

Modernization, Industrialization and Regional Change in Japan

- A Case of a Coal Mining Region:
Panopticonization towards Space and Society in Modern Japan -

The 2nd International Critical Geography Conference at Taegu

Aug.9-13, 2000

Kenji TSUTSUMI

Institute of Human Geography, Graduate School of Letters, Osaka University
Machikaneyama-machi 1-5, Toyonaka city, Osaka prefecture, 560-8532 JAPAN

TEL: +81 6 6850 5136(direct), FAX: +81 6 6850 5131(for common use)

E-mail: tsutsumi@let.osaka-u.ac.jp

Contents

- I. Introduction
- II. Policy of the Meiji government and industrialization in the modern era in Japan
- III. Panopticonization towards space and society
- IV. Takashima : society and space there
- V. Uneven changes in spatial integration
- VI. Conclusion

Abstract

Japan has attained exceptionally rapid modernization under very strong centralization since 1868. Through the process spaces had been integrated under “panopticonization” of them. In the industrialization coal mining has taken a very important role to lead the modernization. In coal mining regions there formed unique society (*Gemeinschaftliches Gesellschaft*) and strong labour unions had been typified by their activities. But petroleum and cheaper imported coal have pushed domestic coal away from a resource market especially since 1960's. The national government has executed some policies such as “Scrap and Build Policy,” to/for domestic coal mines and now there are only two coal mines

left in Japan. We've seen great deal of out-migration and thorough decay of regional socio-economy in such regions. The policies for the regions' revitalization haven't always gone well. Some of the regions experienced lethal decline. In 2001, important acts for such regions will be lost the effects under these days of lower economic growth. The spatial and socio-economic changes in such regions, *Takashima* for example, would show us ultimate model of rapid modernization and decay in Japan.

Key words: modernization, Japan, nation state, panopticonization of space, spatial integration, coal mining industry, Takashima in Nagasaki prefecture, the Miike Strike

*Here figures and tables are omitted, but they will be shown at the appointed presentation time.

I. Introduction

Japan had started its modern era in 1868, at the Meiji Restoration, and the modernization in Japan had been rapidly proceeded by propping-up of the Meiji government with incredible speed. The national government had promoted industrialization, militarization, creation of traffic and urban infrastructures, preparation of educational, institutional and assembly systems, and also bureaucracy, from the Meiji through the *Taisho* era. And then the former 300 feudal spaces had been integrated into one space of the nation state of Japan. Under the piled several institutions through, as it were, "the *panopticonized*" space, people had been watched as members or agents of one modern nation, *the Empire of Great Japan*.

Among the modern industries we can refer to coal mining as one typical example that the nation state had strongly committed and taken an active hand to. In *Takashima*, *Nagasaki* prefecture, there can be seen formation of "*Gemeinschaftliches Gesellschaft*" which is usually peculiar to modern coal mining society, coupled with *Takashima*'s own geographical location as a peripheral island, that results to be drastically depopulated nowadays (**Fig.1**). There had been several controls through the eras of modern imperialism, modern capitalism and global capitalism. In addition, through mutual checks among social strata, modern institution of "*Naya*," intermediary exploitation system managed some local bosses with lodgings, and afterwards through that of "*Tsume-sho*," of coal mining company, by which the daily life of people there had been watched diversely. The watch-system like

as *panopticon* had, partly, a character of a system of mutual aids at once there. It is ironical that in the modernization process such pre-modern-like "*Gemeinschaftlich*" character of a local society, mutual aids and watching system, has lingered in a coal-mining region until the present days.

At this presentation in succession after the three opportunities at the International Comparative Study of Coalminers (Toronto Univ., 1996), at the Inaugural International Conference of Critical Geography (Vancouver, 1997), and at the East Asia Regional Conference in Alternative Geography (Taegu Univ., 1999), I'd focus on spatial situation of modernization in Japan with the example of *Takashima* to consider about coal mining industry and character of the regional society.

II. Policy of the Meiji government and industrialization in the modern era in Japan

The feudal age of Japan had been ended in 1868, with the Meiji Restoration. The reign of *Tokugawa Shogun* (the Yedo era: 1603-1868) closed its history of about for 270 years. During the Yedo era Japan was divided into about 300 small countries. Since the Meiji Restoration, the national government had promoted political centralization and industrial modernization. The many fragmented spaces about 300 had integrated into one nation space in a political and economic meaning. As for industrial modernization, I once referred to that of tea industry through local, regional, national and global levels, with example of Yame region, Kyushu , Japan (Tsutsumi, 1996a. **Fig.2**). The national government also thought much of education. Through these policies of modernization, the nation state of Japan, or its image, had been formed.

But since the middle of the Meiji era (1868-1912), Japan had been to a modern military state. Especially through the Taisho era (1912-1926) and the early one-third of the Showa era (1926-1989), the militarization of Japan had got stronger. The tendency had been sustained with armed invasion by Japan to the foreign, especially, Asian countries.

The modernization of Japan before WWII can be thought as the history of industrialization and militarization. After very serious armed attack, Japan was defeated and occupied by the allied forces in 1945. Many heavy industrial regions had been bombed by the US Air Force; industrial facilities must be re-constructed newly upon the ruins. But in 1950, the Korean War has occurred, and then emergency demands had generated due to the outbreak of the war, which brought the post-war economic rehabilitation and revitalization to Japan.

After that, particularly since around 1960's, Japan had experienced high economic growth. As symbols of its growth, we often refer to the Tokyo Olympic Games and the opening to business of *Shinkansen* (the super-express) in 1964. But just through this age, depopulated regions and over-populated regions have emerged all around Japan. Migrants from rural regions have flowed into cities, changing rural labour force into industrial one in urban regions.

As for depopulated regions, especially rural regions, mountain villages, fishery villages and coal mining regions, where traditionally natural environment and resources have been used for daily subsistence or industry, and where through such tradition social ties had been created and reproduced, have been experienced drastic out-migration and decline of regional social and economic functions.

In another words, the high economic growth of post-war Japan could be possible just only by the formation of depopulated and overpopulated regions, then also by the uneven development.

III. Panopticonization towards space and society

As is well known, the "*panopticon*" has treated by Foucault (1995. originally 1975), after Bentham had referred to it as one of the modern system. In recent days, Hannah (1997) analysed the "*panopticism*" to consider the relationship between power and individuals under the control.

Here I use the word "*panopticonization*" to analyse the modern power and its control over the industry and through spaces in Japan, especially taking one example of coal mining small society. That is, the Meiji government had researched, integrated and controlled the national land of Japan with their strong power, and the tasks must be attained in a short time, so they must consider the national space under the watching and controlling system like *panopticon*. It is one of the schemes that modern power structure and system required. And such *panopticonization* has been seen in coal mining small society even until recent days, and that is critical point here.

The coal mining small society in Japan was one of the modern heritages that have survived partly until now. In that sense the character of such society is unique one, because as Japanese famous sociologist, Yasuma Takata (1922) has once suggested, the more *Gesellschaft* proceeds to emerge, the less *Gemeinschaft* goes on through the modernization process in Japan.

In addition, taking an example of coal mining society is interesting to analyse the

modernity within the era called “*postmodern*.” Such coal mining small society has been situated just under the powerful control and aids by the national government, locating especially peripheral areas, being sustained by the nation’s resource management and insurance policies. But after all the industry of coal mining has been declined onto its silent death under the severe international competition and global economy, because the imported coal costs only one-third of the domestic ones. In another words, coal mining industry and its society have been postponed their life spans towards recent days. Then for these reasons, here I observe and analyse such *panopticonized situation* in coal mining small society to show and think about the modernity in the present days. For concrete example of it we can see *Takashima*.

IV. *Takashima* : society and space there

1 . Coal mining industry in *Takashima*

Takashima locates in *Nagasaki* prefecture, about 15km southwest from the *Nagasaki* Harbour, *Nagasaki* city (**Fig.3**). *Takashima* as a town consists of four islands, but only one island "*Takashima*" is inhabited by about one thousand people. The island is very small to have a big industry; it has a size of only 6.4km around and the town area is only 1.27 square km, which is the smallest figure in Japanese municipality. In 1995 (March), the population counted to 1,100 with 606 households. The population per a household is 1.83, and then the figure is also *the smallest* in all the Japanese towns. But this town has a record of *the most densely inhabited town* in Japan, for example, in 1960's through 1970's.

After the Meiji Restoration (1868), which means the end of feudal age in Japan, the first case that machines were introduced into digging process at coal mining in this country was just at *Takashima* coal mine, where a feudal landlord Nabeshima and a Scottish merchant Thomas Glover co-operated the coal mine. Afterwards in 1881, the *Takashima* coal mine fell into Yataro Iwasaki, who has established the Mitsubishi Financial Group, so we can find the origin of the present biggest financial clique (“*Zaibatsu*”) in Japan there at *Takashima*. In another words, the Mitsubishi was born just at *Takashima*. Then more than for one century, the coal mine at *Takashima* had been under the control by the Mitsubishi till 1986 when the mine was closed.

It has been said that two coal mines, *Miike* and *Takashima*, was best ones in the industrial meaning, so they were recognized as the "Build Mines" which the National Government had planned to support politically and economically for a long time (**Fig.4**. Yada, 1975, 1981, 1994). But then, the two mines were shut down within the last stage for

the national coal mining policy (Takashima, in 1986; Miike in 1997). And there are only two coal mines present in Japan, Ikeshima in Nagasaki prefecture and Taiheiyo in Hokkaido (**Fig.5**). At its peak, Takashima records more than 1.2 million tons/a year of coal production (1965), but under the severe condition around the coal mining in Japan (The Energy Revolution for petroleum and importing cheaper coal), its production had reduced even to a little more than 0.3 million tons/a year in the last year of its running in 1986(**Fig.6**).

2. Regional characteristics of Takashima

Takashima has been called "a region of one island, one town and one company," because its population is consisted of the residents in an isolated island (Takashima island) forming one town, and the town has been a company town (in Japan we express it "*company castle town*").

Often people said that there were three headmen in Takashima, that is, the headman of Takashima town, the director of the Takashima Division of the Mitsubishi Coal-mining Company, and the executive leader of the Labourers' Union of the coal miners at the Takashima Division of the Mitsubishi. So, there were three power poles in Takashima. This situation was caused because of the characteristic of Takashima, the extreme company town controlled by only one company, the Mitsubishi.

As is often the case with coal mining region, there was a typical society in Takashima. There were three hierarchically-structured classes; "*Shokuin*"(white-collared workers), "*Koin*"or "*Honko*"(normally employed coal miners), and "*Kumifu*" (subcontracted coal miners). They lived apart from the other classes (spatial segregation), and socio-economic differentiations were very clear among the classes; in housing, salary etc.

Most of the "*Koin*" lived in company apartment houses with two rooms (9 square meters each) and small kitchen. There was no bath room in such a company apartment house, so they co-used the public bath house offered by the company. Through such a bath system and intimate intercourse among neighbourhood, there networks of information and rumour had been formed locally. *Gemeinschaftliches Gesellschaft* had been formed in coal mining region generally, and *Takashima* also was not the exception.

As for the watching system in coal mining regions, during the pre-modern era through a part of the modern era in Japan, there were many bond labours pens called "*Naya*". The bosses of "*Naya*" had collected coal miners and forced them under severer labouring conditions. *Takashima* was not the exception. In the early Meiji era, there were special prison for digging coal in Hokkaido and Miike, called "*Shu-chi-kan*," although they had been abolished soon. And just during the W.W.II, the national government of Japan forced Chinese and Korean people to compulsory labour at domestic coal mines, construction of

dams and roads, or production of weapons in Japan. So, the labour system in the modern era in coal mines was deeply related to exploitation, constraint and severe control to miners. That is, the Japanese coal mining society has had a history which related to *panopticonization* of the small society by power and industrial capitalism through the times.

After the W.W.II, there established the system of guardhouses in each small area in coal mining regions called "*Tsume-sho*." In *Takashima* the members of "*Tsume-sho*" often checked labouring or health conditions of miners, even living condition of them. The members of the "*Tsume-sho*" sometimes took a role of policemen, so they say that there were almost no task for the real policemen in *Takashima*.

Yamamoto (1991) referred to the characteristics of sub-culture of coal miners. He points out seven items on them as below.

- 1.pride in daredevil job
- 2.strong friendship to colleagues
- 3.self-identity to a dandy
- 4.tendency to conspicuous consumption
- 5.everyday dependency on drinking
- 6.familial and marital complexity
- 7.antagonism against the intellectuals

I cannot accept all of the items as typical characteristics of coal-miners, but I can think that most of the items were typical for some people among "*Kumifu*" class. Yamamoto referred such items as above because he intended to clarify the characteristics of coal-miners through the comparison with those of white-collared salary men. In another words, Yamamoto would compare the sub-culture of coal-miners with that of salary men.

3. Out-migration and regional changes in *Takashima*

According to the National Population Census of Japan whose researches have been executed almost every five years since 1920 to now on, the population of *Takashima* town has recorded its peak in 1960 at the census level (20,938). Since after 1960's, its population has been reduced mostly because of rationalization and restructuring of *Takashima* coal mine. Just before the shutting down of the coal mine in 1986, there were about 6,000 people in *Takashima*. But by the shutting down many people had lost their jobs and forced to seek new jobs to live new lives out of the town. Then now the population of *Takashima* became down to about 1,100 or so. That is, in March 1995, there were 1,110 people and 606 households. Originally *Takashima* is the narrowest self-governing body in Japan (1.27 square km), but also the population per one household is also the smallest in the Japanese towns (1.8). Then *Takashima* attained the most drastic depopulation in Japan

(-95.1%/1960-1995). From these statistics, we can see the drastic depopulation and out-migration from Takashima after the shutting down of the coal mine (**Fig.7, Fig.8**).

At the shutting down of the Takashima coal mine (Nov.27, 1986), we organized studying group at Nagasaki prefecture. The majors of the members consisted of hygienic, geography, anthropology, financial policy and so on. Among them my task has been to analyse the migration from Takashima. The data of migrants from Takashima became to huge volume, so I have been analysing them even now. Then here at the present, I can refer only to the outline of migration from Takashima. The characteristics of the migration can be listed as below.

1. The migrants going to three big city areas (Tokyo, Osaka, Nagoya) were not so many, but about 91% of them (1,947/2,140) went out to within the Kyushu Island.
2. More of the migrants originally had come to Takashima from peripheral regions and many of them, after the shutting down of the coal mine, went out to such peripheral regions than the case of the other usual migration in Japan.
3. Among the "*Shokuin*"(white-collared workers), "*Koin*"(normally employed coal miners), and "*Kumifu*"(subcontracted coal miners), there could be seen differentiation of migration; "*Shokuin*" and their family tended to go to bigger cities, because the "*Shokuin*" did not lose their jobs at the shutting down of the mine, but only transferred to the related companies of the *Mitsubishi*. All of the "*Koin*," however, lost their jobs, then they must go out of *Takashima* almost to seek their new jobs or to have training for new jobs (to get driver's license or so). And the "*Kumifu*" class has experienced the shutting down under the severest condition; some of them could not get the special money for losing jobs that were usually offered by the *Mitsubishi* for "*Koin*" class.

As referred above, there occurred characteristic migration flows from Takashima. Especially by sudden shutting down of the coal mine which attacked a unique regional community of coal miners ("*Gemeinschaftliches Gesellschaft*"), unique migration as such had occurred, so we can see the unique characteristics of Takashima by analysing the migration flow (Tsutsumi, 1991).

The drastic depopulation generated more and more depopulation. Not only coal miners and their family but also people ran or worked at shops had to close their shops and must go out of the island, because population in Takashima reduced under the level of the threshold population of sustaining the shops. Also the financial conditions of the town became worse and worse; the tax income from the company of the *Mitsubishi* drastically reduced; huge volume of migration more than imagined had occurred. Regional functions have been decayed and a vicious circle of structural depopulation has generated to move

("Depopulation brings more depopulation"; Kamino, 1970). Then without the exception, also in the case of Takashima, regional deprivation of functions for social and economic life has occurred. The hospital, elementary school and junior high school which were run by town have reduced their scale, and the Takashima High School run by Nagasaki prefecture had abolished.

It has been one of the biggest tasks or wishes for Takashima to create new working places there. At the early time just after the shutting down, the town office established a company of flatfish breeding as a tertiary sector. But a typhoon attacked its facilities and all the flatfish escaped from it, so they must have given up the new enterprise. Afterwards, tomato breeding company was established, but now its running is reduced. And one company dealing with miscellaneous goods and bedclothes came into Takashima, but it had to pull back because of operation in the red figures.

After the age of the "boom town" has gone, people there must recognize that Takashima is an isolated island where there are no other economically useful resources except coal. Then it has been difficult to generate new working places in Takashima.

4. Remained problems of Takashima

Through the Takashima study, we recognized some points or critical tasks for us as below.

1. From the standpoint of security of energy holding, and from that of remaining the technology and technique for mine digging, it is pity to shut down coal mines in Japan (in 1997, April, there are only two coal mines in Japan).
2. We must think about regional revitalization or redevelopment not only by attracting new companies but also by renewal and reactivation of regional functions which cover living functions of daily life.
3. Policy for the unemployed and old people has become more and more important for the town, in order to avoid more depopulation from there. The treatment against financial conditions which has been becoming worse must make its base upon both industrial policy to attract a new companies and policy for the severe population problems.

V. Uneven changes in spatial integration

Several activities such as economic, political, social and cultural ones, develop differently in spaces. Spatially looking, economic activities tend to proceed widely or

borderlessly. But cultural activities especially local ones are enclosed to narrower local spaces. We can see it easier when we think about in the narrower scales (not so global but regional or local scales) where economic, political, social and cultural activities develop. That is, there is a spatial order by the four kinds of activities within piled different spaces. In fact, the idea of these spaces has relationships to AGIL scheme by Talcott Parsons.

Most of the depopulated regions in Japan have their cultural roots upon local environment like Takashima. Then social ties in communities there are stronger (*Gemeinschaftlich*). But in this country after 1960's of the high economic growth, economic spatial integration has proceeded. Economically, spaces have been integrated into wider space through centralized function system of Japan. The trends of global economy make many effects upon main industry in peripheral regions; mining, agriculture, forestry, fishery. But in the case of local cultural space, such spatial integration has not occurred easily: within such space, spatial integration or spatial "averaging" must face to resistance against changing. That is, although spatial integration by economic activities tends to proceed, movement onto local culture would experience resistance against changing or integration into wider space. So Takashima is a unique and typical case from a standpoint of the view.

VI. Conclusion

We've seen great deal of out-migration and thorough decay of regional socio-economy in coal mining regions. The policies for the regions' revitalization haven't always gone well. Some of the regions experienced lethal decline like in Takashima. In 2001, important acts for such regions will be lost the effects under these days of lower economic growth. The spatial and socio-economic changes in such regions, Takashima for example, would show us ultimate model of rapid modernization and decay under centralization and panopticonization by powers over spaces in Japan as a miniature or an epitome of modern capitalism of exploitation and estrangement.

REFERENCES

Remarks: (E)written in English, (J)written in Japanese

Agency for Natural Resources and Energy, Department of Coal.(ed.) (1994) *Coal*

note : 1994, Shigen Sangyo Shimbunsha, Tokyo, 632pp. (J).

Foucault, Michel (1995, trans. by Alan Sheridan), *Discipline and punish : the birth of the prison*, Vintage Books, New York, 333pp (E).

Hannah, Matthew. (1997), "Imperfect panopticism : envisioning the construction of normal lives," in Benko, George and Strohmayer, Ulf (eds.) *Space & social theory : interpreting modernity and postmodernity*, Blackwell Publishers, Oxford, pp.344-359 (ch.15), (E).

Kamino, Shinji. (1970), "Kaso mondai to shitenno sanson mondai (The problems on mountain villages as ones on depopulation), *Ringyo Keizai (The Forestry Economics in Japan)*, 264, pp.7-20, (J).

Takata, Yasuma. (1922, revised version). *Shakaigaku gairon (The outline of sociology)*, Iwanami Shoten, Tokyo, 540pp. (J).

Tsutsumi, Kenji.(1991), "Tanko heizan ni tomonau Takashima-cho kara no jinko ido(The out-migration from Takashima town caused by the shutting down of coal mine," in Takashima-cho Chiiki Hoken Kenkyu-kai (The Studying Group for Regional Hygiene in Takashima Town) ed., "*anko heizan no shima kara mananda koto: Nagasaki-ken Takashima ni okeru gakusaiteki chiiki kenkyu no kokoromi* (Studied from an island where a coal mine was shut down: a trial for interdisciplinary regional study in Takashima, Nagasaki prefecture, Showa-do Insatsu, Nagasaki, pp.227-246, (J).

Tsutsumi, Kenji.(1995), "Regional identity in Japanese centralism," in Fluechter, Winfried (ed.), *Japan and Central Europe restructuring: geographical aspects of socio-economic, urban and regional development*, Verlag Harrassowitz (Wiesbaden), pp.240-250, (E).

Tsutsumi, Kenji.(1996a), "Industrialization in a peripheral region at modern Japan: a case of tea industry in Yame region, Fukuoka prefecture", in Nozawa, Hideki ed., *Social theory and geographical thought: Japanese contributions to the history of geographical thought*(6), Institute of geography, faculty of letters, Kyushu University (Fukuoka), pp.7-10, (E).

Tsutsumi, Kenji (1996b), "Depopulated regions in Japan: a model on social change in peripheral regions", in Kobayashi, Kiyoshi and Kita, Yoshiyuki eds., *Exploring sustainability: proceedings of the International Symposium on the Future of Small Society in a Dynamic Economy*, Regional Planning Research Group, Tottori, pp.251-259, (E).

Yada, Toshifumi (1975), *Sengo Nippon no sekitan sangyo : sono hokai to shigen no hoki (The coal mining industry of Japan after WWII : its collapse and the abandon of coal resource)*, Shin Hyoron, Tokyo, 285pp. (J).

Yada, Toshifumi (1981), "The abandonment and renovation of coal reserves in Japan," in *The roles of geosciences in development* (Proceedings of the United Nations University-the Tokyo Geographical Society Joint Symposium, Tokyo, pp.98-106 (E).

Yada, Toshifumi (1994), "The industrial adjustment and regional policy in the case of Japan's coal industry, *Annals of the Society for Industrial studies, Japan* 10, pp.89-90 (Summary), (E).

Yamamoto, Yuji (1991), "Takashima tanko shakai ni miru "tanko bunka" to "inshu izon-sei" (The sub-culture of coal mine and dependency on alcohol in *Takashima* coal mine community)," in Takashima-cho Chiiki Hoken Kenkyu-kai (The Studying Group for Regional Hygiene in *Takashima* Town) ed., *Tanko heizan no shima kara mananda koto: Nagasaki-ken Takashima ni okeru gakusaiteki chiiki kenkyu no kokoromi(Studied from an island where a coal mine was shut down: a trial for interdisciplinary regional study in Takashima, Nagasaki prefecture)*, Showa-do Insatsu, Nagasaki, pp.17-72 (J).