Chapter 21

Tracing real and apparent time language changes by comparing linguistic maps

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Geographical distributions on linguistic maps show what language changes have occurred in a surveyed area. In Japan, two national geolinguistic surveys have been conducted in the past: the Linguistic Atlas of Japan (National Language Research Institute 1966, LAJ) and the Grammar Atlas of Japanese Dialects (National Language Research Institute 1989, GAJ). Recently, a third nation-wide geolinguistic survey, the Field-Research Project for Analyzing the Formation Process of Japanese Dialects (FPJD) was conducted to analyze the current geographical distributions of the phonological, lexical, and grammatical items. The informants in the surveys were elderly people. The data from the surveys conducted in different periods was compared, and real-time language changes occurring over the generations were traced. The regional geolinguistic data of the younger generation was also used for comparison to examine apparent-time changes. Thus linguistic maps from different surveys have been redrawn using the same symbols for comparison and then superimposed. The results of the study show two patterns of language change for completed changes and changes in progress.

1 Introduction

Geographical distributions on linguistic maps indicate what language changes have occurred in a surveyed area. To examine real-time changes, a survey is repeated after a period of time, and, to observe apparent-time changes, different generations are surveyed. Fukushima (2013) reported results of a comparison between two geolinguistic surveys of Tokunoshima dialects of Japanese. The two surveys were conducted 30 years apart with a focus on real-time changes. Although it is difficult to repeat a geolinguistic survey with the same scope, especially on a national level, a nation-wide geolinguistic survey, the Field-Research Project for Analyzing the Formation Process of Japanese Dialects (FPJD), was

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conducted in Japan. The aim of this real-time interval research is to compare the dialectal distributions from different surveys and to examine the interpretation of linguistic maps from the older surveys (Onishi 2014). In this paper, data from the national surveys and the recent regional survey of the young generation is compared to trace real- and apparent-time language changes.

2 Data and Methods

Three nation-wide geolinguistic surveys targeted at the elderly have been conducted in Japan to examine linguistic variation and change: (i) the Linguistic Atlas of Japan (LAJ), which mainly focused on lexical items and was conducted around 1960; (ii) the Grammar Atlas of Japanese Dialects (GAJ), which was exclusively concerned with grammatical items and was conducted around 1980; and (iii) the FPJD, which has recently been completed and which focuses on phonological, lexical, and grammatical items. A recent regional survey targeted at the younger generation, which includes phonological, lexical, and grammatical items, is the Survey of College Students in Niigata (CS) (see Table 1).

Table 1: A comparison of characteristics of four surveys

Title	Type	Informants	Time of survey	# of all-Japan localities	# of localities in Niigata	Mean birth year of informants
LAJ	National	elderly	1957–1965	2400	91	1887
GAJ	National	elderly	1979–1982	807	29	1916
FPJD	National	elderly	2010–2014	554	22	1937
CS	Regional	youth	1994–2002	-	103 max.	1980 approx.

The data from the national surveys LAJ and GAJ was compared with that from FPJD to trace real-time changes, while the FPJD data was compared with that from CS to examine apparent-time changes. The CS informants were 631 college students from various localities in Niigata prefecture. To construct the CS maps such as Figure 8, Figure 11 and Figure 14 below, symbols were plotted at the location of each student's town of origin.

The data examined here illustrate the dialectal variation in Niigata prefecture, where the border between Western and Eastern Japanese dialects is situated. Figure 1 shows a linguistic map for *iru* '(a person) to be or exist' from LAJ.[1]. The

[1] LAJ Maps Download: http://www.ninjal.ac.jp/publication/catalogue/laj_map/

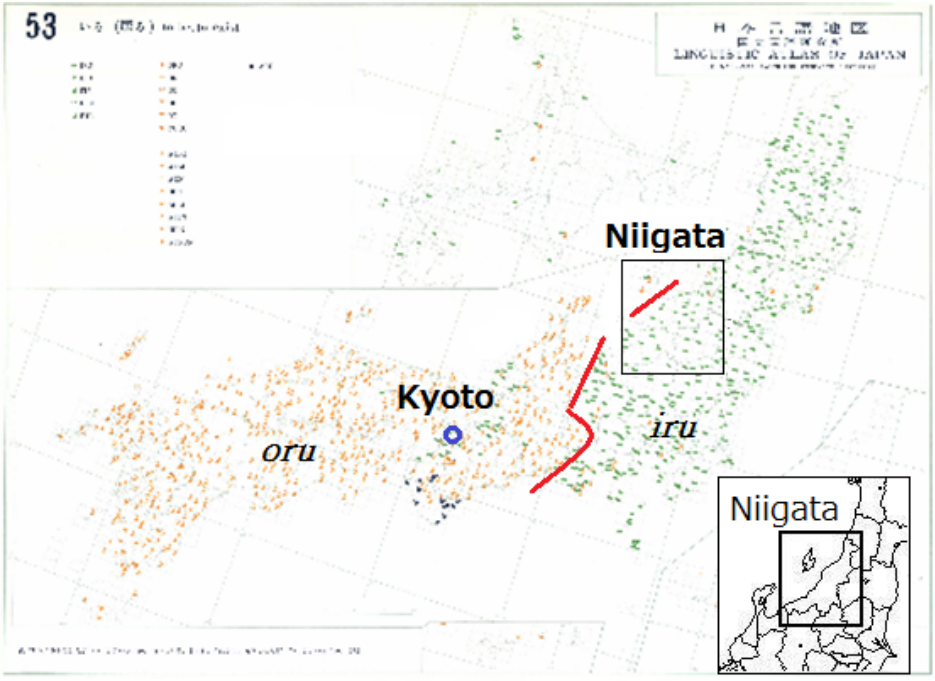

Figure 1: LAJ 53 *iru* 'to be or exist' and Niigata (Original map downloaded from LAJ Maps Download).

lexical variation shown here is a contrastive East-West distribution pattern with a clear isogloss drawn just within Niigata prefecture. The geographical distribution shows that the Western form has diffused from the central part of Japan where the old capital Kyoto is located. A bundle of such isoglosses is found in Niigata prefecture, which shows the division between Western and Eastern dialects.

Fukushima (2007) compared geolinguistic survey results for Niigata dialects from two different surveys in order to examine linguistic variation and change. Either GAJ or LAN — the Linguistic Atlas of Niigata, a regional survey conducted by Katsuo Ohashi in 1980–1985 (Ohashi 1998) — was used as the data from the older generation, and CS was adopted as the data from the younger generation. Two linguistic maps were superimposed by using the SEAL 7.0J system developed by the author. This paper compares geolinguistic survey results for Niigata dialects from three different surveys: LAJ or GAJ, FPJD, and CS. The GIS software SIS 7.1 was used to make comparable linguistic maps by adopting the same symbols and superimposing the distribution of relevant words from different surveys. The results of the comparison are discussed in the following sections.

3 Completed changes

Figures 2–4 show changes that were completed in the past. All three maps show East-West contrastive patterns with isoglosses in Niigata but do not show much difference over time.

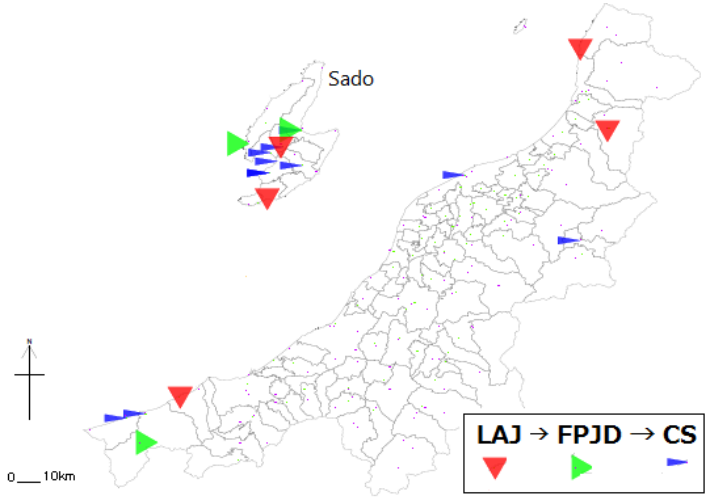

Figure 2: Diffusion of the Western form *oru* for *iru* '[a person] to be or exist'.

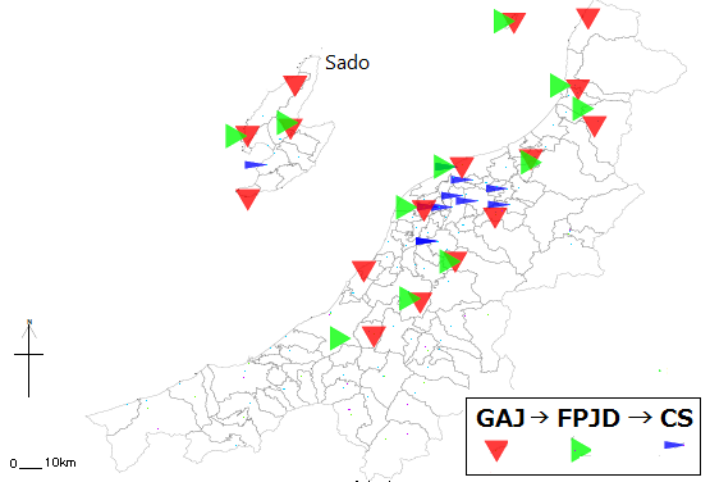

Figure 3: Diffusion of the Western form *kô ta* for *katta* 'bought [past tense]'.

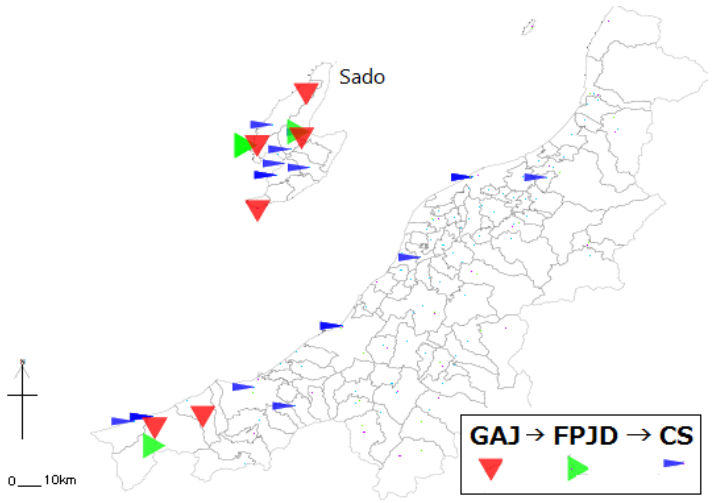

Figure 4: Diffusion of the Western forms *sen*, *sin* for *sinai* 'do not perform or act [a negative form]'.

Each map shows the distribution of Western form(s) in LAJ/GAJ (red symbols), FPJD (green symbols), and CS (blue symbols). Figure 2 maps the lexical variation of *iru* '(of a person) to be or exist'. In LAJ, the Western form *oru* is found on Sado Island, and in the westernmost and northernmost parts of mainland Niigata. In FPJD and CS, the Western form is still found on Sado Island and in the westernmost part of mainland Niigata. Thus the distributions do not vary much between LAJ, FPJD and CS. Figure 3 maps the morphological variation of *katta* 'bought [a past tense form of the verb 'buy']' The Western form *ko:ta* is found in GAJ on Sado Island and also in the central and northern parts of mainland Niigata (this area almost coincides with the Kambara Plains). The distributions in FPJD are the same as those in GAJ, but those in CS, although located in the same area, are more restricted. Figure 4 maps the morphological variation of *sinai* "do not perform [a negative form of the verb 'perform']." The Western forms *sen* and *sin* are distributed in GAJ on Sado Island and in the westernmost part of mainland Niigata. The distributions in FPJD are the same, but the distribution of the Western forms has expanded slightly in mainland Niigata in CS.

These linguistic maps show the contrastive distributions between Eastern dialect forms and Western dialect forms. From the maps, we can conclude that Western dialect forms expanded to Sado Island and part of mainland Niigata in the past, but that they later lost their influence due to the spread of Eastern dialect

forms, which happened to be the standard forms. The Eastern forms were maintained as the linguistic repertoire of the younger generation as a result of language standardization. Figure 4 shows a slight expansion of the Western forms on the coast of mainland Niigata probably due to competition from localized variants *sine* and *sinê:* as well as a standard form *sinai*.

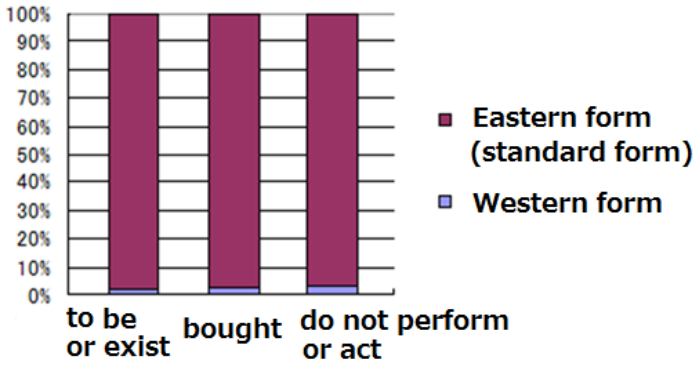

Figure 5: Percentage of actual users of Western forms in the CS data.

Figure 5 confirms this interpretation, as users of Western dialect forms make up less than 5 percent of all CS informants.

4 Changes in Progress

The next group of maps shows changes in progress. Here, the linguistic distributions in different surveys show conspicuous differences.

Figure 6, Figure 7, and Figure 8 map the lexical variation of *kara* 'because' in GAJ, FPJD, and CS respectively. Unlike the maps shown in the previous section, these maps show different distributions for the different surveys. The traditional dialectal form *suke* and its variants occupy most localities in GAJ. The map for FPJD shows two new words, *kke* and *si*, both of which have increased their distribution as shown in the map for CS: the form *kke* is a phonological derivation from *suke*, and the form *si* is a Western dialect form. The FPJD map thus clearly indicates the beginning of lexical innovation, which was expanded later.

Figures 9–14 map the lexical changes in *siasatte* 'two days after tomorrow' and *yanoasatte* 'three days after tomorrow'. For each lexical item, maps are shown from LAJ, FPJD, and CS. This pair of lexical items shows some interesting changes. In LAJ, Figure 9 and Figure 12 show contrastive distributions between Eastern

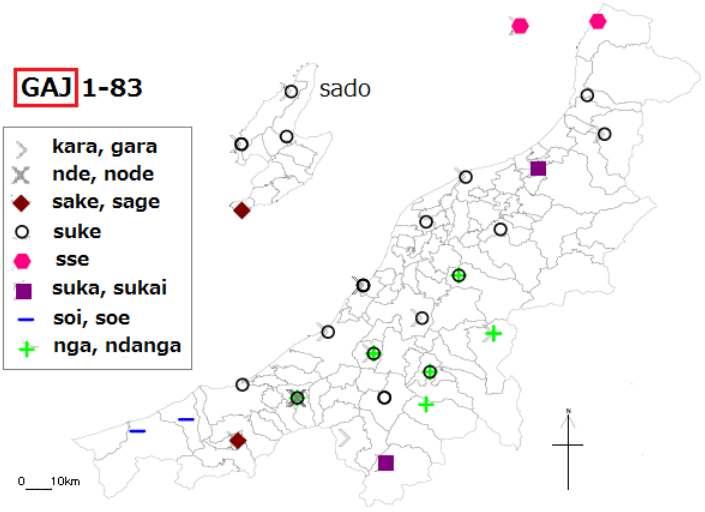

Figure 6: *kara* 'because' from GAJ

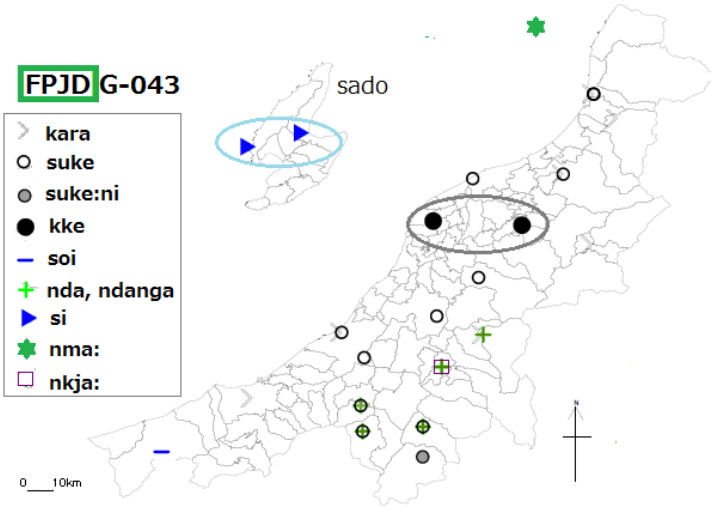

Figure 7: *kara* 'because' from FPJD

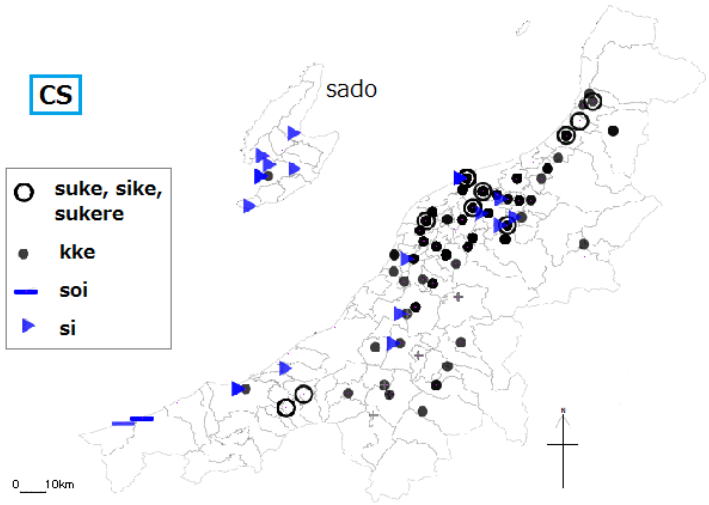

Figure 8: *kara* 'because' from CS

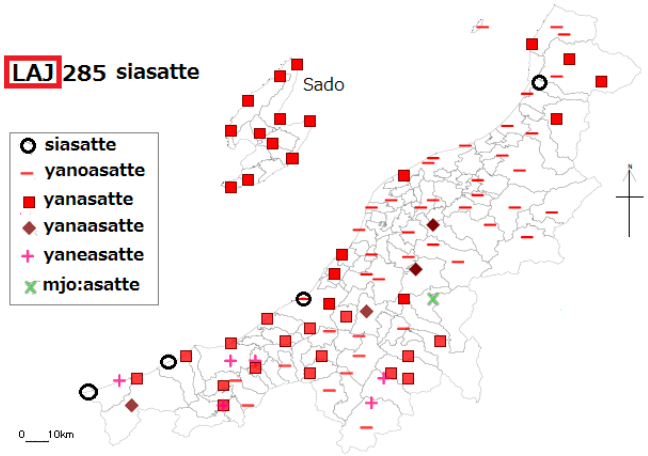

Figure 9: 'two days after tomorrow' from LAJ

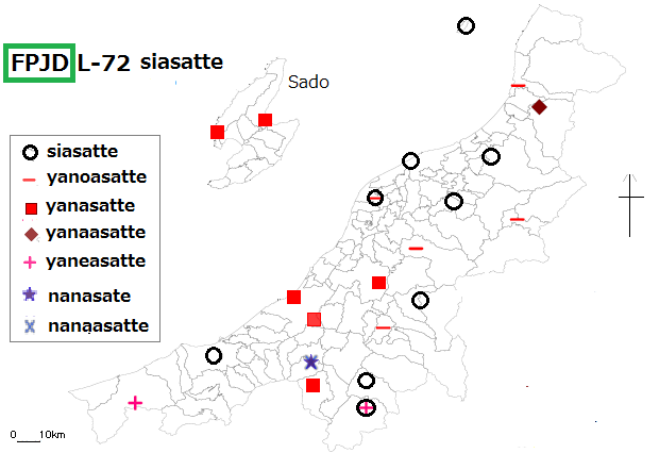

Figure 10: 'two days after tomorrow' from FPJD

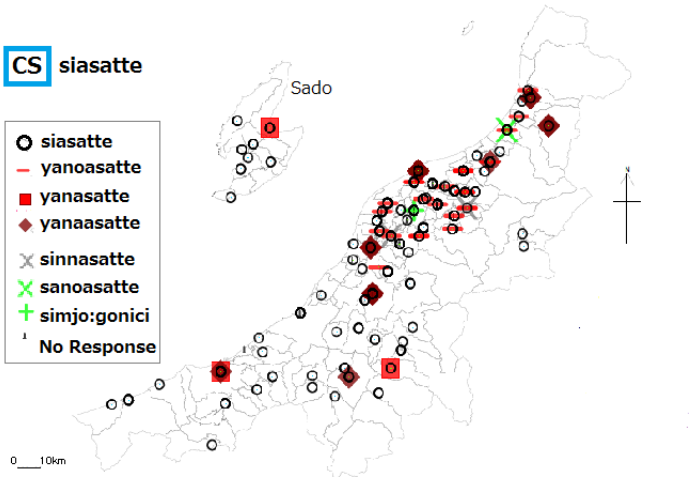

Figure 11: 'two days after tomorrow' from CS

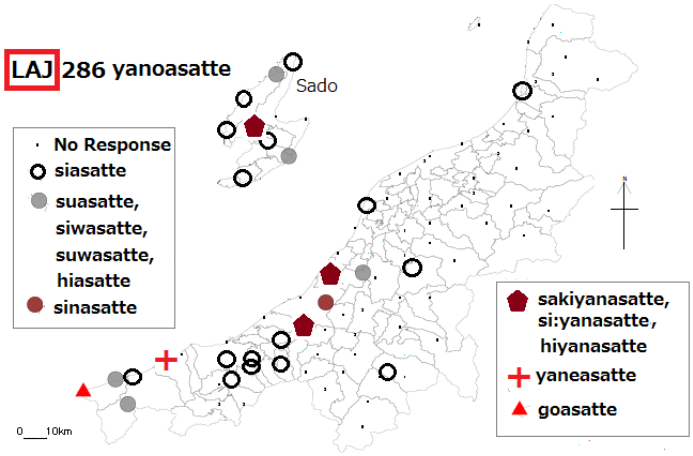

Figure 12: 'three days after tomorrow' from LAJ

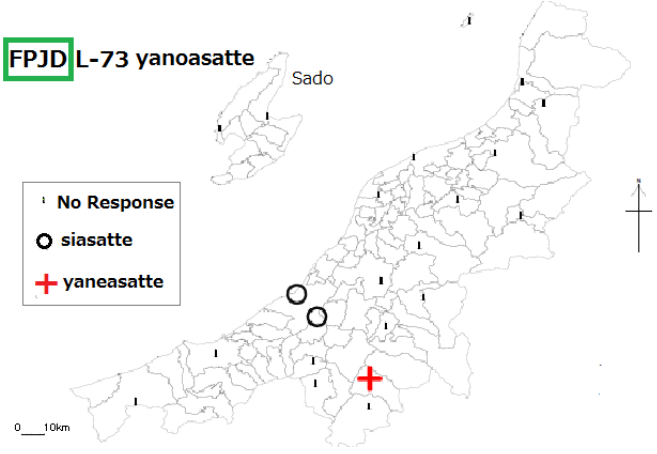

Figure 13: 'three days after tomorrow' from FPJD

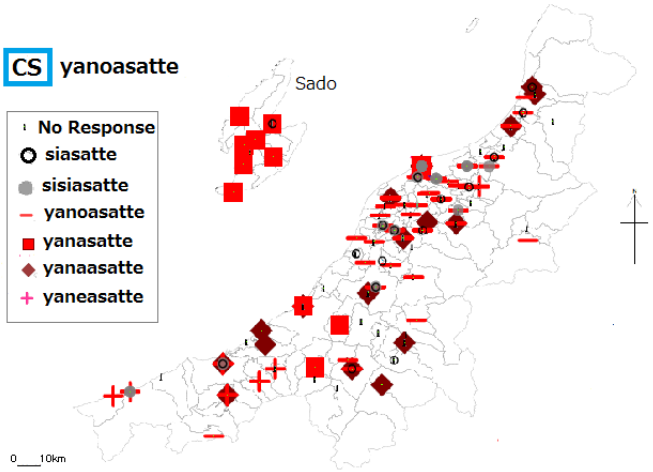

Figure 14: 'three days after tomorrow' from CS

Niigata and Western Niigata (including Sado). In Eastern Niigata, the traditional dialect had a localized form *yanoasatte* which means 'two days after tomorrow' but there was no equivalent word for 'three days after tomorrow'; on the other hand, in Western Niigata, there were localized words, *yanasatte, yanaasatte,* and *yaneasatte* with the meaning of 'two days after tomorrow', but *siasatte* meant 'three days after tomorrow', unlike in the standard system. In FPJD, influenced by the system of standard Japanese, the standard word *siasatte* was introduced with the meaning of 'two days after tomorrow', but this resulted in a conflict with the localized system especially in Western Niigata (see Figure 10 and Figure 13). In CS, some of the young generation adopted the standard system but others used localized dialectal forms *yanasatte, yanaasatte*, and *yaneassatte* with the meaning of 'three days after tomorrow' (see Figure 11 and Figure 14). This has resulted in a new system, shown in Figure 15.

In both cases, the FPJD data shows the transitional stage of dialectal changes between the LAJ/GAJ data and the CS data. If the changes have occurred in the local area recently, they will be captured by the FPJD maps.

5 Conclusion

Regional language changes are traced back using data from three different geolinguistic surveys. Two patterns of results are reported. In the first case, the expansion of Western dialect forms is weakened due to language standardiza-

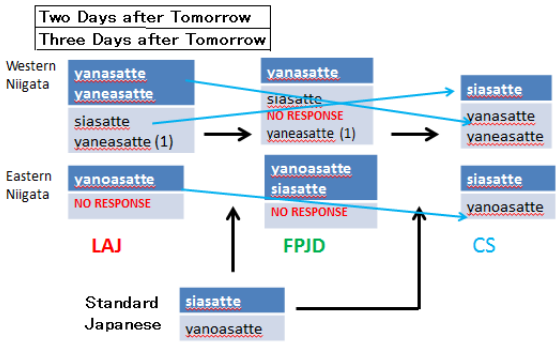

Figure 15: Changes of usage in ”two days after tomorrow” and ”three days after tomorrow”

tion. Changes were observed in the past but no additional advancement was reported in the linguistic maps. In the second case, local dialectal change is still on-going. The recent nation-wide survey of elderly speakers has captured the transition in progress. The results of the study show “a shift in focus from studying the spread of older linguistic features to studying the spread of innovative features” as observed by Gordon (2000: 412). Geographical Information Systems (GIS) are useful in statistical and quantitative analysis as stated by Lee & Kretzschmar (1993), while the georeferencing function of GIS is used to compare and superimpose linguistic maps from different surveys as reported in this paper. The author has been involved in integrating or comparing the distribution patterns of linguistic features found in individual linguistic maps with an objective to “describe” and “explain” or “adduce reasons for the distributions” (Trudgill 1974: 216). Only a few common items from different surveys were compared in this paper, but the patterns reported should be seen as representative. When more data from the younger generation is available for comparison, this opens the way to quantitative analysis.

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