Historical Archeology of Ancient Japan* (Honolulu: University of Hawai'i Press, 1998), 78-79.

51. Gina L. Barnes, *State Formation in Korea: Historical and Anthropological Perspectives* (Richmond, Surrey: Curzon, 2001), 121.

52. Farris, *Sacred Texts*, 85. Farris further notes that the discovery of the first Kara kamado (Korean ovens) in northern Kyushu and the Kinai together with early stoneware "also lend support to the idea of Korean origin." The fifth-century oven produced less smoke and was easier to cook with than the Yayoi hearth (ro) that placed pots right in the fire. See Farris, *Sacred Texts*, 87.

53. See Kidder, "The Archeology of the Early Horseriders," 103-104.

54. Gina L. Barnes, "Sue Ware," in *Kodansha Encyclopedia of Japan* (Tokyo: Kodansha, 1983), 7: 256.

55. J. Edward Kidder, Jr., "The Newly Discovered Takamatsuzuka Tomb," *Monumenta Nipponica*, 27.3 (1972): 249.

56. Farris, *Sacred Texts*, 68-70. According to Farris, the "reservoirs for watering rice had been less important in China, where rivers kept millet fields and rice paddies moist the year round" (p. 82).

57. Farris, *Sacred Texts*, 70.

58. Egami, "The Formation of People," 52.

59. Mizuno Hiroshi, "Patterns of Kofun Culture," *Japan Quarterly*, 16.1 (1969): 71-77.

60. Gina L. Barnes, *Protohistoric Yamato: Archeology of the First Japanese State* (Ann Arbor: Museum of Anthropology and Center for Japanese Studies, University of Michigan, 1988), 16. Barnes states, however, that "Mizuno's characterization of the Oujin Dynasty as a conquest regime and his identification of Puyo elements in the ruling circle have misled others to conclude that fifth-century Yamato was ruled by continental horseriders—an interpretation that Mizuno himself vigorously rejects." *Protohistoric Yamato*, 21.

61. Edwards, "Events and Process," 265-95.

62. Farris, *Sacred Texts*, 78-79. Unger says: "I began to change my mind about this a few years ago because of criticisms of the so-called horserider theory by Walter Edwards and Gina Barnes..." Unger, "Layers of Words," p. 85.

63. See Edwards, "Events and Process," 273, 283, 284, 286. Edwards notes that the dimension of the tombs corresponds to rational multiples of the linear units used in Korea. See Edwards, "Events and Process," 289.

64. See Edwards, "Events and Process," 288-90; Kobayashi Yukio, "Kofun no Hassei no Rekishiteki Igi," *Shinrin* 38.1 (1955): 1-20; Mori Koichi, *Kofun no Hakkutsu* (Tokyo: Chuo Koronsha, 1965), 81-94; and Inoue Mitsusada, *Nihon Kokka no Kigen* (Tokyo: Iwanami, 1960), 218-21.

65. Egami, "The Formation of People," 51.

66. See *Nihon shoki* (Tokyo: Iwanami, 1967), 1: 371, and *Fudoki* (Tokyo: Iwanami,

1958), 278.

67. Nihon shoki, 1: 485.

68. Gina L. Barnes, "Nintoku Mausoleum," in Kodansha Encyclopedia of Japan, 6:

8.

69. Kidder, "The Archeology of the Early Horseriders," 102-103.

70. Kidder, "The Archeology of the Early Horseriders," 102-103. Kidder notes that horse bells were introduced to the Japanese islands only after they became articles of daily use on the Korean peninsula, and the horses (that were eventually bred by the Japanese, and not the small Kiso horses whose bones were discovered in Jōmon and Yayoi sites) were not of Japanese origin. Rather, they were brought over from the Korean peninsula. See Kidder, "The Archeology of the Early Horseriders," 106, 121. King Kwanggaet'o's stele, which was erected in 414, mentions fifty thousand foot and mounted soldiers.

71. Gina L. Barnes, "Kofun," in Kodansha Encyclopedia of Japan, 4: 245. Edwards classifies the Ariyama tomb as the one that contains nothing conspicuously continental.

72. See Kidder, "The Archeology of the Early Horseriders," 100. Edwards tabulates the date and contents of the Maruyama tomb, placing it "at the end of the fourth century," as one that contains almost nothing conspicuously continental. Although a saddle with gold decoration was found in the tomb, he insists that a subsidiary mound should not be considered contemporary with the main mound and that "this tomb could not have been constructed earlier than the middle of the fifth century," negating his own tabulation. See Edwards, "Events and Process," 275, 295.

73. Farris, Sacred Text, 71-73.

74. Farris, Sacred Text, 79.

75. Kim, Ki-Woong, "The Transfer of Korean Culture to Japan: Japan's Kofun Culture" (in Korean), Essays on Korean History, 16 (Seoul: National History Compilation Committee, 1986), 73-130.

76. See Imamura, Prehistoric Japan, 134-35.

77. The U-shaped iron edges for wooden hoes and spades appeared in the Chu state during the last years of the Spring and Autumn period (722-481 B.C.E.) and then spread into North China and eventually to the Korean peninsula. The National Research Institute of Cultural Properties of Korea has summarized the recent research reports by experts on Korea's agricultural history. See Dictionary of Korean Archaeology (in Korean) (Seoul: National Research Institute of Cultural Properties, 2001), 226-27.

78. Farris, Sacred Texts, 81-82.

79. Farris, Sacred Texts, 82.

80. Farris, Sacred Texts, 82.

81. J. Russell Kirkland, "The Horseriders in Korea: A Critical Evaluation of a Historical Theory," Korean Studies, 5 (1981): 109-128.

82. Ōbayashi Taryō, "Uji Society and Ie Society from Prehistory to Medieval Times," Journal of Japanese Studies, 11.1 (1985): 13-14.

83. See William F. Ruddiman, "The Anthropogenic Greenhouse Era Began Thousands of Years Ago," Climate Change, 61.3 (2003): 261-93.

84. Lamb, Climate, History, 159.

85. Farris, Sacred Texts, 77.

86. Most parts of the northern hemisphere south of about 35° N became warmer but suffered drought because the equatorial rains had a restricted seasonal migration north at that time, coinciding with the blooming Mayan civilization in Central America. A curse for some peoples was a blessing for others.

87. Lamb, *Climate, History*, 168.

88. By the time King Mi-cheon of Koguryō conquered the Le-lang Commandery in 313, Paekche came to occupy the Dai-fang Commandery. According to the *Samguk sagi*, Keun Kusu, in the year 369 as the crown prince, routed the twenty-thousand-man Koguryō army and captured five thousand Koguryō soldiers. In November 369, the king held a grand military parade south of the Han River, fluttering yellow flags (just like the Chinese emperors). The conquest of the entire Ma-han area occurred immediately thereafter. In 371, King Keun Chogo, together with the crown prince, invaded Koguryō with thirty thousand troops, and King Koguk-won (331-371) of Koguryō was killed by an arrow in a battle at Pyung-yang. Before the appearance of King Kwanggaeto the Great in 391, Koguryō had constantly been battered by Paekche. In the *Samguk sagi*, the expression “King Keun Chogo and (or let) Crown Prince Kusu” very conspicuously appears three times. One can find such an expression in the *Nihongi* also. Paekche under the reign of the martial King Keun Chogo (345-375) and his son, Keun Kusu (375-384), reached its peak in military might and territorial expansion. I contend that the Paekche people conquered the Japanese islands and established the Yamato kingdom sometime during this period (ca. 370-390).

89. Janhunen, *Manchuria*, 231.

90. Diamond, “Japanese Roots,” 10. Katayama states: “So it appears that modern Japanese skeletal morphology had already developed by about the Kofun period. Since then, there has probably been no substantial change in the genetic constitution of the Japanese.” See Katayama, “The Japanese as an Asia-Pacific Population,” 24.

91. Unger, “Layers of Words,” 81. Unger somehow regards only the people of Kaya and Silla (i.e., Pyōn-han and Chin-han) as “Korean” and the people of Koguryō and Paekche as (Puyo-) Tungus.

92. Unger, “Layers of Words,” 97.

93. See Roy Andrew Miller, “Old Japanese and the Koguryō Fragments: A Resurvey,” in *Explorations in Linguistics*, ed. G. Bedell et al. (Tokyo: Kenkyusha, 1979), 348-68, and Bruno Lewin, “Archaic Korean: A Component to Clarify the Origin of Japanese,” *Bulletin of the International Institute for Linguistic Sciences 2* (Kyoto: Kyoto Sangyo University, 1981), 201-215. Lewin notes that the scholars during the Tokugawa period tended to regard Japanese as a branch of Korean. See Bruno Lewin, “Japanese and Korean: The Problems and History of a Linguistic Comparison,” *Journal of Japanese Studies*, 2.2 (1976): 390. See also references in Unger, “Layers of Words,” 81-111.

94. See Yi Ki-mun, *Outline of the History of Korean Language* (Seoul: Tap, 1972), in Korean, *Kugosa kaesol*, 35-36.

95. Diamond, “Japanese Roots,” 1-12.

96. It is interesting to note that there have been three main dialect groups within the Ainu language that are said to be mutually unintelligible: Hokkaidō, Sakhalin, and the Kurils dialects. See Hudson, *Ruins of Identity*, 99. There exists absolutely no record suggesting that any set of dialects on the Korean peninsula (excluding Cheju island), was mutually unintelligible.

97. See W. G. Aston, *Nihongi: Chronicles of Japan from the Earliest Times to A.D. 697* (Tokyo: Tuttle, 1972), 1: 326.

98. Unger, “Layers of Words,” 96.

99. According to Ono, the Malayo-Polynesian linguistic influence in the Japanese language may account not only for the survival of a vocabulary of southern origin for body parts, but it may also account for the weakening of vowel harmony and its disappearance in the ninth century and for the reworking of word endings into open-syllable form in the

Japanese language. The lexical and phonological influence of the Ainu language and, in particular, the Malayo-Polynesian language could indeed have cast a long shadow on the evolution of the Japanese language. See Ono, "The Japanese Language," 17-21.

100. In 681, eighteen years after the fall of Paekche in the Korean peninsula, the *Nihongi* records the arrival of three persons from Silla to practice the Yamato language. According to the *Shoku Nihongi*, a person arrived from Silla to learn the language in 740, and the Silla court sent two persons to learn the language in 760 because they "did not have anyone who knows the common speech of the Yamato court." By 812, the *Nihon koki* records that it was impossible to communicate with the Silla people without an interpreter. We can infer from this that, by the early ninth century at the latest, the people of the Korean peninsula and the people of the Japanese islands could no longer directly communicate with each other without interpreters. We can infer, as well, from these records that if and when there occurred any language problem, it would have been duly recorded. *Shoku Nihongi*, covering nine reigns from 697 to 791, was originally commanded by Konin (r. 770-81) but was completed during the reign of his son Kanmu (r. 781-806) and was presented to the throne by Sugano Mamichi (741-814) and Akishino Yasundo (752-821). *Nihon koki*, covering four reigns from 792 to 832, was compiled, under the initial imperial command in 819, by a team headed by Fujiwara Otsugu (773-843).

101. According to Lewin, "it can be assumed that Japanese was closely related to the Koguryō language and that in its core it belonged to the Puyō group, or was at least close to it." See Lewin, "Japanese and Korean," 408.

102. Imagine what would have happened between the modern German language and modern Anglo-Saxon English if William the Conqueror and his followers had been German instead of Frenchified Danish Vikings.

103. Hudson, *Ruins of Identity*, 94-95.

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