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Reviews

Japan Upside Down

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日本地図に樺太と沖縄を加えて逆さにし、大陸から日本列島を見ると、従来とは違った日本が見える。考古学、遺伝子学、自然人類学等の最新の研究が提示するのは、東西日本の差異ではない。北と南（フォッサマグナ以北と南九州・沖縄）が体質的・言語的・文化的特徴を共有し、中央部（関西と北九州）が中国・韓半島とつながる日本の姿である。この現象の原因は、縄文人の居住する日本列島に大陸から弥生人が侵入したことにあり、その結果、日本は、複数の文化が共存し、２種類の人種の混血が現在も進行中の「非単一民族」の国になった。以下、沖縄の位置、下戸と耳垢の遺伝子、方言の分布、稲の伝来の４項目を手がかりとして、逆さ地図の視点から、現代日本の姿とここに至る歴史的過程を考察してみよう。

I would like especially the Japanese people to know what will be mentioned here. We Japanese tend to believe that we are homogeneous, and that we have a kind of insular mentality (*shimaguni konjō* 島国根性); however, this is not always true. This is why I wrote this short essay.

Introduction

When I found *the* map in the book written by the influential historian Amino Yosihiko, *What is 'Japan'?* (2000), it had a great impact. It was an upside-down map, such as Figure 1. The map made a different world of its own. I thought: "This Japan is a part of the continent, not isolated."

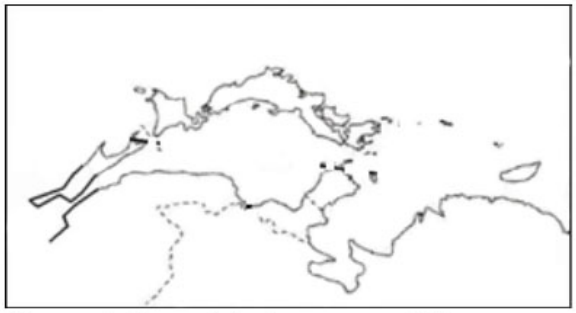

Figure 1. An upside-down map of Japan.

Japanese people are said to have the image that Japan is an isolated island nation inhabited by a homogenous race. It is because we usually focus only on the part enclosed by the square (Figure 2). However, this is an inflexible idea. If we look at Japan from a

Figure 2. A usual map of Japan.

different angle like in Figure 1, we would be able to find something new about Japan. This is a standpoint from the Asian continent: we can see the Japanese archipelago from the homeland of the people who came from the Asian continent in ancient days. In this case, Kyōto is located in the center of Japan, while Tōkyō in the furthest peripheral area.

Particularly, we can understand the following points better than when a usual map of Japan is used (Figure 2): (a) the true geographical position of the Japanese archipelago; and (b) the distribution of modern cultural differences between the Kansai area and the other regions of Japan, and the movement of ancient people which caused this distribution.

According to recent anthropological and archaeological research, the Japanese archipelago was never actually an isolated area; and the Japanese people do not consist of a uniform race.

Okada, K (2009). Japan upside down. *OTB Forum, 2*(2), 7-16.

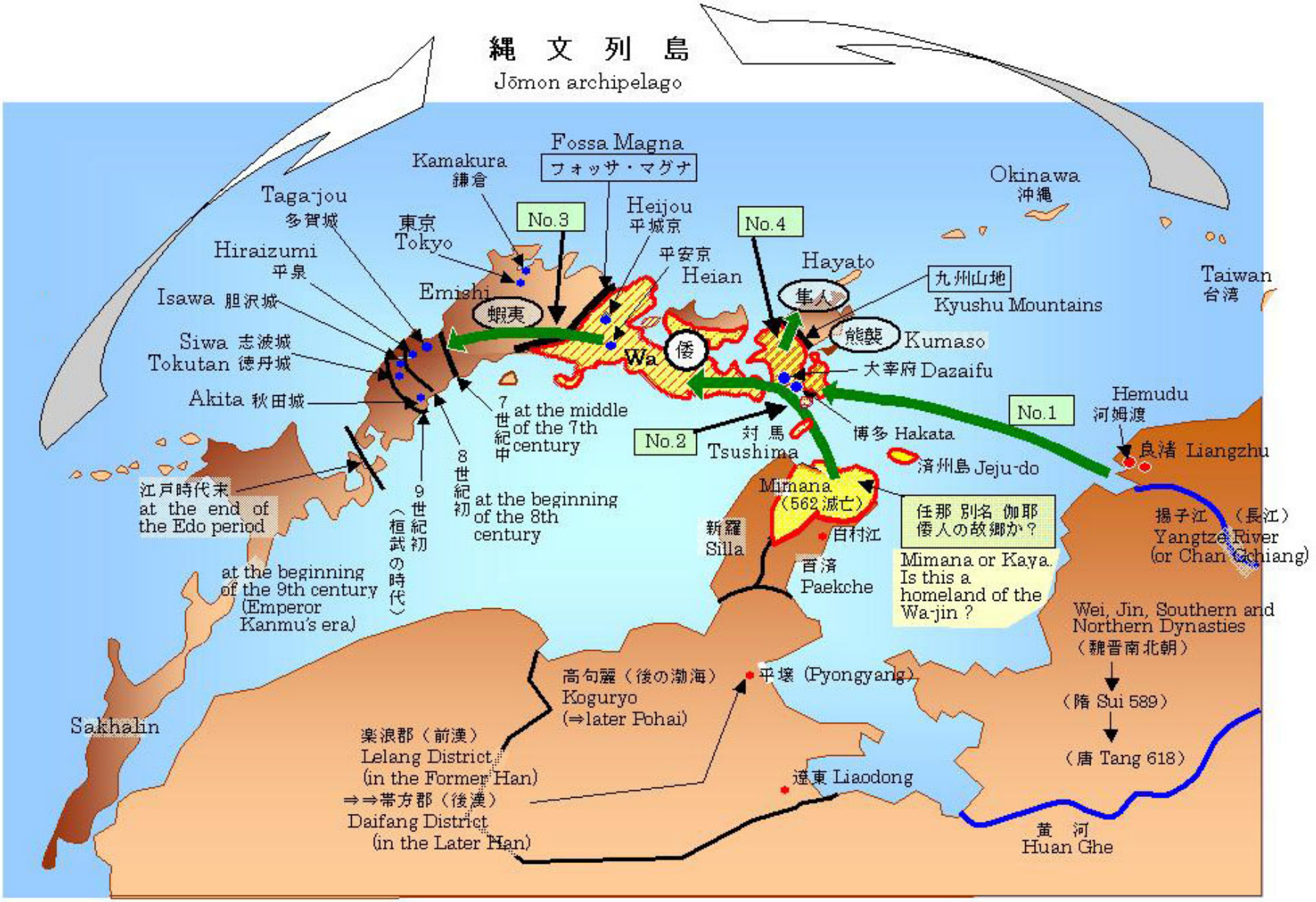

Figure 3. Historical upside-down map of Japan

True Geographical Position of Japan

'The Jōmon archipelago' with Okinawa and Sakhalin

Figure 3 is a historical upside-down map of Japan which I made, based on the above-mentioned map. In Uzbekistan, I showed this map to my students at Tashkent State Institute of Oriental Studies and asked: "Does Japan look like this when it is seen from the continent?" They answered that they had never seen such a type of map, and some of them said: "It is understandable why Nagasaki was important in the Edo period."A map of Japan usually consists of four main islands: Hokkaidō, Honshū, Shikoku and Kyūshū. On this upside-down map, however, the Japanese archipelago with Sakhalin and Okinawa is drawn like a big bow. About 12,000 years ago, the Japanese islands were separated from the Asian continent because of the drastic environmental change, and then the Jōmon period began. Here, we will call this long chain of islands 'the Jōmon archipelago.'

What Does This Historical Upside-down Map Show Us?

A new image of Japan

Through the upside-down map, we can obtain another image of the world: the Sea of Japan looks just like a large lake. Everyone knows that Tsushima and the Korean Peninsula are just located within hailing distance; however, the distance between Sakhalin and the Asian continent is even closer than the distance between the Tsushima and the Korean Straits. We usually see a map without Sakhalin, so we are not aware of this fact. Now, we can fully realize that the Sea of Japan was a lake in the last Ice Age.

The geographical position of Okinawa

More importantly, this map shows us the true position of Okinawa. Because we usually see the Okinawan Islands added to the corner of a map, we do not know the geographical position of Okinawa accurately: Okinawa has been left out of our thinking *unconsciously*.

Okinawa belongs to the Nansei Islands (Southwest Islands) which stretch from southwest Kyūshū to the Yonaguni island near Taiwan; they are about 1,200 kilometers long, that is, almost 1/3 of the Japanese archipelago. In addition to that, Okinawa is a very important area in studying the Japanese culture because Japanese archaic language forms and customs have been found still surviving in Okinawa's society. Nevertheless, it seems that Japanese people are not much interested in Okinawa, including current issues about the American base camps. If the geographical position of the Okinawan Islands is properly indicated on a map, I think that would enable us to change our view on Okinawa.

Three regions of Japan

The yellow striped area is especially impressive. This area is the precise center of 'the Jōmon archipelago', from Hokkaidō in the north to Okinawa in the south; it is the proto-typical Japan '*Wa'* (倭, literally meaning 'small'), present-day northern Kyūshū and Kansai regions.

As we usually divide the Japanese archipelago from Hokkaidō to Kyūshū, excluding Okinawa, into east and west regions, we tend to emphasize the east-west differences. In this case, "the boundaries between east and west Japan roughly overlap with the so-called *Fossa Magna* which is a large dislocation running from Itoigawa in Niigata Prefecture to Lake Hamana (Hamanako) in Shizuoka Prefecture" (Hanihara, 1991).[1] This division distributes the areas of Kyōto and Nara, ex-capitals of Japan, in the west of the mainland Honshū.

When the range is expanded to Okinawa, however, we can divide the Japanese archipelago into three parts: (a) Chūbu, Kantō and Tōhoku regions, (b) Kansai and northern Kyūshū, and (c) southern Kyūshū and Okinawa. These three regions are divided by the *Fossa Magna* and the Kyūshū mountains; the areas of ex-capitals are located between the two boundaries, that is, in the center of Japan.

These areas can be classified further into two groups: (a) and (c) form a group, and (b) another, because (a) and (c) have the cultural and anthropological similarities. It is thought that the Yayoi migrants are the cause of this phenomenon. In the late Jōmon period, waves

of migration from China and the Korean Peninsula took place: the so-called Yayoi people[2] came into the Japanese archipelago where the Jōmon people widely had lived. They mainly migrated into northern Kyūshū and Kansai regions, occupying the central area of Japan. Thereafter, the spread of the Yayoi migrants started. I would like to call this mixture of the Jōmon people with the Yayoi migrants '*yayoization*' (弥生化).

Distribution of Modern Cultural Differences

Specific genes of Yayoi migrants (Figure 4)[3]

The green arrows in Figure 3 indicate the progress of '*yayoization*'. After leaving southern China or the Korean peninsula, the arrows reach northern Kyūshū and then advance to the Kansai region, across the *Fossa Magna*, and finally to the northeast area where the *Emishi* lived.[4]

This Yayoi migration brought some significant changes to the Kansai region. The latest studies of anthropology and genetics have shown that some physical and genetic traits of the Kansai people are shared with those of the Korean people. Now, we can follow the movement that brought two specific genes into Japan through route No. 2 in Figure 3.

Specific gene for geko

Harada Shōji, formerly a professor of Tsukuba University, found light- and non-drinkers (*geko* 下戸) have a specific gene that prevents them from resolving alcohol. This gene, which is called the DD type, is distributed only in certain areas of China, the Korean peninsula, and Japan. Harada says, "It was probably born by the mutation somewhere in southern China. It was introduced into Japan via the Yayoi people, and mainly spread to the Chūgoku, Kinki and Chūbu districts." (Harada, 2000; "Inhabitants", 2000).[5]

Specific gene for earwax type

The research on earwax type is also very interesting. In 1938, Adachi Buntarō found

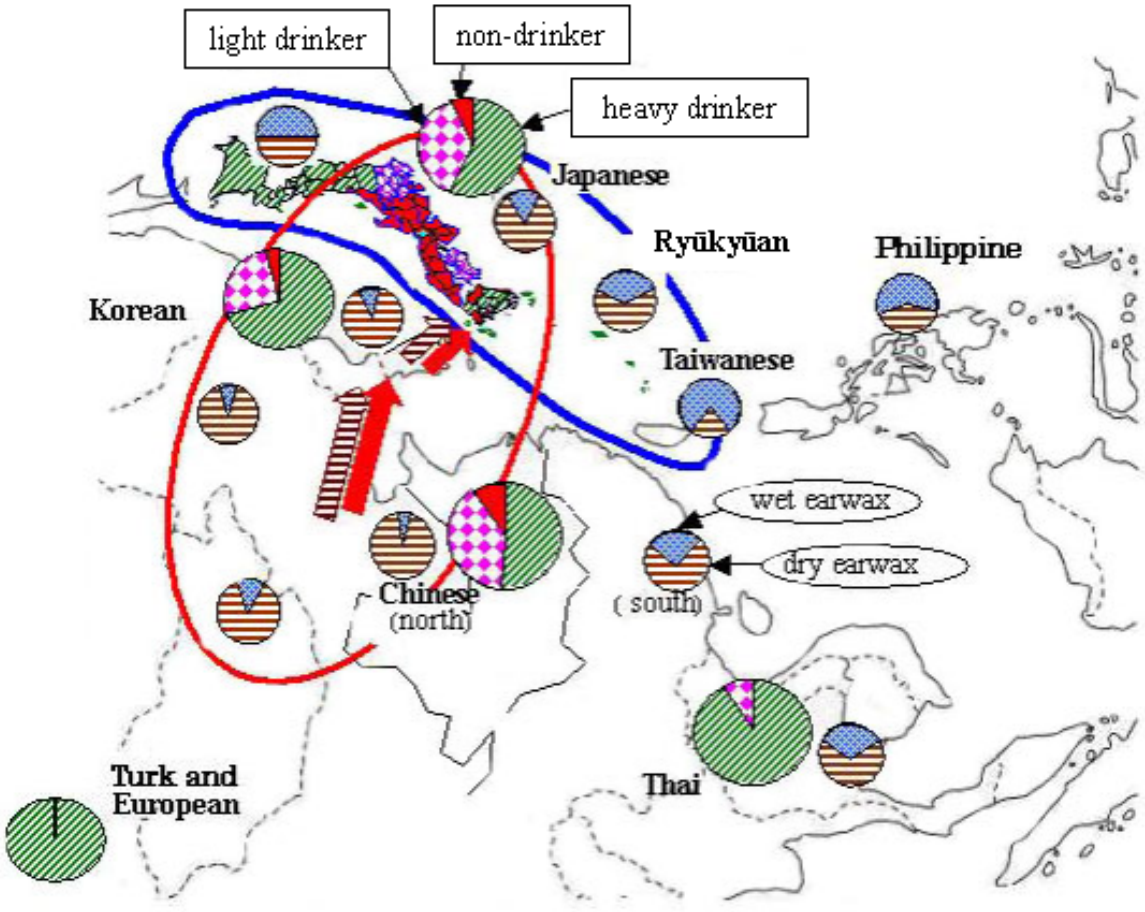

Figure 4. Genetic distribution of earwax types and alcohol-drinker types. (made by the author).

that humans have two earwax types, dry and wet. Only certain areas of Japan, the Korean peninsula, and China are characterized by the dry earwax type, while people in the other regions of the world usually only have wet earwax.[6]

In 2006, Niikawa Norio, a professor of Human Genetics at Nagasaki University School of Medicine, identified the ABCC11 gene as the determinant of the earwax types (Yoshiura et al., 2006). In addition, in 2007 a study carried out by a student team from Nagasaki Nishi High School—led by Dr. Niikawa—showed "the gene that was responsible for dry earwax is more common in western Japan," which supports the theory that "it was introduced into Japan by people who came from the Asian continent during the Yayoi period or later." ("Earwax map", 2007).[7]

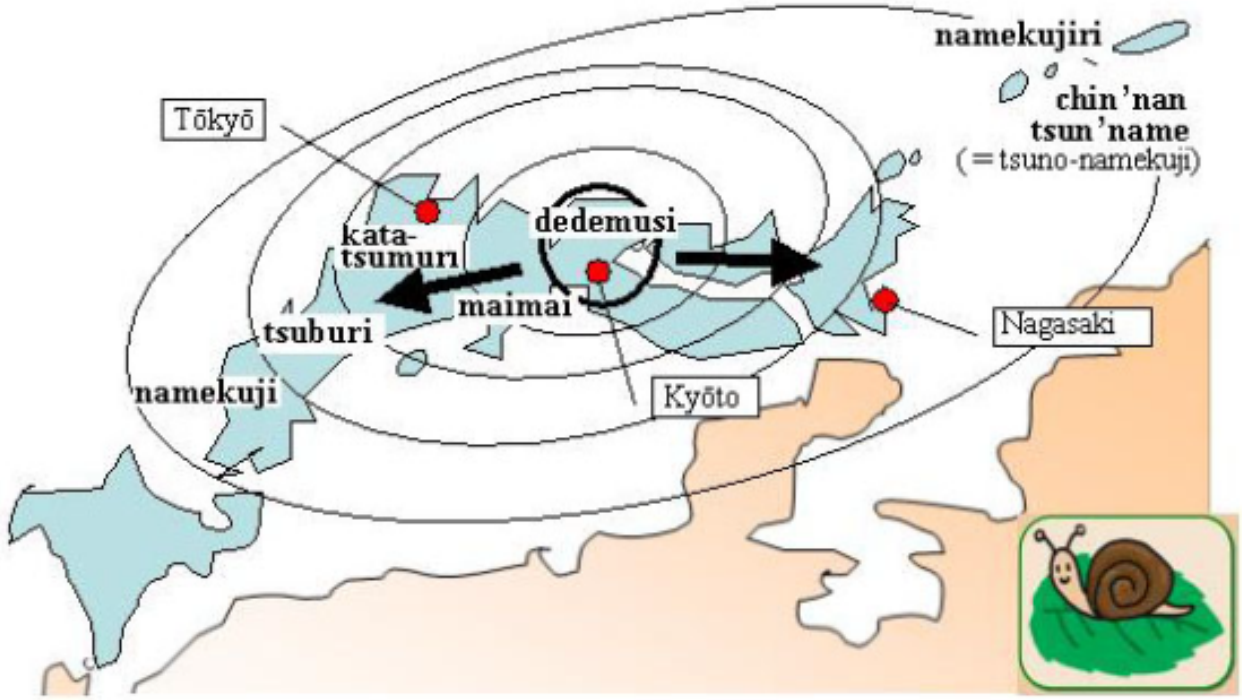

Figure 5. Distribution of words for snail. (created by the author)

The Jōmon people carried the gene for wet earwax. After being introduced into Japan, the dry earwax type gradually has spread through the routes No. 3 and No. 4 in Figure 3.

Northeast and southwest Japan still shared some physical traits of the Jomon people with each other, while the central area, the Kinki district, is characterized by the genes from the continent. The Yayoi migration is responsible for this strange distribution, which is well-known as 'dual structure model' of Hanihara Kazurō (Hanihara, 1991). This can be understood better as illustrated in Figure 3.

It might make an interesting anthropological or archaeological study to find out whether there is any correlation between the group of dry-earwax-type people and the group of people who cannot drink.

Distribution of dialectal forms (Figure 5)

Many words and cultural practices are common between northeast and southwest Japan. Both areas are so distantly separated from Kyōto and Nara, ex-capitals of Japan (the yellow striped area in Figure 3), that they were little influenced by the capitals. The well-known folklorist Yanagida Kunio (1875-1962) argued why the older word forms remain outside the areas of ex-capitals, which is introduced as "the theory of peripheral distribution of dialectal forms" in his work (Yanagida, 1982)[8].

Yanagida says that five different words for snail, *namekuji*, *tsuburi*, *katatsumuri*, *maimai*, and *dedemushi*, were known in Kyōto, but that not all of these words can be found in the north and the south of the capital. He attempts to explain this phenomenon as follows: Kyōto, the cultural center, creates new words, which are often synonyms; over time these words

gradually move outwards to peripheral regions, expelling old words. However, owing to distance, the areas farthest away from the capital keep only the oldest word forms. Arrows No. 3 and No. 4 in Figure 3 indicate this movement.

The route through which rice was introduced into Japan

Usually, rice is thought to have reached Yayoi Japan through route No. 2. However, Satō Yōichirō, associate professor of genetics at Shizuoka University, suggests a possibility of another route. He discovered a common gene-type found in rice plants in China and Japan, but that could not be found on the Korean peninsula. Satō argues there was another route, not via the Korean peninsula, through which rice was brought directly from the Yangtze basin to northern Kyūshū (Satō, 2001, 2007, pp. 104-106). This is route No. 1 in Figure 3.

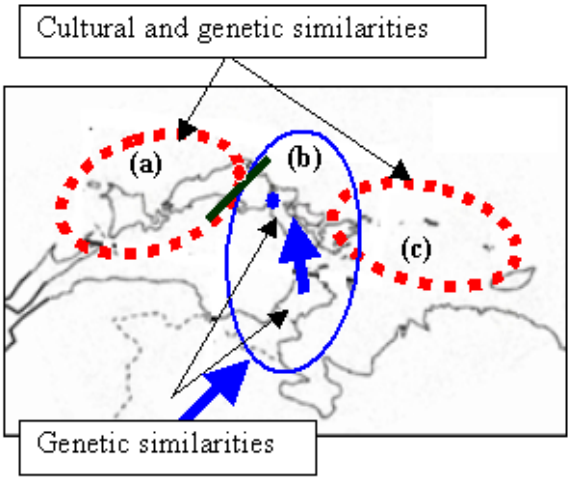

Figure 6. Regions with genetic similarities and regions with cultural and genetic similarities.

Nowadays, rice is assumed to have originated in the Yangtze valley in southern China 7,000~8,000 years ago. In the Middle and Lower Yangtze basin there are some great sites of wet rice agriculture, such as Hemudu and Pengtoushan (Nippon-jin Project, 2001; Satō, 2002)[9]. Many researchers believe that the Jōmon people was strongly connected with the Hemudu culture, because the artifacts unearthed at the sites in Hokuriku region[10] have striking similarities to those of the Hemudu site, such as axes and architectural techniques of wooden constructions (Nakahashi, 2006, pp. 185-187; "Wooden houses", 1998; Yasuda, 2003). Route No. 1 was a great sea road in ancient days connecting these two areas together.

Conclusion

A flexible upside-down map shows us the significance of considering Japan from various aspects. The usual map of Japan offers us only a mono-perspective: from Japan to the continent. But now, we should have another one: from the continent to Japan. This is the route of *yayoization.* The traits of the Yayoi-migrants, which spread south- and northwards, brought about the regional differences of today. At the same time, however, they mixed with the Jōmon people, creating a new Japanese people and culture; the intermixture between the two populations is still on going. We often hear that the Japanese are homogeneous, but such is not the case: we are heterogeneous. As Amino Yoshihiko (2000) said, the ancient Japanese archipelago was not isolated at all[11].

A perspective which puts Japan upside down produces a 'Lake [Japan Sea]' (《日本海》湖; i.e., makes the Sea of Japan appear as a lake). It helps to show us the dynamism of Japanese history. The differences today between east and west Japan are clear. However, on the upside-down map that includes Okinawa, we can see the three cultural areas shown in Figure 6. Areas (a) and (c) have cultural and anthropological similarities. The Japanese archipelago was essentially divided in the center by the Yayoi migration.

The Japanese archipelago is made up of more than one culture; the Japanese are an intermixture of populations, Jōmon and Yayoi peoples; people of the Kansai region share some genetic traits with people of the Korean peninsula, while other Japanese in the north and south share characteristics with earlier indigenous inhabitants of those regions. Altogether, this is the image of Japan that the upside-down map shows us.

Notes

[1] The quotation is from p. 17. The *Fossa Magna* is also called the *Shizuoka-Itoigawa*

Structural Line（静岡・糸魚川構造線）.
This line is well-known as the boundary of the cultural and linguistic differences between east and west Japan.

[2] The Yayoi period is the second historical age after the Jōmon era, which lasted for only 700 years (from the 4th century B.C. to the middle of the 3rd century A.D.). But, according to recent archaeological studies, the beginning of the Yayoi period should be dated to the 10th century B.C. (Fujio, 2005).

[3] Figure 4 was created by the author, based on "About Dr. Adachi" (n.d); "Formation" (1997), National Museum of Science (2001), and Sasaki, 1999, p. 234.

[4] The *Emishi* is an ancient ethnic group of non-Yamato people. They inhabited the Kantō and Tōhoku regions when the Yamato Imperial Court existed in the Kinki district.

According to the study of physical anthropology, *Emishi* are thought to be descended from the people of the Jōmon lineage (Hanihara, 1998, pp. 286-296; Nippon-jin Project, 2001, p. 165). The original meaning of *Emisi* or *Ebisu* is not clear. It is possibly that *Ezo*, another form of *Emisi*, means 'human' (Koizumi, 2000, pp. 192-195).

[5] This quotation from Harada (2000) was translated by the author.

[6] Adachi Buntarō 足立文太郎 (1865-1945 [Keiō Year 1-Shōwa Year 20]) is an anatomist. He studied at Strasbourg University in Germany from 1899 to 1904 (Meiji Years 32-37). His masterpiece written in German, *Das Arteriensystem der Japaner* (The artery system of the Japanese) was published in 1928 ("About Dr. Adachi", n.d.).

[7] This study led by professor Niikawa Norio (新川詔夫) was carried out in cooperation with Nagasaki University, and the results were made public at the 53rd annual meeting of the Japan Society of Human Genetics on September 15, 2007.

[8] This theory is called hōgen shūken ron 方言周圏論. Yanagida introduced it in his book written in 1930, *About the vocabulary for snail* (Kagyū kō 蝸牛考).

[9] These are the typical sites of ancient wet-rice agricultural civilization. The Hemudu culture（*kaboto bunka* 河姆渡文化）enjoyed prosperity between 5,000 B.C. and 3,000 B.C., and Pengtoushan culture（hōtōzan bunka 彭頭山文化) between 7,000 B.C. and 6,100 B.C.

[10] The Torihama shellmound site in Fukui prefecture (12,000～5,000 years ago) and the Sakuramachi site in Toyama prefecture (4,000 years ago) are well-known. In particular, the latter shows us the high level of architectural technology in the Jōmon period.

When building houses with high floor, people at the Sakuramachi site used various advanced architectural techniques to combine two wooden pillars. However, these techniques had already been known to Hemudu people 7,000 years before (Nakahashi, 2008; "The Sakuramachi site and the Hemudu site", n.d.; "The Sakuramachi site in Toyama prefecture", n.d.).

[11] Amino Yoshihiko (1928-2004) says that the image of 'isolated insular country Japan' is false. "The activity over a very wide area by ships can go back even before the Jōmon period, which was clearly proven by the fact that the jade of Niigata and the obsidian of Hokkaidō had been unearthed at the San'nai-Maruyama site in Aomori prefecture and the ancient tree-stem ships at the Torihama site in Fukui prefecture" (pp. 34-35; translated by the author).

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