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Antinuclear Energy Movements in Germany and Japan: A Comparative Analysis of Protest against Disposal of Nuclear Waste*

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Abstract

This study seeks to provide a comparative analysis of antinuclear energy movements in particular against a final disposal site for high-level radioactive waste in Germany and Japan. Three major paradigms of social movement research, resource mobilization, framing and political opportunity structure, supplemented by analyzing their political systems and backgrounds, will be discussed. Why are the degrees of mobilization of antinuclear energy movement extremely different from each other, while there are not so many distinctions between results of their activity?

Keywords : antinuclear energy movement, final disposal site, paradigms of social movement research, Gorleben, Toyo town

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1 Introduction

The final disposal of radioactive waste is one of the biggest problems of humankind. Despite it's importance, until now there has been no place for disposing of nuclear waste on the earth. The construction of a final disposal site has been started only in Finland¹⁾. Permission for the construction of the final disposal site was applied for in the United States on June 3, 2008²⁾. Also, there are no decided plans for the final disposal sites in Germany and Japan. However, in Germany, it was decided by the German Parliament that one or several locations for the disposal of nuclear waste should be found at latest by the year 2010. In the case of Japan, locations for final disposal sites must have been already chosen³⁾. Since Japan promotes nuclear energy, suitable measures for the disposal of nuclear waste is an urgent problem for both states.

In both countries, there were protests against using a location for a final disposal site. The following is a brief summary of the protests. The resistance campaign brought by hundreds of people occurred when the major of the Kochi Prefecture Toyo town in Japan applied for a possible site for the disposal of radioactive waste in January 2007. There were also protests in Germany against a decision to transport high-radioactive nuclear waste from the French recycling plant in La Hague. The difference between the resistance in Germany and Japan was that the German protests included about 16,000 people as opposed to a few hundred in Japan. So far, the total number of protesters has been several thousand to about 20,000 that have opposed the transportation or nuclear waste to Gorleben, Germany.

The previously described difference raises some questions. Why are the degrees of mobilization of antinuclear energy movement in these cases different from each other while there are not so many distinctions between results of their activity in the two countries? Why is enormous mobilization of antinuclear energy movements in Germany possible, while mobilization is so much smaller in Japan? And despite this difference in the amount of resistance mobilization, the outcomes of both resistance movements are very similar. How can we explain this similarity of outcome?

To answer these questions, I would like to analyze both countries with the three major paradigms of social movement research, namely resource mobilization, framing, and the political opportunity structure. However, these approaches are not enough to answer the question mentioned above, so they will be supplemented by comparing and analyzing political systems of the two countries in detail. Before going to the main subject, I will briefly describe the nuclear policy in both countries.

Grunwald, Armin/Hocke, Peter, 2006: Die Endlagerung nuklearer Abfälle als ungelöstes Problem. in: Grunwald, Armin/Hocke, Peter (Hrsg.). Wohin mit dem radioaktiven Abfall? Perspektiven für eine sozialwissenschaftliche Endlagerforschung. Berlin, 12.

²⁾ Asahi Shimbun, June 4, 2008.

³⁾ Ibid., June 13, 2008.

2. Nuclear energy policy

Similarities between Germany and Japan are found comparatively easily if one looks at the latest history, e.g. the fascism before 1945, the defeat at the Second World War, and the "Progressive industrialization" and "Democratization" after the war⁴⁾. What kind of nuclear energy policy did these defeated nations of World War II follow in the way of democratization, respectively? I would like to list similarities and differences between them below.

First, I would like to mention similarities. Both nations had the same starting point of nuclear energy politics, in 1952 in Japan and in 1955, the Federal Republic of Germany. They both promoted nuclear energy after the oil crisis and had intense controversy regarding the use. The two coutries faced the problems of disposal of nuclear waste, climate change, and had to consider the economic factors of advancing nuclear energy. Because these two countries were defeated countries of World War II, the research for nuclear power in postwar days was prohibited by the union countries. The sanctions on research for nuclear power of Japan was lifted with the peace treaty in April, 1952⁵⁾. The atomic research began in the Federal Republic at the same time as the peace treaty came into effect in May, 1955⁶⁾. Following it, in order to purposely promote nuclear energy the ministry of nuclear research was established with Franz Josef in October, 1955⁷⁾.

The origin of the nuclear power technology is in military development, uranium enrichment, and the reprocessing for the nuclear weapon manufacturing. In 1955, Britain and the Soviet Union used the uranium-enrichment technology for the purpose of a non peaceful but military use⁸⁾. It was after 1962 that France established facilities only for military purpose. The military application and the peaceful use of the nuclear technology are different uses of the same technology⁹⁾. At the beginning, atomic energy was regarded as cheap and unlimited energy and therefore, created a euphoria and the thought of a new "golden age" of cheap unlimited energy arose¹⁰⁾. Although some regional occasional resistance activities occurred in the 1950's and the 60's in Federal Republik, they did not attract much attention¹¹⁾. Large-scale resistance was caused for the first time in the 1970's.

⁴⁾ Derichs, Claudia, 1998: Soziale Bewegungen in Japan der Nachkriegszeit. in: Derichs, Claudia/Osiander, Anja (Hrsg.). Soziale Bewegungen in Japan. Hamburg, 36.

Yoshioka, Hitoshi, 1999: Genshiryoku no Shakaishi- Sono Nihonteki Tenkai (Social History of Nuclear Energy- Its Japanese Development). Tokyo, 57.

⁶⁾ Tiggemann, Anselm, 2004: Die "Achillesferse" der Kernenergie in Deutschlan.: Zur Kernenergiekontroverse und Geschichte der Entsorgung von den Anfängen bis Gorleben 1955 bis 1985. Nürnberg, 50.

⁷⁾ Ebd.; Radkau, Joachim, 1983: Aufstieg und Krise der deutschen Atomwirtschaft 1945 - 1975 : verdrängte Alternativen in der Kerntechnik und der Ursprung der nuklearen Kontroverse. Reinbek, 137f.

⁸⁾ Müller, Wolfgang D., 1990: Geschichte der Kernenergie in der Bundesrepublik Deutschland. Stuttgart, 489-493.

⁹⁾ Shimoyama, Syunji, 1976: Genschiryoku (Nuclear Energy), in: Yamamoto, Soji/ Shiono, Hiroshi/ Okudaira, Yasuhiro/ Shimoyama, Syunji, Mirai Shakai to Ho (Future Society and Law). Tokyo, 418. Schelb, Udo (Hrsg.),1988: Reaktoren und Raketen. Köln.

¹⁰⁾ Boyer, Paul S.: 1985: By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age. New York.

¹¹⁾ Kitschelt, Herbert, 1980: Kernenergiepolitik : Arena eines gesellschaftlichen Konflikts. Frankfurt/Main. u.a., 69ff.

Secondly, I will continue with the differences between Japan and Germany. Japan promotes nuclear energy and has 55 nuclear reactors, while Germany has 17. In Germany, the Red-Green government reached an agreement in June 2000 with power companies for phasing out all nuclear power stations. Since then, 2 nuclear plants were shut down. While a great difference is not seen in the percentage of the total energy produced in each country, it should noted that 2 new nuclear reactors have been planned in Japan.

Table 1 nuclear power reactors

	Germany	Japan
nuclear reactor May 2008	17	55
Nuclear Electricity Generation 2007billion kWh	133.2	267
% e	26	27.5
Reactors Planned May 2008	0	2

Source : World Nuclear Association http://www.world-nuclear.org/info/reactors.html (01/08/2008)

The strengths of the controversy on nuclear power in both societies are also different¹²⁾. Conflict of opinions about nuclear energy in Germany has been continued for an extremely long period¹³⁾, while there are little public controversies in Japan. Although the agreement for phasing out nuclear energy was decided upon in Germany, opinion about nuclear energy became divided between the political parties, especially between the Christian-Democrats (CDU/CSU) and the Social Democrats (SPD). Because the opinions about phasing out nuclear power in the CDU/CSU and the SPD have not come to terms, the agreement by the former administration, the Red-Green government, in 2000 has continued for the present. The CDU/CSU and Liberals (FDP) profess however that they want to advance nuclear power and have scheduled to bring this issue into the federal electoral campaign. Federal Environment Minister Sigmar Gabriel (SPD), Green Party, and the Left (Die Linke), are of the opposite opinion¹⁴⁾. Regular demonstrations by many students opposed to nuclear power are characteristic in Germany. There is not so great and regular movement like this in Japan.

To better understand the anti-nuclear movements in both countries, I would like to describe the development of the nuclear power energy policy. The nuclear power energy began to be promoted and

¹²⁾ Uekötter, Frank, 2009: Vorwort für die japanische Ausgabe (Ergänzungen für den Band "Umweltgeschichte im 19. und 20. Jahrhundert" der Oldenbourg-Lehrbuchreihe "Enzyklopädie Deutscher Geschichte"), Manuscript yet to be published München.

¹³⁾ cf. Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, 2007: Streitfall Kernenergie. Berlin.

^{14) &}quot;Signal für den Wahlkampf", in: taz, November 10, 2008.

the problem of the nuclear waste surfaced especially after the oil crisis of the autumn of 1973 in the Federal Republic. There has been optimistic assumption that man could solve the problem of nuclear waste and that nuclear waste could be exported in case of an emergency¹⁵⁾. Especially since 1977, the protest against disposal of nuclear waste has been repeated in Gorleben. At that time Gorleben was located in the periphery of the Federal Republic. Lower Saxony's Prime Minister, Ernst Albrecht (CDU), nominated Gorleben as a possible place for the construction of a nuclear waste disposal center (NEZ) on February 22, 1977. The location of this planned final disposal facilities concentrated on Lower Saxony, because of the presence of many big, comparatively steady salt domes¹⁶⁾. Gorleben is located in Lüchow-Dannenberg which is quite a remote place in Germany where population density is low¹⁷⁾.

Several thousand people protested every time the waste was transported, from the nuclear fuel reprocessing plant in La Hague in France to Germany. The radioactive waste with high radiation levels, classified as the high-level nuclear waste, is turned out in the process of this reprocessing. This high-level nuclear waste is encased in glass in order to keep it inert for hundreds of years, and transported to Germany - the so called Castor transport. The dispute concerning the Castor transports has resulted the revival of the antinuclear movement since 1994¹⁸⁾.

The current final disposal plan "failed substantially¹⁹⁾" and the following agreements were come to by the Red-Green coalition and Electric Power-related Industry on June 14, 2000. "The investigation of the salt dome in Gorleben would be discontinued from three to ten years because of clarification of the problem in the plan and the safety technology²⁰⁾". After July 1, 2005, all radioactive waste must be sent for direct disposal and all reprocessing must be halted.

In Gorleben, there are provisional disposal sites for low and middle level radioactive waste and a facility for keeping the high-activity waste from the factory in La Hague in France and the Sellafield in Britain. The citizens have been afraid that Castor transports would promote the decision of Gorleben as a final disposal site. The controversies over nuclear power have not been discontinued in Germany. Recently, two big events concerning nuclear power have occurred. First, revelation of the scandal in the pit Asse II (Schacht Asse II), and second, a demonstration of a large scale in Gorleben: The scandal in Asse II was reported in Germany on June, 2008. At first, danger was undervalued²¹⁾, but the new facts were clarified. The underground water in Asse II was polluted with radioactivity and appropriate

¹⁵⁾ Rucht, Dieter, 1980: Von Wyhl nach Gorleben. Bürger gegen Atomprogramm und nukleare Entsorgung. München, 14.

¹⁶⁾ Ebd., 104.

¹⁷⁾ Ebd., 106

¹⁸⁾ Kolb, Felix, 1997: Der Castor-Konflikt. Das Comeback der Anti-AKW-Bewegung, in: Forschungsjournal NSB 10(3), 16-29.

¹⁹⁾ SPD und BÜNDNIS 90/DIE GRÜNEN, 1998: Aufbruch und Erneuerung –Deutschlands Weg ins 21. Jahrhundert. Koalitionsvereinbarung zwischen der Sozialdemokratischen Partei Deutschlands und BÜNDNIS 90/DIE GRÜNEN. Bonn, 16.

²⁰⁾ Vereinbarung zwischen der Bundesregierung und den Energieversorgungsunternehmen vom 14. Juni 2000, 9.

^{21) &}quot;Wasser im Asse-Endlager radioaktive belastet", in: Braunschweiger Zeitung, Juni 11, 2008; "Rätselraten um das Cäsium in der Asse", in: HAZ, Juni 12, 2008. Refer to following HP for details of information until now. Bundesamt für Strahlenschutz HP <u>http://www.bfs.de/de/endlager/asse</u>

measures were not taken, although this fact was informed to authorities by the operator. Documentary evidence proved that Asse II was informally used as a final disposal site although Asse II was started for research purpose of disposing radioactive waste²²⁾. Nuclear waste was stored to Asse II from 1967 to $1978^{23)}$. Federal Environment Minister Sigmar Gabriel thought that the Scandal in Asse II was a case that would be the hindrance of the comeback of nuclear energy, and pointed out that the problem of the final disposal of radioactive waste remained unsettled²⁴⁾.

In November 2008, the number of Protestors against transporting the nuclear waste were about three times as many compared with 2006 and it took about 78 hours to transport the 11 castors which was the longest time to carry the Castor from La Hague to Gorleben²⁵⁾. Perhaps, in the future the result of the energy policy depends on this upcoming federal election while the Castor transports occurred two years after federal elections²⁶⁾. The protest activity surged again, though it seemed only to weaken because of the agreement for phasing out nuclear energy had been decided. Moreover, the theme of the nuclear power is well alive among young people²⁷⁾. The influence of the report of the scandal in Asse II is not small²⁸⁾. It is an important precondition that this issue would be on the agenda of politicians not to discontinue the phasing out of nuclear energy. It is impossible to accomplish the reduction of the usage of nuclear energy only by the actions of the movement in Germany.

In Japan, the plan to decide the candidate site for final disposal of the radioactive waste has hardly developed from the 80's to the beginning of the 90's²⁹⁾. The decision to construct facilities for the final disposal of radioactive waste in the Hokkaido Horonobe town was made for the first time in Japan on April 21, 1984. However, the Hokkaido governor opposed the plan.

The Nuclear Waste Management Organization of Japan (NUMO) began to advertise a candidate site in December 2002. However, there was no candidacy and have four years passed³⁰⁾. The Agency for Natural Resources and Energy (ANRE) decided to increase subsidies by about five times from 2007, which would bring the candidates about one billion yen. This was done because there was no region which would apply as a possible site for the final disposal of radioactive waste³¹⁾.

The mayor in the Kochi Prefecture Toyo town applied for the subsidy on January 25, 2007. However,

^{22) &}quot;Giftcocktail im Laugenloch", in: Spiegel, 36/2008, 170.

^{23) &}quot;Der Asse aufs Dach getiegen", in: taz, November 6, 2008.

^{24) &}quot;Giftcocktail im Laugenloch", a. a. O.

^{25) &}quot;Der Sport des Blockierens", in: taz, November 11, 2008. "Widerstand sinnvoll!", in: taz, November 12, 2008.

^{26) &}quot;Den Schwung von Gorleben nutzen", in: taz, November 11, 2008.

^{27) &}quot;In Bewegung bleiben", in: taz, November 11, 2008, 14.

²⁸⁾ Ebd.

²⁹⁾ Yoshioka, op. cit., 202.

³⁰⁾ Hangenpatsuundo Zenkoku Renrakukai (Ed.), 2007: Ko Rebel Hoshasei Haikibutsu Syobunjo Koshite Tometa! Chiso Shobun · · · Koko ga Shiritai Q&A (A disposal site for high-lebel radioactive waste. We have stopped it this way! Geological repository · · · We want to know this: Q&A). Tokyo, 3. Yomiuri Shimbun, January 5, 2007.

³¹⁾ Ibid.

about 60% of the resident signed a petition against the plan. Additionally, six of ten members of the town councillor protested. In addition, the governor of the region offered opposition to this application. After the election of the mayor, the candidate who advocated opposition to the plan was chosen. Finally, the application for the building of a final disposal site was withdrawn.

So far, spent nuclear fuel in Japan is reprocessed by France and the United Kingdom and returned to Japan. The high-level nuclear waste generated by reprocessing in France and Britain is temporarily stored in the high-level nuclear waste storage facility in the Rokkasho village in Aomori Prefecture. The Minister of Economy, Trade and Industry handed an official paper to the Aomori Prefectural governor on April 25, 2008 which meant that the final disposal site would not be constructed in Aomori Prefecture. This was requested to remove concerns of inhabitants of the Aomori prefecture although it was already promised in 1994/95, that the government would not construct the final disposal site in Aomori Prefecture³²⁾.

3. Structures, political networks and their impacts

To compare the movements, I would like to use three main theories concerning resource mobilization, framing and political opportunity structure. Because there is no particular difference in the development of social movements in both countries, with the exception for cultural issues, certain theories can be adapted without further complications to Japan³³⁾.

3.1 Structures

The antinuclear energy movement is limited within small civic groups and apart from the labor class³⁴). The anti-nuclear movement belongs to a wide environment movement³⁵⁾. However, the antinuclear movement also has it's own character.

According to Rucht/Roose (1999), the feature of the environmental movement and the antinuclear movement is classified as follows. The former gives priority to a small regional group, a special organization, and the national institution, while the latter is informal, decentralized, and no public organization in the national institution³⁶. In addition, I would like to pay attention to the character of both movements and describe differences between the ideology and the strategy. While the environmental

³²⁾ Asahi Shimbun, April 25, 2008.

³³⁾ Derichs, a. a. O., 37.

³⁴⁾ Mez, Lutz, 1979: Bundesrepublik Deutschland. Der unaufhaltsame Aufstieg zur Atommacht, in: Mez, Lutz (Hrsg.). Der Atomkonflikt. Berlin, 46.

³⁵⁾ Rucht, Dieter, 2008: Anti-Atomkraftbewegung, in: Roth, Roland/Rucht, Dieter (Hrsg.), 2008: Die sozialen Bewegungen in Deutschland seit 1945. Ein Handbuch. Frankfurt/Main, 246.

³⁶⁾ Rucht, Dieter/Roose, Jochen, 1999: The German Environmental Movement at a Crossroads? in: Environmental Politics 8(1), 72.

movement practically becomes moderate in process of time, the antinuclear movement maintains its non compromising radical attitude. These characters are observed when the agreement for phaseing out of the nuclear power was criticized by anti-nuclear movement. The purpose of the antinuclear movement is not a phase-out of the nuclear power but an immediate closing at once. Because the purpose of the movement like the obstruction and the stop of the nuclear power is clear and concrete, the result of the movement can be observed more clearly than another movements - e.g. the women's- and the environmental movement. After the targets are reached, it is difficult to maintain the mobilization, and the movement begins to decline. Therefore, the mobilization of the movement is unstable.

It is not strange that these movements depend on a social network in the region solidly. It is pointed out that this frame condition applies to the two countries. Harmful industry and other causes of environmental destruction concentrate on the areas which are economically weak and thinly populated³⁷⁾. In addition, this structure, — the nation and the enterprise distributing the responsibility of society to an economically weak region with the capital — wakes up the public opinion, and there is a possibility that it causes political conflict.

3.2 Resource mobilization approach

I would like to compare states of the antinuclear movement of the two countries according to the resource mobilization theory. The resource mobilization approach emphasizes the close relationship between the social, diverse support, named resources, and the formation and development of the social movements³⁸⁾.

The so-called "New social movement" was especially strong in Germany³⁹⁾. There are social movements that affect in the whole modern western countries. They are the labor movement, the woman's movement and the environment movement⁴⁰⁾. As has been mentioned, the anti-nuclear movement is classified as one of the broadest environmental movements and is able to utilize resources that have already been developed once — intimate contacts to specialist such as lawyers and scholars and a lot of potential supporters⁴¹⁾.

³⁷⁾ Mez, Lutz, 2006: Zur Endlagerfrage und der nicht stattfindenden sozialwissenschaftlichen Endlagerforschung in Deutschland. in: Grunwald, Armin/Hocke, Peter (Hrsg.). Wohin mit dem radioaktiven Abfall? Perspektiven für eine sozialwissenschaftliche Endlagerforschung. Berlin, 49.

McCarthy, John D./Zald, Mayer N., 1977: Ressource Mobilization and Social Movements. A Partial Theory, in: American Journal of Sociology 82(6), 1213.

³⁹⁾ Rucht/Roose, op. cit., 73; Kriesi, Hanspeter/Koopmans, Ruud/Dyvendak, Jan W. and Giugni, Marco G., 1995: New Social Movements in Western Europe. A Comparative Analysis. Minneapolis, 20, 22. The research of Kriesi et al (1995) is based on activity and participants' data of France, Germany, the Netherlands, and Switzerland.

⁴⁰⁾ Neidhart, Friedhelm/Rucht, Dieter, 2007: Soziale Bewegungen und kollektive Ationen. in: Joas, Hans (Hrsg.). Lehrbuch der Soziologie, 3. überarb. Und erw. Auflage. Frankfurt/NewYork, 636ff.

⁴¹⁾ Kolb, a. a. O., 1997, 22.

In Japan, there is social movement⁴²⁾. However, the social movement is generally weak here⁴³⁾. The scale of the environmental movement in Japan is comparatively small and it is pointed out that the resources for the antinuclear movement of Japan are smaller than that of Germany⁴⁴⁾.

According to Neidhardt/Rucht (1993), "social movements are mobilized networks of people, who take part in collective actions"⁴⁵⁾. What kinds of actors play an important role in the surrounding and in the antinuclear movement Germanys and Japans?

After the prime of movements in the 70's and the 80's, the movement became weak in the Federal Republic. Citizen movements in the big regions and a super-regional mobilization are little today. The Lüchow-Dannenberg citizen's initiative is counted as one of them, as is the protest against the nuclear facility in Gorleben⁴⁶⁾. This group is important in this country, and has protested already for a long time⁴⁷⁾. After the Castor transport in 1994, the anti-nuclear movement revived.

In addition, a political party that represents the antinuclear power movement exists in Germany. The Green Party was originally born from the antinuclear movement⁴⁸⁾. Besides, national organizations in Germany, e.g., green peace, BUND, and NABU, have far exceeded those in Japan by the number of their members and staff⁴⁹⁾. Moreover, it is pointed out that the opposition specialist participated in disputing nuclear power⁵⁰⁾ and contributed to the controversy. Above all, professional research institutes such as the Wuppertal Institut für Klima, Umwelt, Energie, the Öko-Institut work for phasing out nuclear energy.

In the meantime, supporter of antinuclear movement and another organization like Green peace, friends of earth, who play a role in many industrial countries do not play an important role in Japan⁵¹⁾. The number of members of the environmental movement in Japan is less than it is in other industrial

⁴²⁾ Vosse, Wilhelm, 2006: Need for a New Movement? A Fragmented Environmental Movement in Times of Global Environmental Problems. in: Vollmer, Klaus (Hrsg.). Ökologie und Umweltpolitik in Japan und Ostasien. München, 111.

⁴³⁾ Kajita, Takamichi, 1990: Sengo Nihon no Shakai Undo-"Kaihatsu Kokka" to "Nihonteki Tokushitsu" ni Chakumokusite- (Social movements in postwar Japan –paying attention to the "Development State" and the "Japanese Characteristics"), in: Shakai Undo Ron Kenkyukai (Ed.), Shakai Undo-ron no Togo wo Mezashite: Riron to Bunseki, (Aiming to Integrate Social Movement Theories: Theory and Analysis) Tokyo, 180.

⁴⁴⁾ Foljanty-Jost, Gesine, 2005: NGOs in Environmental Networks in Germany and Japan. The Question of Power and Influence. in: Social Science Japan Journal 8(1), 103-117.

⁴⁵⁾ Neidhardt, Friedhelm/Rucht, Dieter, 1993: Auf dem Weg in die "Bewegungsgesellschaft"? Über die Stabilisierbarkeit sozialer Bewegungen, in: Soziale Welt 44(3), 307.

⁴⁶⁾ Rucht, 2008, a. a. O., 264/Kolb, a. a. O., 1997, 21.

⁴⁷⁾ In addition, there are rural communities (Bäuerliche Notgemeinschaft), legal aid Gorleben (Rechtshilfe Gorleben), an examination comittee Gorleben (Ermittlungsausschuss Gorleben), the Initiative 60 (Initiative 60) and the Women of Gorleben (Gorleben Frauen). Kolb, Ebd.

⁴⁸⁾ Rüdig, Wolfgang, 2000: Phasing Out Nuclear Energy in Germany. in: German Politics, 9(3), 53. Green Party in Germany was formed first in Lower Saxony. Müller-Rommel, Ferdinand, 1993: Grüne Parteien in Westeuropa. Entwicklungsphasen und Erfolgsbedingungen. Opladen, 54.

⁴⁹⁾ Foljanty-Jost, op. cit., 107f.

⁵⁰⁾ Dannenbaum, Thomas, 2005: >>Atom-Staat<< oder >>Unregierbarkeit<<? Wahrnehmungsmuster im westdeutschen Atomkonflikt der siebziger Jahre, in : Brüggemeier, Franz-Josef/Engels, Jens I. (Hrsg.). Natur- und Umweltschutz nach 1945. Konzepte, Konflikte, Kompetenzen. Frankfurt: New York, 270.

⁵¹⁾ Vosse, Wilhelm, 1998: Die Umweltbewegung im gegenwärgigen Japan. Strukturen, Probleme, Wirkungen. in: Derichs, Claudia/Osiander, Anja (Hrsg.). Soziale Bewegungen in Japan. Hamburg, 245.

 $nations^{52)}$.

The Citizens' Nuclear Information Center (CNIC) in Japan is a nonprofit organization and has been established in 1975⁵³⁾. CNIC can be comparatively trusted because it is independent in the idea of the nation and the economic world and it can be considered that it is free from the operation. The head of CNIC, Jinsaburo Takagi, won the Right Livelihood Award in Stockholm in December, 1997.

There is no political party in Japan that equals the Green Party in Germany. However, this is not the correct evidence that the difference of the environment awareness of the two countries is immediately shown. For instance, the existence of 5% obstruction articles in Germany is one of the important factors that explains why the Green Party already exists for a long time and did not split off in Germany⁵⁴⁾. While nuclear promotion is supported by the majority of public opinion to be secure in Japan, nuclear technology is not trusted and it is not necessarily relieved. In 2005, in a Public Relations Office survey, 55.1% said they would promote nuclear energy (47.1% answered "Positively promote it" and "Carefully promote it" 8.0%), 17.0% said they would abolish it (2.3% "Abolish it in the future" and "Immediately abolish it" 14.7%), and 20.2% said they would keep this condition⁵⁵⁾. On the other hand, when people were asked how they feel as the nuclear power generation of their country, 24.8% said "It is safe" (20.4% "It is safe" and "It is uneasy" 48.1%).

In addition, it can be pointed out that the prefectural governor in Japan has veto power for the nuclear installation. In other cases, the prefectural governor had used the power of veto over the nuclear installation. The governor's veto power has increased in importance by the reform in 1990. After the Hokkaido prefectural governor refused the candidate site in the high level nuclear waste storage engineering center, it plays an important role for the antinuclear movement⁵⁶⁾.

Moreover, it is pointed out that the opposition specialist also participated in the controversy in Japan: On February 27, 2007, specialist from affirmative and critical side discussed publicly in the Toyo town. The agreement side proposed the waste disposal from the emphasis of the necessity of the nuclear power energy, and there was no alternative to the earth. The other side pointed out the frequent occurrence of earthquakes, and objected the plan⁵⁷⁾.

⁵²⁾ Vosse, op. cit., 2006, 112.

⁵³⁾ CNIC HP http://cnic.jp/

⁵⁴⁾ Raschke, Joachim, 1993: Die Grünen : wie sie wurden, was sie sind. Köln, 140.

⁵⁵⁾ Naikaku-fu Daijin Kanbo Seifu Kohoshitsu (Public Relations Office, Cabinet Office, Government of Japan), 2005: Energie ni kansuru Yoron Chosa (Public Opinion Polls on Energy). <u>http://www8.cao.go.jp/survey/h17/h17-energy/index.html</u>

⁵⁶⁾ Honda, Hiroshi, 2003: Nihon no Genshiryoku Seiji Katei - Rengo Keisei to Funso Katei - (Nuclear Energy Politics in Japan - Coalition Formation and Conflict Management -), in: Hokudai Hogaku Ronshu 54(1), 372ff.

⁵⁷⁾ Kochi Shimbun, February 28, 2007.

3.3 Framing

The expression "Frame" shows the scheme of the interpretation that determines, perceives, recognizes and classifies the status of a phenomenon within the habitat and the individual's world⁵⁸⁾. The frames of the collective actions are the sets of their beliefs and meanings that are directed toward their action, motivate and legitimize their activities and the campaign of the social movements⁵⁹⁾.

According to Rucht (1980), there are the following seven points which are considered as a motive and a discussion point of the activist of the anti-nuclear power $movement^{60}$.

- 1. fear of close relation to nuclear weapon,
- 2. fear of risk of incontrollable accident and disaster,
- 3. demand returning enormous technology to human measure,
- 4. criticism against interest connection between private enterprise and governmental administration,
- 5. fear of the "Nuclear State"⁶¹⁾
- 6. threat to economic existence,
- 7. threat to nature.

Because the above-mentioned points take the resistance activity to the nuclear plant as an object of study, different viewpoints can be given when we especially pay attention to the Castor transports and the final disposal site. Aoki (2006) pointed out the existence of the generation's consideration that originates in the student movement in 1968 for the Castor transports in Germany⁶²⁾. The aptitude of the final disposal site is also problematic, when we wrestle with the problem of the waste management of nuclear power. In addition, it should be paid attention to the fact that the resistance activity, which is contrary to the Castor transports, is against all nuclear power programs and the nuclear power nations at the same time⁶³⁾. Because facilities for security and the permanent disposal of radioactive waste are obligated to be established by the nuclear power law in Germany⁶⁴⁾, this means that the failure of "Nuclear wate management centre" can disturbs continuously the operation and the expansion of the nuclear plant in Germany⁶⁵⁾. From this new frame, the resistance activity against the Castor

65) Tiggermann, a. a. O., 22.

⁵⁸⁾ Snow, David A./Rochford, E. Burke, Jr./Worden, Steven K. and Benford, Robert D., 1986: Frame Alignment Process, Micromobilization, and Movement Participation, in: American Sociological Review 51, 464.

Benford, Robert D./Snow, David A., 2000: Framing Processes and Social Movements. An Overview and Assessment, in: Annual Review of Sociology, 26(1), 614.

⁶⁰⁾ Rucht, a. a. O., 1980, 74-78.

⁶¹⁾ This means the fear of the risks and dangers at the nuclear facilities and excessive interference from the state. cf. Jungk, Robert, 1977: Der Atom-Staat: vom Fortschritt in die Unmenschlichkeit. München.

⁶²⁾ Aoki, Soko, 2006: Kogi Kodo no Jizokusei to Sankasha no Undo-Kan - Doitsu ni okeru Ko-Reberu Hoshasei Haikibutsu Hantai Toso no Jirei kara (The durability of protests and participant's view of activism - From a case of a struggle against high-level radioactive waste transportation in Germany), in: Shakaigaku Kenkyu 80, 238.

⁶³⁾ Kolb, a. a. O., 1997, 23; Kolb, Felix, 2002: Soziale Bewegungen und politischer Wandel. Lüneburg, 35.

^{64) 1976:} Viertes Gesetz zur Änderung des Atomgesetzes (Atg) von 30. August 1976, BGB1, I, 2573-2576.

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transportation loses the character of the so-called "NIMBY" (not in my backyard) $^{\rm "^{66)}}$.

In the case of Japan, the criticism against the former mayor having put up for a candidate for the final disposal site against the intention of Parliament and its citizens is mentioned. Furthermore, especially following three points were pushed out to the front as a frame in the newspaper and its extensive publicity work by anti-nuclear energy movement: (2) fear of risk of incontrollable accident and disaster, (6) nuthreat to economic existence, and (7) threat to nature. In addition, pressure to stopp the use of nuclear power by obstructing the final disposal site like Germany doesn't come to the front so much in Japan.

3.4 Political opportunity structure

The theoretical approach of "political opportunity structure" is based on the idea that the political institution of the nation decides the possibility of the movement, i.e., confines the strategy and decides limit of the activity⁶⁷⁾. According to Kitschelt (1986), political opportunity structures function as "filters" between the mobilization. If the political opportunity structure in one country is open for the movements and advantageous to them, they can easily act freely. According to Kitschelt (1986) and Honda(2003), Germany and Japan belong to the countries having a closed structure⁶⁸⁾. Therefore, we must classify both countries more precisely.

According to Kolb (2007), there are detailed factors⁶⁹ :

- 1. the relationship between the executive and legislative branches of government
- 2. the degree of federalism
- 3. the existence of bicameralism
- 4. the possibility of popular referendum
- 5. the strength of judicial review
- 6. the effective number of political parties

The author evaluates them with a numerical value from zero to two. Therefore, the index of the political system structure becomes 0 from 12. The system structure can work advantageously for the social movement when the value of the index rises and then the system structure becomes $open^{70}$. In

⁶⁶⁾ Kolb, a. a. O., 2002, 24.

⁶⁷⁾ Kitschelt, Herbert P., 1986: Political Opportunity Structures and Political protest. Anti-Nuclear Movements in Four Democracies, in: Britisch Journal of Political Science 16, 57-85.

⁶⁸⁾ Ibid., 64ff.; Honda, op.cit., 375.

⁶⁹⁾ Kolb, Felix, 2007: Protest and Opportunities. Frankfurt/New York, 206.

⁷⁰⁾ Ibid.

these factors, in the three points, namely, federalism, bicameralism and the strength of judicial review, we can notice the difference. We can think that the difference of mobilization in the anti-nuclear movements result from resources and these political institutional structures.

	Executive-legi slative relationship	Federalismu	Bicameralism	Referendum	Strength of judicial review	Effective number of political parties	Index of political institutionalstr ucture
Germany	1	2	2	0	2	1	8
Japan	1	0	1	0	0	1	3

Table 2 Index of the political institutional structure

Quelle : Kolb, 2007, S. 207. *For convenience' sake, the simple notation is applied in the table in order of the turn mentioned above from the left to right.

3.5 Actors relations

How can it be explained that the antinuclear energy movement in Japan obstructed the plan for a radioactive final disposal site although it was evaluated that the value of the political system structure by Kolb (2007) was low?

As for this evaluation, it is necessary to add a further viewpoint. I would like to consider some characteristics in a region concerned and the role of various actors in the process of this case. In the case of the Toyo town, the signature-obtaining campaign and the petition play an important role in the political process. The residents can dismiss the public service person by 1/3 or more of the numbers of all voters because of the Local Autonomy Law (recall). Therefore, the potential and actual pressure of the opposition citizens in Japan to the public service person can be assumed to be stronger than that of nations where the recall doesn't exist. When he or she doesn't concede to it, this person can face the possibility of dismissal. The Mayor, local administrative chief was removed by recall procedure for the first time in Japan in the Kochi Prefecture Kubokawa town over the location of the nuclear power plant for the issue of nuclear power in July, 1982, and this case attracted the attention of, not only the antinuclear power movement but also from various citizen movements⁷¹.

The plan for a high level disposal site was considered by over 10 communities, and it has so far been given up because of the opposition from residents or their prefectural governor or a their neighboring autonomy: Fukui Prefecture Izumi Village, Kochi Prefecture Saga town, Kumamoto Prefecture Goshoura

⁷¹⁾ Honda, op. cit., 54(3), 157.

town, Kagoshima Prefecture Kasasa town, Nagasaki Prefecture Shinkamigoto town, Shiga Prefecture Yogo town, Kagoshima Prefecture Uken village, Kochi Prefecture Tsuno town, Kochi Prefecture Toyo town, Nagasaki Prefecture Tsushima city, Fukuoka Prefecture Nijo town, Kagoshima Prefecture Minamiosumi town, Akita Prefecture Kamikoani Village⁷²⁾. In addition, only Toyo town actually subscribed. As Honda (2003) points out⁷³⁾, in Japan, man can recognize characteristic of "Consensus mobilization" based on the deliberate attempt for consensus among sectors or the population⁷⁴⁾. For instance, it is pointed out that prefecture governors' contrary opinions were reported in the mass media impressively and useful for appealing public opinion although the heads of municipalities can apply for the plan of final disposal site at the early stage withought agree of their prefecture governors. Moreover, the enactment of the ordinance can be claimed by signing the number of all voters of 2% or more in this law. In the case of Toyo town, the ordinance with a new content of not permitting the radioactive substance to be brought into Toyo town was enacted.

Then, why is the impact of the movements the same? Namely, why are the places for disposal of nuclear waste undecided?

As have been mentioned by Kischelt (1986) and Kriesi et.al. (1995), we would like to make a clear distinction between the outcomes or impacts of social movements and their level of mobilization⁷⁵⁾. The analysis at the chance for the political reform is different from the analysis of a political mobilization⁷⁶⁾. Therefore, it is necessary to interpret a comparatively low mobilization in Japan and the withdrawal of the plan for a final disposal site by this context.

In the case of Germany, it was indispensable that Red-Green federal government was established and reached an agreement of phasing out nuclear power. Before the formation of the Red-Green federal government, some attempt to obstruct the plan for final disposal site did not succeed eventually. For example, massive anti-nuclear movements (1977-1979) against the plan in Gorleben promote government in Lower Saxony to refuse the concept of the plan in this form finally⁷⁷⁾, however, it was only temporary. Moreover, the Red-Green government at Land level in Lower Saxony (1990-1994) had already tried to obstruct the plan for Gorleben, but finished without concrete success.

In addition, the federal system of Germany makes the decision over a candidate disposal sites for high-level radioactive waste difficult. In the federal system in Germany, there are complementary relations between federation and states in role and authority, and usually states control and execute the

⁷²⁾ Hangenpatsu Undo Zenkoku Renrakukai (Ed.), op.cit., 3.

⁷³⁾ Honda, op. cit., 54(4), 340.

⁷⁴⁾ Klandermans, Bert, 1989: The formation and mobilization of consensus, in: Klandermans, Bert (Hrsg.), From structure to action : comparing social movement research across cultures. Greenwich/ Connecticut. u.a., 173-196.

⁷⁵⁾ Kitschelt, op.cit., 1986, 72-74; Kriesi et al, op.cit., 209.

⁷⁶⁾ Meyer, David S./Minkoff, Debra C., 2004: Conceptualizing Political Opportunity, in: Social Forces 82(4), 1462.

⁷⁷⁾ Rucht, a. a. O., 1980, 102.

law that the federation established (Article 83 of the fundamental law). Therefore, political friction is sometimes caused between a federal government and the state government⁷⁸⁾ and it is likely to take a long time or even be obstructed sometimes in the execution of the state government of the political decision that the federation intends.

4 Conclusion

This comparison of conflicts over the disposal of nuclear waste in Germany and Japan shows that different mobilizations of anti-nuclear movements in both countries results from the difference of resources and political opportunity structures. The same impact comes from the other conditions. In case of Japan, the Local Autonomy Law plays an important role in the retraction of the plan. The plan of the final disposal site was withdrawn by the mayor's change. It was clarified that the mayor is not able to decide the candidate site alone although the application of the candidate site had been permitted formally. The protest movements in Japan has challenged public policies and changed it without the mobilization of a clear large scale. In case of Germany, the green party entering federal government, the agreement in June 2000 and federalism are pointed out as important factors. The anti-nuclear movements influenced the policy of both countries in each context in spite of the different scale of the mobilization of the movements. However, it remains to be difficult to affirm it academically what influence the movement actually has, as Kolb (2006) and Roose (2006) says⁷⁹⁾ , and this problem remains the author's problem in the future.

⁷⁸⁾ cf. Sendler, Horst, 1992: Anwendungsfeindliche Gesetzesanwendung, in : DÖV, 181-189.

⁷⁹⁾ Kolb, Felix, 2006: Die politischen Auswirkungen und Erfolge sozialer Bewegungen, in: Forschungsjournal NSB 19(1), 12-21; Roose, Jochen, 2006: 30 Jahre Umweltprotest: Wirkungsvoll verpufft? in: Forschungsjournal NSB 19(1), 38-49.