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IMPROVEMENTS IN THE SOCIOLINGUISTIC STATUS OF DIALECTS AS OBSERVED THROUGH LINGUISTIC LANDSCAPES — UTILIZATION OF GOOGLE MAPS AND GOOGLE INSIGHTS —

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Abstract

The sociolinguistic status of Japanese dialects will be discussed on the basis of linguistic landscape in this paper. A steady increase in dialect shop names over the past fourteen years was concretely ascertained in a southern island on the basis of tour guide books. This increase in dialect shop names is observed also in other areas of Japan. The fieldworks are examples of "insect's eye view" research. The geographical distribution of dialect shop names can be shown also on distribution maps of *Google maps*. These maps give us a "bird's eye view". It has been ascertained that Japanese dialect forms are utilized both domestically and abroad. Many more examples are observable using *Google street view* as "fly's eye view", and *Google insights* as "witch's eye view".

The background of dialect landscape can be explained partly by the progress of language standardization, or decline of dialects. Dialects are now economically utilized because of their scarcity value. Three sociolinguistic types can be distinguished historically: ERADICATION, DESCRIPTION and UTILIZATION. Now Japanese dialects are in the state of UTILIZATION. Dialect landscape is a reflection of language standardization, and is regarded as a sensor of standardization. On the basis of the *Linguistic Atlas of Japan*, three historical stages of standardization can be distinguished: first, language standardization from the former capital Kyoto, and secondly from the new capital Tokyo, and thirdly nationwide standardization among junior high school students.

In the meantime, new dialect forms, which are changes in the opposite direction from standardization, are still emerging in various areas in Japan. These historical movements of standardization and new dialect formation can be concisely shown by the "umbrella model". From pragmatic surveys of dialect landscape, it has been found that principles of economics work on dialect use. Thus, the econolinguistics of dialect will be a fruitful study field in the future.

Key words

dialect landscape, standardization, Google maps, umbrella model, S-shaped curve

MEJORAS EN EL ESTATUS SOCIOLINGÜÍSTICO DE LOS DIALECTOS OBSERVADOS A TRAVÉS DE LOS PAISAJES LINGÜÍSTICOS — USO DE GOOGLE MAPS Y GOOGLE INSIGHTS —

Resumen

En este artículo se discute el estatus sociolingüístico de los dialectos japoneses basándose en el paisaje lingüístico. En los últimos catorce años, se ha comprobado en las guías de viaje el aumento constante del dialecto en los nombres de tiendas, concretamente en una isla del sur. Este incremento se observa también en otras áreas del Japón. El trabajo de campo descansa en ejemplos basados en una investigación realizada "a vista de insecto". La distribución geográfica de los nombres dialectales de tiendas se puede mostrar también mediante los mapas de *Google maps*. Estos mapas ofrecen un panorama "a vista de pájaro". Se ha comprobado que las formas japonesas dialectales se utilizan tanto en el país como en el extranjero. A través de *Google street view* pueden observarse muchos más ejemplos "a vista de mosca", y a través de *Google insights*, "a vista de bruja".

El fondo del paisaje dialectal puede explicarse en parte por el avance de la estandarización lingüística, o por la disminución de los dialectos. Los dialectos son ahora utilizados económicamente debido a su escaso valor. Históricamente, pueden distinguirse tres tipos sociolingüísticos: la ERRADICACIÓN, la DESCRIPCIÓN y la UTILIZACIÓN. Ahora los dialectos japoneses se encuentran en el estado de UTILIZACIÓN. El paisaje dialectal es un reflejo de la estandarización lingüística, y se considerado como un sensor de la estandarización. A partir del *Atlas Lingüístico del Japón*, pueden distinguirse tres etapas históricas en la estandarización: en primer lugar, la normalización desde Kyoto, la antigua capital; en segundo lugar, desde la nueva capital, Tokio; y, en tercer lugar, la normalización a nivel nacional entre los estudiantes de las escuelas secundarias.

Mientras, nuevas formas dialectales, que consisten en cambios en dirección opuesta a la estandarización, siguen surgiendo en distintas zonas del Japón. Estos movimientos históricos de la estandarización y la formación de nuevos dialectos puede mostrarse de forma concisa a través del "modelo del paraguas" (*umbrella model*). A partir de encuestas pragmáticas sobre el paisaje dialectal, se ha comprobado la incidencia de los principios de la economía en el uso dialectal. Por lo tanto, la 'econolingüística' el dialecto se convertirá en un campo de estudio fructífero en el futuro.

Palabras clave

paisaje dialectal, estandardización, Google maps, 'modelo del paraguas', curva en forma de S

1. Data: Linguistic Landscape and Dialect

In this paper¹ the sociolinguistic status of Japanese dialects will be discussed on the basis of linguistic landscapes. Permanent linguistic landscapes are more reliable as data for comparison with other areas or with the past. Shop names are permanent because they are officially registered.

The theoretical reasoning of this paper is roughly as shown in Figure 1.0. Standardization causes dialect non-use. It produces scarcity value, it creates economical utilization in the form of a "dialect industry" and dialect image also influences the dialect landscape.

Standardization→ Dialect non-use

 \rightarrow scarcity value \rightarrow economical utilization

 \rightarrow dialect image \rightarrow dialect landscape

Figure 1.0. Theoretical reasoning

The study of dialect on the street is the main topic of this paper. Signboards and posters have been the main concern of linguistic landscape studies until now (Landry & Bourhis 1997, Inoue 2005). Multilingual signboards are spreading worldwide showing English Imperialism or Globalism. We can here make use of the term and concept "High and Low" varieties of "diglossia" (Ferguson 1959). Use of the Alphabet or of English is a symbol of western culture or "High" culture. Japanese characters or use of the Japanese language is a symbol of "Low" culture, by comparison. Within the Japanese language, standard language symbolizes "High" culture, and dialects symbolize "Low" culture. Local dialect is, however, also written and found on the street. Both English and dialects have become prominent recently, symbolizing an acceptance of wide variation from High to Low. Many signboards in Japan contain no alphabet letters, and the parallel use of English and dialect was especially rare in the past. In the actual examples we show here, we have selected photos with alphabet letters for convenience.

¹ This paper was originally presented at the Plenary session of "METHODS of dialectology14" held in London, Ontario, Canada on Aug 5 Friday 2011. Dr Lawrence Wayne and Dr Daniel Long kindly checked English.

1.1. Dialect landscape

First, expressions for "welcome" will be shown as an introduction. And next, several examples of dialectal signboards and posters will be presented.

Dialect landscape is increasing in Japan. In several local airports in Japan, local dialect is used to welcome tourists and visitors from other areas. *MENSORE* (Stand. *irasshai*) 'welcome' in Photo 1.1 is Okinawa dialect.



Photo 1.1. MENSORE 'welcome', Naha Airport, Okinawa

Ishigaki Island is the main stage of this paper, and a street name with the same word [o:ri to:ri] (*irasshai*) 'welcome' in Photo 1.2 will appear later.



Photo 1.2. [o:ri to:ri] 'welcome', Ishigaki Island, Okinawa

The dialectal expression *Nukutee nee* (atatakai nee) = 'It's warm, isn't it?' is used in Photo 1.3 along with multilingual signs of welcome in Japanese, English, Chinese and Korean.



Photo 1.3. Kanto dialect in Ito hot spring

The use of English in Photo 1.4 suggests that the target of this shop is foreigners, and the use of Kyoto dialect suggests that another target is domestic tourists.

Omasse (arimasu) = 'there is' *Arimasse (arimasu)* = 'there is' *Oideyasu (irasshai)* = 'welcome'



Photo 1.4. Kyoto dialect advertisements posters

On this small island many dialectal signboards are displayed. The letters in Photo 1.5 say:

Keerakati mamoriikanaa sumanu kukurutu kootsuu ruuru 'Let us all keep Island's heart and traffic rule'



Photo 1.5. Traffic safety slogan in Kohama dialect, Ishigaki, Okinawa

The title in temporary exhibition in a public in Photo 1.6 space is *wagaya no MEKKOI shashin ten*, 'Photo exhibition of pretties in my house'. *MEKKOI (kawaii)* 'pretty' is a famous dialectal word of northern Japan. The meaning can be understood even by tourists from the other regions of Japan, but writing it in the Roman alphabet between Japanese scripts is exceptional, perhaps aiming for some special psychological effect.



Photo 1.6. MEKKOI 'pretty' in temporary exhibition

1.2. An insect's eye view (1). Field work for Dialect shop names

Dialect shop names will be presented next. A shop name is fixed, because official registration of the name is necessary for a business license. As one kind of proper noun,² a shop name has two seemingly contradictory characteristics: similarity and difference. A shop name must have some common characteristics and psychological

 $^{^{2}}$ Examples of proper names are first names, family names, company and institution names and place names.

association with other shop names, and at the same time must be distinguished from other shop names in the same area. This shows that a certain, limited degree of originality is essential for shop names. A dialect shop name is convenient because it is a utilization of an already exiting word. Dialect shop names often suggest what kind of shops they are. Attributes of shops are easily understood seeing the shop name. Most of them have a homey or country atmosphere, and restaurants serve hometown dishes.

The fieldwork presented here are examples of "**insect's eye view**" research, because the research area is relatively small.

The first line of Photo 1.7 tells us that this restaurant serves Japanese dishes and is run by a fishmonger. Dialectal expression e- *jaro* (*ii daroo* = 'must be good') is effective for this kind of restaurant.



Photo 1.7. Okayama city *e- jaro* = 'must be good'

Kiteco (kite goran) = 'please come' is used only in a small area near Shizuoka city, and is a word that has been recently created as new dialect which will be discussed later. This fresh expression is utilized for a municipal facility for local residents in Photo 1.8. These kinds of semi-official facilities often have dialect names recently, in many parts of Japan. Dialects usage in official contexts was something unimaginable in the past. Many of them make use of old-fashioned dialect expressions for 'please come in', 'get together', and 'chat' and so on. Some of these dialect words sound like foreign languages and are spelled in the Roman alphabet. This mismatch of a "Low" variety dialect and a "High" variety foreign language is a useful technique for attracting people's attention.



Photo 1.8. *Kiteco* = 'please come' in Shizuoka new dialect

Tilla = 'Sun' in Ishigaki dialect, cognate with *tida* in Okinawan dialect, probably from Sino-Japanese *tendo*. This shop in Photo 1.9 is an undertaker, making this an exceptional occupation for the use of dialect. Use of "l" is also exceptional.



Photo 1.9. Ishigaki Island *Tilla* = "Sun"

Photo 1.10 is a bar. The local word for *arigato* 'thank you' is *niifai yuu*, etymologically from *mihai*. In this shop name *yuu* [ju:] is spelled like the English pronoun 'you'. This kind of utilization of English words and spellings for showing Japanese words is becoming popular these days.



Photo 1.10. Ishigaki Island Nifai-you = 'thank you'

Photo 1.11 shows a scene of the Misaki district of Ishigaki city in March 2011. A gate beckons [o:ri to:ri] (*irasshai*) 'welcome' to this district. Many signboards of shop names can be seen in the background.



Photo 1.11. A scene of Misaki district in Ishigaki city

1.3. Increase of dialect shop names in Ishigaki Island and Osaka

A steady increase in dialect shop names over the past 14 years was concretely ascertained in Ishigaki island on the basis of tour guide books which have been published every one or two years. The case of a downtown leisure-resort area, Misaki of Ishigaki Island will be analyzed here. A steady increase of dialect shop names has been observed. The portion of dialect shop names 19 in 2011 is just one third, as a total 57 shops are listed on the map. The effect of an Okinawan TV drama called *Churasan* can be pointed out for this dialect use. In Figure 1.1, TV1 to TV 4 indicates the period when the TV drama series *Churasan* was broadcast. A neighboring shopping street also has dialect shop names. Parts of the town which tourists do not visit do not have many dialect shop names. This implies that dialect shop names are for tourists and not for native residents.

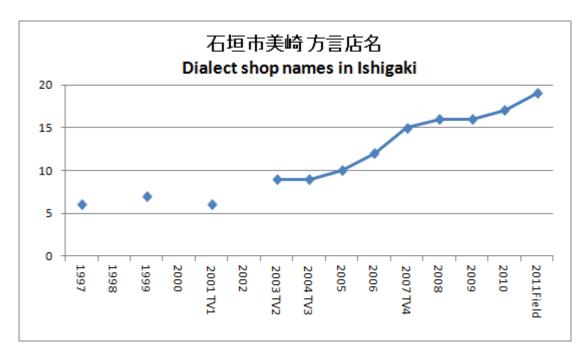


Figure 1.1. Increase of dialect shop names in Misaki district

Concrete data is presented in the form of a table in Figure 1.2. Some shops disappear in some years, but new shops appear. So, relative stability in dialect shop names can be observed.

1997		1998	1999	2000	2001 1	2002	2003 T	2004 T	2005	2006	2007 T	2008	2009	2010	2011 Field	
ゆうな	k		ゆうな	k	R	R	R	R	ゆうな	ゆうな	ゆうな	ゆうな	R	R	ゆうな	
マーミヤ	k.		マーミヤ		k.	2 2	<i>k</i>	<i>R</i>	2			マーシャ	<i>R</i>	k.	マーミヤ	
			ぐるくん亭		くるくん亭	R	くるくん亭	ぐるくん亭	ぐるくん亭				ぐるくん亭	ぐるくん亭	ぐるくん亭	
			まーさん道	k,	k	皮	まーさん道	まーさん道	まーさん道	まーさん道	2	2	まーさん道	まーさん道	まーさん	
					ゆくい	々	ゆくい	ゆくい	ゆくい	ゆくい	ゆくい	ゆくい	<i>R</i>	R.	ゆくい居	
							スブンテ	スブンテ	スブンテ	スブンテ	スブンテ	スブンテ	スブンテ	スブンテ	スプンテピ	
							ゆんた	ゆんた	ゆんた	ゆんた	<i>R</i>	<i>R</i>	<i>R</i>	R.	島の美食	
							ゆらていく	ゆらていく	ゆらていく	ゆらていく	ゆらていく	<i>R</i>	<i>R</i>	R.	ゆらていく	
								てぃーだ	てぃーだ	てぃーだ	てぃーだ	てぃーだ	てぃーだ	てぃーだ	ていーだ居福	雪屋
									やいま日利	やいま日利	やいま日利	やいま日利	々	R	やいま日和	ペンション
										tilla earth	々	tilla earth	tilla earth	tilla earth	有限会社テ	イーラアーン
										美ら島屋	美ら島屋			美ら島屋		
															-ニーランカー	ナン
															-やーちゅー	
												ふがらっさ		R	民宿ふがら	っさ
												SANSIN		SANSIN	SANSN	
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6		4	7	5	6	6 6	9	9	10	12	15	16	16	17	19	

Figure 1.2. Appearance and disappearance of dialect shop names in Misaki district

In order to show that the phenomena in southern Japan are not an exception, additional research is necessary. This increase in dialect shop names is observed also in

other areas of Japan. A considerable increase in dialect shop names in Osaka City since the 1980s has also been reported as shown in Figure 1.3. The ratio is small among all the thousands of shops in Osaka city. Dialect shop names are still the exception to the rule. The types of business are limited; most of them are restaurants

This has been an attempt at analysis for time dimension. Analysis for geographical dimension will be discussed hereafter.

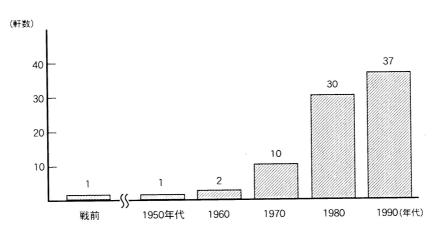


Figure 1.3. Increase of dialect shop names in Osaka City

1.4. Bird's eye view (2). Google maps

The geographical distribution of dialect shop names can be shown also on distribution maps, if we make use of *Google maps*. By using *Google maps*, it has been ascertained that Japanese dialect forms are utilized both domestically and abroad. *Google maps* can work as a convenient tool for folk linguistics or secular linguistics. *Google maps* give us a **"bird's eye view"**, because we can see a wide area at a glance.

An example of dialect shop names will be discussed here. The name *Shekarashika* (*urusai*) = 'noisy, troublesome' of Photo 1.12 is the Kyushu dialect. Due to the meaning, this is not an appropriate name for a noodle restaurant. Nonetheless four branches of the noodle restaurant were found near Osaka and Tokyo by *Google maps* shown in Photo 1.13. But significantly there are no shops with the name of *shekarashika* in Kyushu itself.



Photo 1.12. Shekarashika = 'troublesome' in Kyushu dialect



Photo 1.13. Google map of Shekarashika

The greeting *Obandesu* (*konbanwa*) = 'good evening' is used in northern Japan. But with shop names it is not only used in northern Japan but also near Tokyo as well in Photo 1.14.



Photo 1.14. Shop names of Obandesu 'good evening' in Northern dialect

1.5. Interlingual dialectology of shop names of Okini 'very much'

Shops with the name of *Okini (taihen)* 'very much' will be analyzed next using *Google maps* and other internet techniques. *Okini* is a famous dialectal expression of the Osaka and Kyoto area, which literally means 'very much' (*taihen*) but is used in the sense of 'thank you very much' (*taihen arigato*). This domestic map in Photo 1.15 shows the distribution of shops with this name in Western Japan and near Tokyo.

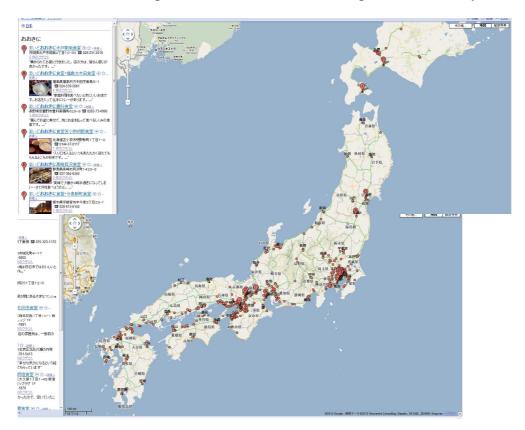


Photo 1.15. Shops with the name of Okini 'very much' by Google maps

Actual geographical distributions are shown on a map in Figure 1.4 from the *Grammar Atlas of Japanese Dialects* (NLRI 1989-2006) which is now accessible and downloadable on the internet. We see that *Okini* is used mainly in central Japan, around the Kyoto and Osaka area, though there are some small areas in other parts of Japan.

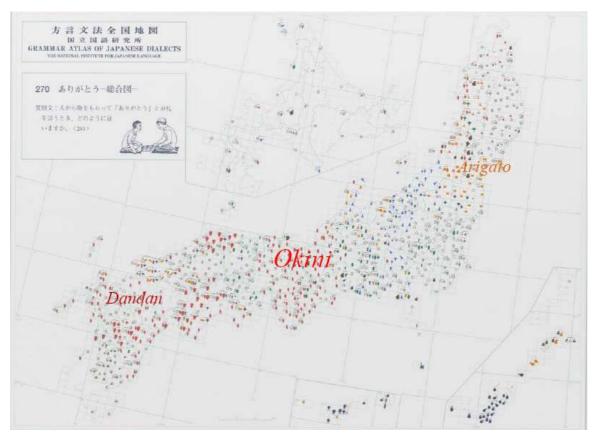


Figure 1.4. Grammar Atlas of Japanese Dialects

Domestic geographical distribution has been discussed above. Hereafter we will enlarge and broaden our viewpoint to see the entire world. A new type of linguistic map, a worldwide linguistic map can be drawn by using the functions of *Google maps*. A *Google map* showing the position of a shop name can be enlarged to show the entire nation or the entire world by sliding the control on the left side of the screen as shown in Photo 1.15. Using this technique a new type of global dialectology can be developed. We can make worldwide maps across national borders and across linguistic borders. This is a new technique appropriate for the "Interlingual Dialectology" which has been advocated by Weijnen (1978), or for authentic geolinguistics.³

The *Google maps* can be classified into two types, using the conventional distinction between language and dialect. Dialectal words of a language can advance overseas or across language borders. It has been ascertained by *Google maps* that

³ In the conference of METHODS 14, presentations of borrowings by Dr Vilja Oja and by Dr Francisco Dubert-García and Dr Xulio Sousa-Fernández were examples of interlingual dialectology which will surely be studied more and more in the future. Quantitative dialectology in the Netherlands has been developed into Quantitative interlingual dialectology by Dr Wilbert Heeringa at this conference by including Afrikaans in the analysis.

Japanese dialectal expressions are used in foreign countries, not only in Europe, but also in Asia.

A typical example of a dialectal shop name is *Okini* (meaning 'very much' in Western Japan), used worldwide. Many more examples are observable using *Google maps* or *Google insights*. Use of Osaka (Western Japanese) dialect abroad, in USA and Europe is clearly shown in Photo 1.16.



Photo 1.16. Shops with the name of Okini 'very much' by Google maps

1.6. Fly's eye view (3) Google street view

In some areas of the world continuous street scenes can be shown using *Google street view*. We can jump to *Google street view* by moving the controls on the left-hand side of the screen. *Google street view* can be thought of metaphorically as a "**Fly's eye view**" because of the compound eyes with 360 degree vision. We can observe a wide range area in a few minutes.

When the signboard of the shop name is large enough, we can read it without actually visiting the location. In the case of Photo 1.17 the picture and sentences on the left hand-side show that this is a sushi restaurant. *Google maps* are a powerful tool. New types of distribution maps can be drawn instantly. I have made hundreds of maps in one year but have found no appropriate place to exhibit them yet.



Photo 1.17. Google street view of Okini 'very much'

1.7. Witch's eye view (4) Google insights

Google insights is more useful in some cases because distribution is shown by ratio of usage according to area (prefecture, district, state or country). Google insights may be metaphorically thought of as a "Witch's eye view" because we can look at geographical distribution both all over the world and within a country, and because we can also see trends of usage of the past and the future as a witch uses a crystal ball. Both time dimension and geographical dimension can be shown by Google insights. Incidentally, Google trends has the same functions of Google insights but it does not show geographical distribution. Thus we have shown at least four types of views: insects, birds, flies and witches.

As shown in Photo 1.18 *Okini* 'very much' is certainly used in western Japan. To add to this, trends of usage change for the past seven years are also shown in the graph above. *Okini* shown by the blue line, written in Japanese Hiragana notation was used once in 2007, but its usage is now steady. *Okini* shown in the red line is the same word written in Chinese characters. The use of *Okini* is now increasing, symbolizing the vitality of Japanese dialect and a recent trend in the utilization of dialect. Increasing trends in many other Japanese dialect words have also been found on the basis of *Google insights*.

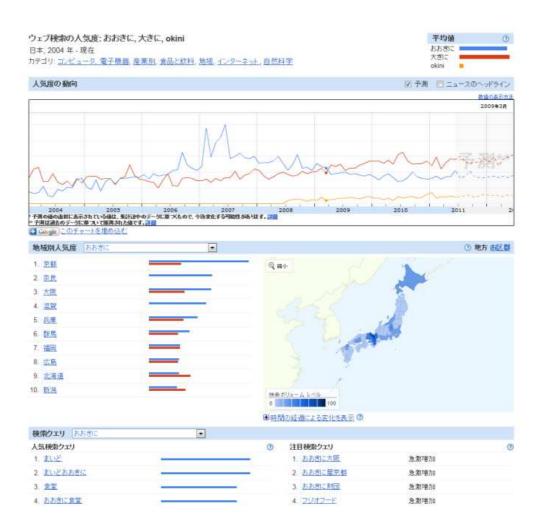


Photo 1.18. Increase of Okini 'very much' according to Google insights

Another example of the utilization of Japanese dialect abroad is given next. *Hannari* (*hanayaka*) = 'gorgeous, flowery' in Kyoto dialect, is used mainly in western Japan, but it is used also in North America and Europe, not as shop names but for product names, such as *Hannari Tofu* as the balloon in Photo 1.19 shows. These examples show that Japanese dialect usage is increasing even overseas.



Photo 1.19. Shops with the name of Hannari according to Google maps

In Photo 1.20 of *Google insights*, the heavy use of *Chura* = 'beautiful' in the southern Okinawan Islands is not presented properly because the islands are too small for this scale of *Google insights* maps. The trend graph above shows that the use of the Okinawan dialect *Chura* has been increasing these several years. Two ways of writing are used, one in Hiragana syllabary and the other in Chinese characters. Hiragana syllabary shown by the red line is increasing conspicuously. This is another example showing that the utilization of Japanese dialect is increasing.

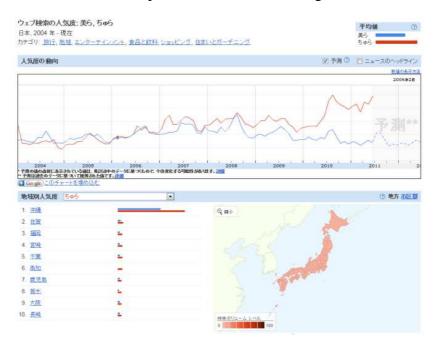


Photo 1.20. Increase of Okinawan dialect Chura= 'beautiful' according to Google insights

1.8. Interlingual dialectology in other languages

Google insights is quite robust, and is a new technique for the old field of linguistic geography as advocated by Jules Gilliéron as a tool to reconstruct the history or genealogy of an individual word. At that time and until recently, dialectology has been a study with a domestic viewpoint. However because of various recent internet techniques, "linguistic" geography has become a truly international or global study transcending national borders and incorporating various nations and languages.⁴

To show how *Google maps* and *Google insights* work, some concrete examples of world distribution in other languages will be mentioned briefly. In Inoue (2011.2) *Google maps* of "Bonsai", "sophomore" and other Japanese dialectal words are presented. In an internet site of "Sanseido Word Wise Web" essays using *Google maps* are sometimes presented. For example, "Candy bar" is more used in the USA and "chocolate bar" is more used in the former British Empire including Canada.⁵ However, as shop names, "candy bar" is used in England. Worldwide distribution of "motor pool" is also discussed in the same series. In the same site, world differences for "underground railway" are presented. In Argentina "subte" is used, though in other Spanish speaking countries "metro" is prevalent. There are many more examples of English words showing world-wide differences like "take out" vs. "take away", "freight train" vs. "goods train", "running shoes" vs. "sneakers", "face cloth" vs. "wash cloth", railway vs. railroad, movie vs. cinema, whisky vs. whiskey, and so on.

Dr Jack Grieve has presented in the conference of METHODS 14 geographical differences of lexical items based on letters to the editors of American newspapers. The lexical items analyzed by him could be instantly shown on maps and trend graphs when *Google insights* was used. For example the distinction between "although" and "though" was stimulating. A world map shows that "although" is used in countries where English is used as a foreign language. "Though" is not used so much in the northwestern parts of the USA. It suggests word history of "although" and "though". Also the difference of "cemetery" and "graveyard" is clear not only within the USA but also in the world.

⁴ This new trend could be observed in many presentations in this Congress of METHODS 14, including the presentation which was delivered by Dr Wilbert Heeringa.

⁵ This was inspired by the study of Dr Boberg, and is explained in Japanese in the title of <"Candy bar" and "chocolate bar" by Google insights>. Search for the keywords "Sanseido, dialect, Inoue".

1.9. Tentative conclusions with dialect shop names

1 Insect's eye view	Field surveys
2 Bird's eye view	Google maps
3 Fly's eye view	Google street view
4 Witch's eye view	Google insights
Figure	e 1.5. Metaphor of research techniques

Thus far concrete data using dialect shop names have been discussed (Figure 1.5). Insect's eye view data of dialect shop names by field surveys are restricted by the range of behavior or trips of researchers. The Bird's Eye View data of shop names by *Google maps*, the Fly's Eye View data by *Google street view*, and Witch's Eye View of *Google insights* do not have such limitations. The use of internet information with the appropriate techniques allows us to enlarge our viewpoints and develop a new field of research. The internet is a useful and convenient tool or instrument. Its appropriate and effective utilization ensures better academic results. It is useful for data collection which can be accomplished even by ordinary students if appropriate guidance is given.

Above, we have utilized internet information and have found some interesting trends. These were the discovery of a phenomena or data to be analyzed. However, what any earnest researcher aims to accomplish is the interpretation or analysis of the acquired data. The relation of cause and effect should be found and explained logically. This is what we attempt in the next section's discussion.

A lot of dialect shop names must be collected in order to see any nationwide tendencies in terms of geographical distribution. Preliminary data at present shows that dialect shop names are amply found on both ends of Japan archipelago and also in large cities, showing **three peaks**. This tendency is similar to the one found in studies of dialect souvenirs which will be presented in the following section. The **ashtray model** in Figure 2.6 vividly explains this tendency.

2. Discussion: Background of Dialect Landscape

Next, basic principles to explain the recent increase of dialectal signboards in Japan will be analyzed in the discussion section. The background of dialect landscape can be explained partly by the progress of language standardization, or the decline of dialects. In short, dialects are now economically utilized because of their scarcity value.

2.1. Rise and fall of three types of dialects

Three sociolinguistic states can be distinguished if we look back at more than one hundred years of dialect usage in Japan: 1 ERADICATION, 2 DESCRIPTION and 3 UTILIZATION. Now Japanese dialects are in the state of 3 UTILIZATION.

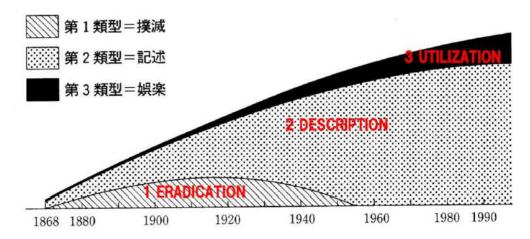


Figure 2.1. Three types of dialects: Rise and fall of three types of dialects

2.2. Social history of the decline of dialect

The entire trend is shown impressionistically in Figure 2.1 relying on a list of books and academic papers on dialects. Books and papers for the eradication of dialects were mainly found before the Second World War, or in the age of militarism or imperialism. Neutral attitudes and objective description were observed throughout the century. The positive commercial utilization of dialect for amusement has become prominent recently. Geographical differences are disappearing and nowadays nationwide standardization can be observed among young speakers. As a background to

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this, there are changes in people's ability to use standard language, and also changes in how dialect is perceived.

In the age of 1 dialect eradication, the "dialect inferiority complex" (Sibata 1998) became a social problem. Examples of "dialect murder" cases (cases where use of dialect led to a murder) have been documented. Instances of "dialect murder" have now decreased and the age of eradication seems to be over. In a manner of speaking, dialect has increased in scarcity value and a movement towards the opposite direction of positive evaluation can be observed. In other words, the economical value of Japanese dialects has changed from minus to zero, and then on to plus.

In the following, concrete visible data showing the change of dialect consciousness will be presented.

2.3. ERADICATION: Dialect tags

Dialect tags were used in modern Japan until the 1970s. In Photo 2.1, this is the only one which still exists, kept on a southern island near Ishigaki Island. The Chinese characters say *hogen fuda* 'dialect tag'. Pupils who used dialect at schools had this tag hung around their necks and had to keep it until they found another pupil using dialect to whom they could pass it on. This technique was used in the southern islands and also in northern Tohoku area. This is an extreme case of dialect discrimination. But this dialect eradication may have been attempted with the best of intentions, because the use of dialect would have been detrimental to students trying to find good jobs in those days. The use of dialect or standard language is strongly connected to one's job opportunities, in the "language market".



Photo 2.1. Dialect tags

2.4. DESCRIPTION: Dialect word list

There are a lot of cases of the objective description of dialect, especially as with dialect souvenirs. Photo 2.2 displays a small curtain showing a list of dialect words, acquired in Shimane prefecture in western Japan, the production of which shows a reduction in the social prejudices towards dialects.



Photo 2.2. DESCRIPTION. Dialect list

Prewar picture postcards for sightseeing locations are shown in Photo 2.3. The conversation is in dialect with a translation into the standard. A group of dialectologists is now working to collect as many examples as possible and to make a complete list of prewar dialect postcards.



Photo 2.3. DESCRIPTION. Dialect postcard

A change of views towards dialect is also observable in letters to the editor of the newspaper Asahi Shinbun shown in Figure 2.2. Surprisingly old-fashioned views of the "correction" of dialect were discovered as late as 1960. This was a new discovery because it had been believed that this kind of discriminatory view had disappeared at the end of WW2. A positive view discussing the importance of dialect became prevalent in the 1970s. The absolute number of letters to the editor on dialect was large around 1970, at the age of the rapid economical development of Japan. At that time large scale population movement occurred and dialect contact became a severe problem, bringing with it the dialect inferiority complex and even dialect murder. People began to be sensitive to the social position of dialects at this time.

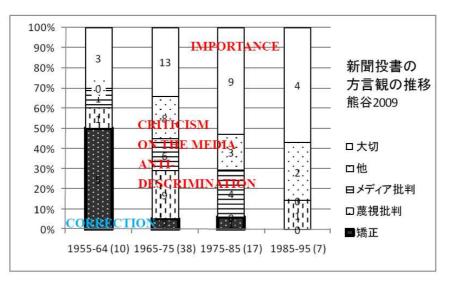


Figure 2.2. From ERADICATION to DESCRIPTION: Letters to the editor

Figure 2.3 is a map and graph for poems written in dialects. The inset graph shows a sudden increase of publication of dialect poems since the 1980s. Looking at the map, three peaks can be discerned in the central Kyoto-Osaka area and at both peripheries of the Japanese islands, as will be discussed later in Figure 2.4.

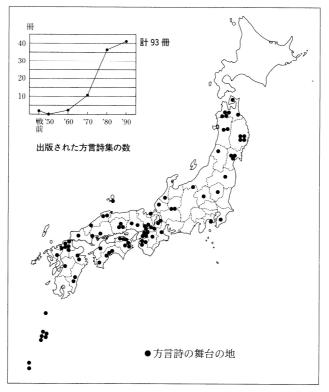


図 30 方言詩の増加と地理的分布

Figure 2.3. Dialect poems

2.5. UTILIZATION: Dialect souvenirs

Nowadays dialect is utilized commercially in many aspects. Examples of dialect souvenirs (Photo 2.4) are amply found. Newer types appear year by year perhaps because they sell well.



Photo 2.4. Osaka dialect candies

Many new kinds of candies and cakes using Osaka dialect have appeared these past few years, perhaps indicating that they sell well. One corner of this souvenir shop (Photo 2.5) is dedicated wholly to dialect souvenirs.



Photo 2.5. Osaka dialect souvenirs

Photo 2.6 shows a candy with a Kagoshima greeting for visiting *miyage monso* (*gomen kudasai*) 'Hello'. Etymologically *miyage* in this expression has no relation with *miyage* 'souvenir'.



Photo 2.6. Okinawan dialect cake

Photo 2.7 is a traditional item which has a long tradition over several decades. Many dialectal words are baked on the surface of these cakes.



Photo 2.7. Osaka dialect cakes

Use of the Roman alphabet for writing dialects was quite rare in the past. In Photo 2.8 the Roman alphabet has been adopted perhaps to give a fresh image to dialects. This type of small souvenir is typically purchased by students on school trips. *Minna Nakayō shitōne* (*minna nakayoku shiteiruka*) means 'is everybody being friendly?'.



Photo 2.8. Hakata dialect key holder

Photo 2.9 shows tea cups with Okinawa dialect terms. A variety of colors and sizes show that they sell well. These dialect souvenirs and dialect goods are typical examples of UTILIZATION.



Photo 2.9. Tea cups with Okinawa dialect terms

Photo 2.10 shows Hello Kitty dolls with talking functions in Hakata and Nagoya dialects. There are also vending machines which speak dialect when someone passes in front of them or makes a purchase. This is a broadened type of dialect landscape or an example of dialect soundscape. There are many more kinds of dialect products, and

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some of them are introduced every week on an internet site in Japan (http://dictionary.sanseido-publ.co.jp/wp/). Even those who cannot read Japanese can see concrete examples in the photos. One should be able to find these by searching for the keywords "Sanseido Word-Wise Web, dialect, Inoue".



Photo 2.10. Hello Kitty dolls with talking function

Even dialect postage stamps have appeared. Postage stamps are issued by the central government, and are usually utilized to symbolize national unity. Thus dialect is rarely used on postage stamps. Photo 2.11 is the first local dialect issue (2009) in Japan sold only in Toyama prefecture. Several local issues followed in neighboring prefectures. Other local postage stamps use dialectal expressions either in the title or in the explanation. These local issues are rarely used, and kept in collectors' drawers, thus helping the finances of the post office.



Photo 2.11. Dialect postage stamps

Photo 2.12 is a DVD of the TV drama *Churasan* from Okinawa. As stated before, this drama *Churasan* became especially popular and brought many tourists from Mainland Japan to Okinawa.



Photo 2.12. Dialect TV drama Churasan in Okinawa

There is a long tradition of dialect TV drama since 1964 by usage of Ehime (Matsuyama) dialect in "*Ohana-han*". An artificial mixture of dialects ("stage dialect") was used for dramas in the past. But nowadays a kind of "dialect realism" has been established and there are many semi-professional dialect instructors. The most famous dialect TV drama outside of Japan is *Oshin*, which has been translated into several foreign languages. But the dialect was not utilized in foreign language versions.

To use the term of diglossia of High and Low varieties again, the language in the media is a formal, High variety and dialects are informal, Low varieties. Dialect use in the media was caused from two directions. One upward trend, because language use in the media became more open, and lower varieties like colloquial expressions were allowed to appear. The other downward trend is because the position of dialects has become higher so that they are used in more formal situations (Jinnouchi 2007, Inoue 2011.1).

2.6. Three factors for dialect souvenirs

These landscape phenomena observable from outside correspond with dialect image which is the main topic of perceptual dialectology advocated by Preston (1989) and Long & Preston (2002). In this section, three factors which seem to influence the geographical distribution of dialect souvenirs will be discussed. The three factors are as follows:

1. A linguistic factor: Difference from standard language which is partly paralleling geographic (railway) distance from Tokyo

2. An external or nonlinguistic factor: Numbers of tourists are reflected in the micro geographic distribution of souvenir shops

3. A psychological factor: Emotionally positive dialect image or a love for one's hometown.

The first factor of difference from standard language will be treated later. To state concisely, difference from the standard is proportional to railway distance from Tokyo. The second factor of tourists does not show clear correspondence, if seen nationwide. This will be briefly discussed later. We will analyze the third factor of dialect image first. For this factor the dialect landscape discussed above gives important information, if arranged geographically.

The numbers of dialect souvenirs actually collected and recorded in various books were listed and processed on the computer, and listed in this graph according to prefectures. As shown in Figure 2.4 three peaks are observed: the central Kyoto-Osaka district and the peripheral northern and southern tips of Japan.

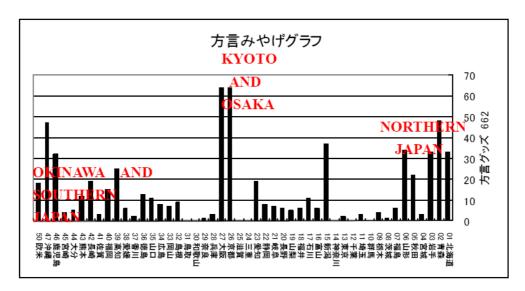


Figure 2.4. Dialect souvenir by prefectures

The graph of Figure 2.4 can be better understood if an actual map of Japan is presented as in Figure 2.5.

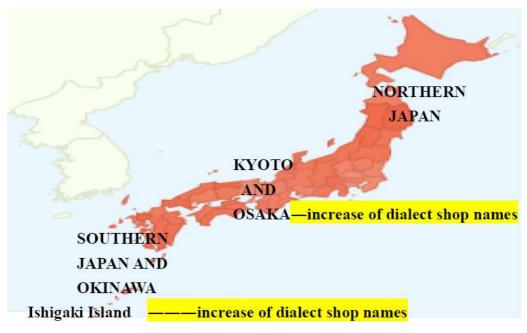


Figure 2.5. Three peaks of dialect Souvenirs

This awkward pattern of three peaks can be well represented if we take up the metaphor of an ashtray as in Figure 2.6, high on both sides and in the center. However, it seems to be difficult to explain this distribution by one simple principle, without adopting (the emotionally positive) dialect image.

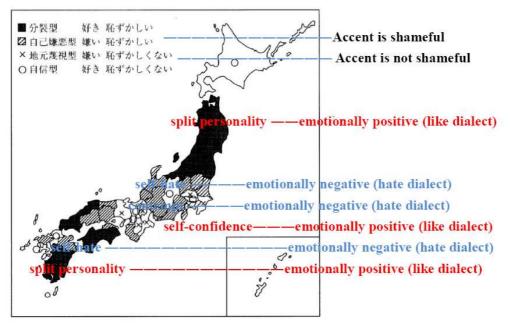


Figure 2.6. Ashtray model

2.7. Dialect Images of Japan

This ashtray model in Figure 2.6 shows some similarity to one factor of dialect image. Several quantificational techniques were applied. Multivariate analysis of dialect image has shown that Japanese dialects can be classified into four groups by intersection of two factors of intellectual and emotional images.

A metaphorical classification of dialects based on multivariate analysis is utilized in Figure 2.7. The data is based on a large scale nationwide survey of regional differences by NHK, the Japan Broadcasting Corporation. Two items connected to dialects are treated here. Emotional and intellectual images were surveyed and prefectures are divided into similar four groups. Emotionally positive dialect image, represented in red letters, is high at both ends of the country and also in the central Osaka and Kyoto areas. This matches the ashtray model distribution quite well. Emotionally positive dialect image can be also regarded as parochialism in a positive sense, or local patriotism, love for one's hometown. Similarities can be found with Dennis Preston's key words of pleasantness and correctness in *Perceptual Dialectology*.⁶



Emotionally positive = both extremes of center and periphery

Figure 2.7. Dialect images of Japan in NHK survey

⁶ A recent special issue 2011 of the internet journal *Dialectologia* on "Production, perception and attitude" has collections of interesting papers on this topic; see: http://www.publicacions.ub.edu/revistes/dialectologiaSP2011/.

2.8. Preliminary Conclusions

Among the three factors above, 1: difference from standard, 2: number of tourists, and 3: emotionally positive dialect images, the last one or people's own dialect image best explains the overall geographical distribution.

However the second, tourist factor is also important, because small scale geographical locations of dialect signboards and dialect souvenirs match up with tourist spots in cities. This shows that dialect is connected with economic activities.

The more deep-rooted cause of this tendency of ashtray distribution might be a sense of difference or rivalry, or a kind of antagonism against the standard language and the Tokyo dialect. For this kind of analysis other data must be taken into consideration. We will move to the first linguistic factor of difference from standard in the next section.

3. Background: Language Standardization and New Dialect

In the third section of this paper, the deeper basic mechanisms of standardization in Japanese dialects will be reviewed. Dialect landscape is a reflection of language standardization, and is regarded as a sensor of standardization. There are ample concrete studies of language standardization in Japan. One is the Tsuruoka (and Yamazoe) standardization surveys repeated three times over the past several decades.⁷ A clear Sshaped curve of language diffusion was observed which extends back more than 100 years.

3.1. Language standardization

In Figure 3-1, the average of the mean values of each age group was plotted on a theoretical S-curve (Inoue, in press). The position of each survey was located at the corresponding value position on the S-curve as this technique aims at correspondence with the mean values of the age group. In order to make the correspondence with the

⁷ This Tsuruoka survey will be repeated in the autumn of 2011 and longitudinal surveys with a 60 year time span will appear soon.

year of survey easily understood, perpendicular lines using different shapes and thickness were drawn from the S-curve to the bottom line. Phonetic items are shown by solid lines and pitch accent is shown by dotted lines. Tsuruoka is shown with heavy lines and Yamazoe is shown with thin lines. In this graph, the year of the survey is a key element. This method allows us to see how the mean values have moved along an S-curve over the 40 actual years of the three (real time) surveys. The result as a whole conformed to the theoretical S-curve very well.

The time intervals on the graph of Figure 3.1 correspond closely with numerical values for the phonetic items and accent of the three surveys in Tsuruoka. A rise of almost 38% for both the phonetic items and accent was observed over the 40 years from the first survey to the third survey of Tsuruoka. The length in years on the horizontal axis corresponds with the 38% rise for phonetic items and accent. Language standardization seems to have advanced at the rate of 1% a year on average over the 40 years. When the increase of 40 years in Tsuruoka is moved along the S-curve and extended or extrapolated, 1% grows to 99% in a time span of a little less than 200 years. The whole process of a linguistic change in one community seems to take more than one hundred years. This time span is too long for an individual to experience in person, but is short enough for one to notice changes is in progress as generation differences.

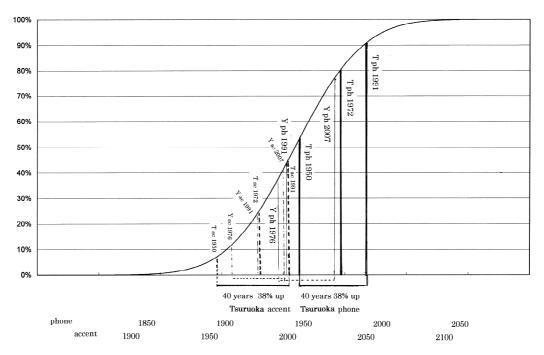


Figure 3.1. S-shaped curve in Tsuruoka and Yamazoe standardization surveys

3.2. S-shaped curve of language standardization

In the following section, the present transformation of language will be considered. The transformation will be treated (positioned) in language change in general.

In Figure 3.2 the relation of the S-shaped curve with consciousness of language deterioration is also shown with five circles on the top (Inoue 2011.1). This is a sociopsychological analysis of language change. When language change occurs and spreads, we find that the following five stages are followed.

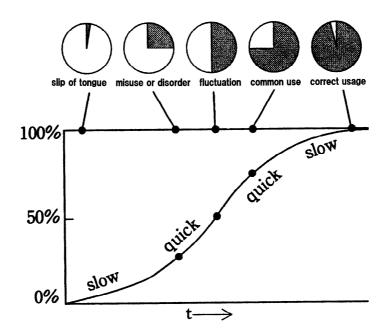


Figure 3.2 S-shaped curve of diffusion and the consciousness of language

- 1. At the stage when diffusion is very limited, the phenomenon in question is often (mis)interpreted as a "slip of tongue or a mistake in speaking".
- 2. When extending to about a quarter of the people, the phenomenon attracts people's attention and is criticized as "misuse" or "deterioration" of language.
- 3. When diffusing to about half the speakers, it is recognized as "fluctuation of usage".
- 4. When extending to about three quarters of people, it is accepted as "common use".

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5. When most people use it, it becomes "correct usage", and the old usage is referred to only for giving the authentic etymology.

This pattern can also be applied to language standardization or decline of dialect. When dialect use of the whole nation of Japan is considered, the present language situation has experienced a time of substantial change. The decline of dialect and the propagation of standard language have been pointed out before. Japanese dialect has now entered the "stability period". The recent dialect landscape is symptomatic of this trend. The values of the standard language and dialect have changed.

3.3. Language standardization and railway distance

Thus far, the time dimension of standardization has been discussed on the basis of an S-shaped curve. Next, the geographical dimension will be discussed. Geographical differences of degrees of standardization will better explain the ashtray model of dialect landscape.

The other (or the first) evidence for ashtray model of dialect landscape is the numerical data of nationwide standardization on the basis of the *Linguistic Atlas of Japan*. From this data, three historical stages of standardization can be distinguished (Inoue 2004, Inoue 2010.12b). First, language standardization progressed from the former capital Kyoto, and secondly, it disseminated from the new capital Tokyo in proportion to railway distance. Thirdly, nationwide standardization progressed quickly among junior high school students and almost no correlation can be found with railway distance. Railway distance between prefectures was taken into consideration. Figure 3.3 suggests that standardization is correlated with the distance from Kyoto or Tokyo. In short, the so-called geographical proximity effect is at work for dialectal distribution. Although there are various techniques for measuring geographical distance, railway distances were utilized here, calculating the distance between Kyoto station and the railway stations in other prefectures' capitals.

Many prefectures plotted nicely from the top right to the bottom left. This graph demonstrates that railway distances from Kyoto are a useful means of showing the clear correlation between geographical location and language standardization. The peak lies about 500 kilometers from Kyoto, i.e., around Tokyo. The overall pattern, when Okinawa and Hokkaido are excluded, shows that railway distances correlate with the degree of standardization of the dialects. At present, Kyoto does not represent the peak of language standardization, and the use of standard forms increases and decreases in line with the prefectures location relative to Tokyo.

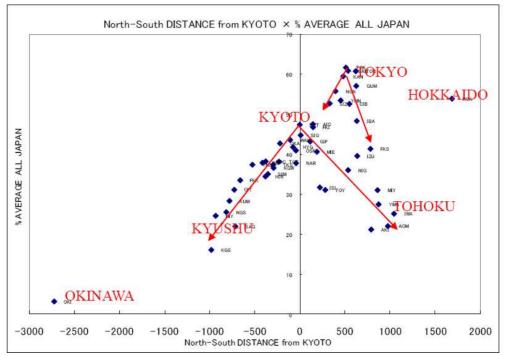


Figure 3.3. Nationwide standardization and railway distance

This interpretation introduces another idea: the standardization of language in Japan proceeded in two historical stages (Inoue 2008) as is also shown by arrows in Figure 3.3. The first stage was standardization out of Kyoto. It proceeded rather slowly, constituting a gently sloping mountain from the peak in Kyoto to the two peripheral areas of Japan in the east and the west. The second stage of standardization, out of Tokyo, appeared in the modern ages. This standardization seems to have progressed more quickly than the first, constructing a steep mountain on the eastern half of Japan. These two stages were ascertained by classifying the 82 words into two clusters. West cluster words showed Kyoto-centered diffusion and East cluster words showed Tokyo-centered diffusion (Inoue 2008).

In Figure 3.3, the three peaks of dialect souvenirs are marked in red letters. Old cultural center of KYOTO (and Osaka) and two peripheries of northern TOHOKU and southern KYUSHU can be distinguished, because areas with less dialect souvenirs lie

between the center and peripheries. Two peripheries of TOHOKU and west KYUSHU can be easily explained by greatness of differences from the standard. Dialects of Kyoto Osaka area are not as different as the surrounding areas. However, uniqueness of Kyoto Osaka dialects can be explained if we take account of higher degrees of dialect contact between the two (old and new) cultural centers. East and west dialect differences are great according to peoples' secular idea of dialects.

The second factor of dialect souvenirs, tourism should be taken into consideration here. According to government report of tourism, the number of tourists for prefectures is controlled by the prefectures of large population (around Tokyo and around Kyoto and Osaka). Both areas have large population and great economical power, leading to great traffic exchange which beautifully matches "gravity model" (Inoue 2010.12a) of geography. This dialect contact is the main reason of the dialect contrast consciousness between the two cultural centers Kyoto and Tokyo.

Interestingly enough, these degrees of standardization of prefectures show strong correlation with average income of residents of the prefectures though the graph is not shown here. This shows that areas of greater economical activity necessitate use of standard language, and that speakers of standard language can expect wider (better) chances of job selection.

Thus, the ashtray model of geographical distribution is influenced both by pure linguistic phenomena of dialect differences (differences from the standard) and non-linguistic phenomena of economy. In a word consciousness of contrast against the standard language (or Tokyo speech) may be the ultimate cause of emotional evaluation of dialects. This is concretely reflected in the number of dialect souvenirs observed. From the standpoint of economical development, the rival in the past Kyoto and Osaka area have positive evaluation of their dialects, and also the two peripheries Tohoku and Kyushu areas of extreme delay of economical development have positive evaluation of their dialects. As has been stated by Willem Grootaers (Inoue 2011.7), "geography reflects history or time reflects space".

Recently standardization progressed rapidly as shown in Figure 3.4. Nationwide Standardization among junior-high students shows no relation with railway distance.

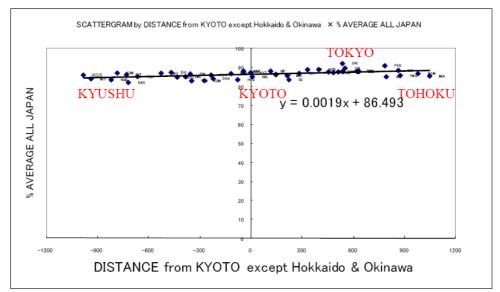


Figure 3.4. Nationwide standardization students data and railway distance

3.4. National standard and local standard

Looking at the changes which occurred in the 20th century, a major current (propagation of standard language and the decline of dialect) is conspicuous. However, other movements exist, too. One is "**regional standard** (local common) language", which had been noted in the past. This is a regionally limited version of standard language, different from "nationwide common language".

Figure 3.5 is a simplified model showing the transition of the dialect situation of Okinawa Prefecture (Inoue 2011.1). Figure 3.5 can be interpreted to show the overall pattern of dialect use in Japan. In the past dialect and mixed code was prevalent. And recently old, authentic dialects have disappeared and newer variety of dialect and standard Japanese have established.

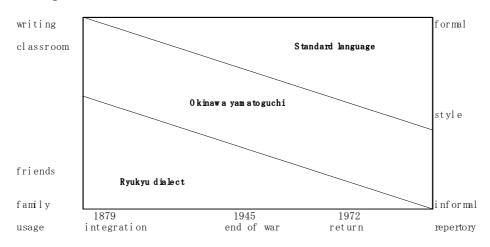


Figure 3.5. Language situation in Okinawa (former Ryukyu Kingdom)

3.5. New dialect and glottogram

New dialect forms, which are changes in the opposite direction from standardization, are still emerging in various areas in Japan including the capital Tokyo. New dialect can be considered to be language change in progress, and change from below.⁸ Thus Japanese dialects have not lost vitality yet.

The "gravity model" of geography has not been applied easily to dialectological phenomena (Chambers et al. 1980, Nerbonne et al. 2005, Inoue 2010.12a). However new dialect forms born in the countryside and adopted in Tokyo showed certain degree of correlation. Cultural center Osaka and Kyoto area showed close relation with (influence on) Tokyo speech, but periphery areas gave almost no influence on Tokyo speech. Thus major areas of dialect souvenirs act differently these days on Tokyo speech. New dialect thus shows that the ashtray model can be explained by several different factors.

The Glottogram is a technique developed in Japan, showing "Geography x age" in graph form (Inoue 2010.7). The horizontal axis shows age, younger generation shown on the left. The vertical axis shows geographical locations. Thus linguistic change in progress can be shown in one graph making use of apparent time. The spread of new dialectal expressions -BE 'let us' is shown in this glottogram of Figure 3.6. Darker portions indicate that a new form has been spreading both north and south from Fukushima prefecture over these several decades. The speed of diffusion is nearly 10km per year.

⁸ Dr Jack Chambers pointed out several lexical and phonetic changes in Canada, and Dr Jenny Nelson talked about Swedish examples in this congress.

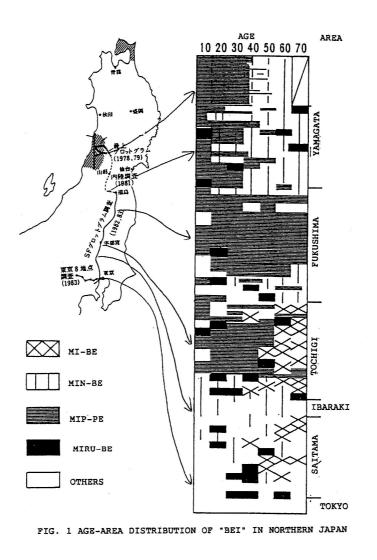


Figure 3.6. Contribution of Glottogram: Propagation of MIPPE

The spread of the same auxiliary verb -*BE* is observed in *Google insights*. The original area of -*BE* was eastern Japan, but people in large cities in western Japan began adopting this new expression. Recent trends of usage also show steady growth of usage of -*BE* as the blue line in the graph shows. -*BE* is adopted because it is simple to use, and because the sound is more impressive than the standard Japanese "-ou" [o:].



Figure 3.7. II BE in google insights: trends and distribution

One example of new dialect or non-standard expression was found to have been created more than one hundred years ago in many separate parts of Japan. The lengthened expression *nom-ereru* (for standard *nom-eru*, meaning 'can read') mainly spread to western Japan, and is now invading Tokyo (Inoue 2010.7). It is a typical new dialect expression. The speed of spread seems to be rather quick, being nearly 10 km per year.

3.6. The Umbrella model of New dialect

These historical movements of standardization and new dialect formation can be concisely shown by the "umbrella model" (Inoue 2010.7, 2010.12a, 2011.1).

4. Theory: Econolinguistic Basis of Dialect landscape

The theoretical background of dialect landscapes will also be discussed next. Landscape can work as a sensor of the linguistic situation. From pragmatic surveys of dialect landscape, it has been found that the principles of economics work on dialect use. Thus, the econolinguistics of dialect should be a fruitful study field in the future.

4.1. Econolinguistics of dialect landscape

The linguistic landscape can be a kind of sensor or measuring machine of the language situation of a country. The same is true for dialect landscapes. The linguistic landscape can be interpreted as a discourse, in a circular or spiral process. Figure 4.1 shows discourse between senders and receivers of linguistic landscape. As mentioned above, the sociolinguistic situation of language use can be confirmed by the visible data of the linguistic landscape. Data in linguistic landscape can be treated utilizing methodology of discourse analysis. As Figure 4.1 shows, basically language standardization regulates the language consciousness of people. Language consciousness can be detected through opinion polls. Language choice of senders determines linguistic landscape. Linguistic landscape gives influences to interpretation of receivers or general consumers. Interpretation of receivers forms language consciousness, and basically, economic principles control linguistic landscape.

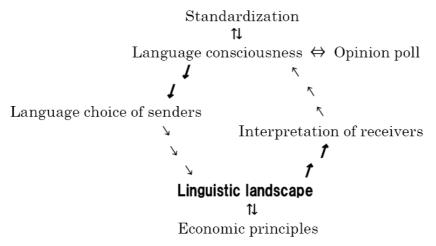


Figure 4.1. Discourse between senders and receivers of linguistic landscape

4.2. Contrastive study of dialect landscape

The background mechanism may be multifarious.⁹ The inevitable or usual route of language standardization or modernization of a national state may be at work,

- 1. Progress of language standardization is the key concept. Mutual intelligibility or understanding level of dialects may be different between languages or countries with big and small country size.
- 2. Tourism may also be influential to dialect landscape. Patriotism or parochialism of the speakers differs as to the analysis of Japan as the ashtray model has shown. Interests of tourists on dialect may also be different as to areas.
- 3. Economy may be the ultimate factor. The dialect industry is a venture business but not as lucrative.
- 4. Social positions of dialects may be different among countries. Prohibitions of the showing of domestic diversity may be at work, like the prewar Japanese Empire.
- 5. Restriction of dialect notation may also work. In Chinese ideographs dialectal pronunciation is hard to show.

Linguistic landscape and dialect landscape are becoming something of a trend in Japan.¹⁰ International comparisons seem to be interesting. As far as I know, dialect souvenirs are found in many European countries¹¹ and in the US. Dialect shop names and dialect signboards have also been reported in Korea. But to identify that some words are dialectal, one must be fluent enough in the language in question, so cooperation with other researchers is essential.

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⁹ This paper is intended as an integration of theories and models which have been proposed independently.

¹⁰ Dr Daniel Long also read a paper on this topic.

¹¹ Dr Julie Auger has collected similar data of dialect landscape of Picard dialects in France. French dialects seem to have already reached the last stage of language standardization.

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 ¹² * Most of the papers in English by INOUE are now accessible on the internet site, and freely printable: Search by keywords of "Inoue, English papers".
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