

How Japanese Changed After the Great East Japan Earthquake: From a Public Opinion Survey on Disaster Prevention, Energy and Basic Sense of Values¹

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http://www.nhk.or.jp/bunken/summary/research/report/2012_06/20120603.pdf

Abstract

The Great East Japan Earthquake in March 2011 resulted in an unprecedented disaster for the directly hit northeastern coastal area of Japan, but it also greatly affected the people of Japan as a whole. People have made some improvement in their household disaster prevention measures, but few say that the measures they have taken are adequate. People in Japan live today with the uncertainty that a major earthquake may happen and are concerned about the safety of their families, but many have not decided on an emergency family meeting place. Most people are negative about nuclear power generation and place their hopes in natural sources for generating energy.

Compared with before the earthquake, more people think marriage and having children is “a matter of course”; more realize they don’t have adequate communication with other family members and are trying to set aside more time for conversation. There was a slight increase in the number of people who say it is desirable to routinely consult their neighbors and maintain a mutually helpful relationship with members of their community. People are more concerned about society than about themselves and the number of steadfast people who want to make solid plans for truly enriching the future has also increased.

Introduction

At 2:46 p.m. on March 11, 2011, a major earthquake occurred off the coast of northeastern Honshu, measuring magnitude 9.0, the strongest quake recorded in Japanese history so far, and setting in motion huge tsunami that engulfed wide areas of the coastline. The impact of the earthquake and tsunami on the Fukushima Daiichi Nuclear Power Plant caused serious damage to equipment and buildings, resulting in the leakage of massive amounts of radioactive material and the evacuation of 78,000 people from a city and eight towns and villages of the area within a radius of 20 kilometers of the plant. That area was later designated an “off-limits zone,” and people were prohibited from entering the area.

The Great East Japan Earthquake left a total of 19,000 dead or missing, centering on the three northeastern prefectures of Iwate, Miyagi, and Fukushima, making it the worst natural disaster to hit Japan since the end of World War II.² The number evacuated in the

² National Police Agency figures as of May 9, 2012.

disaster and even now unable to return to their homes is more than 340,000, and many continue to live in cramped temporary housing.³

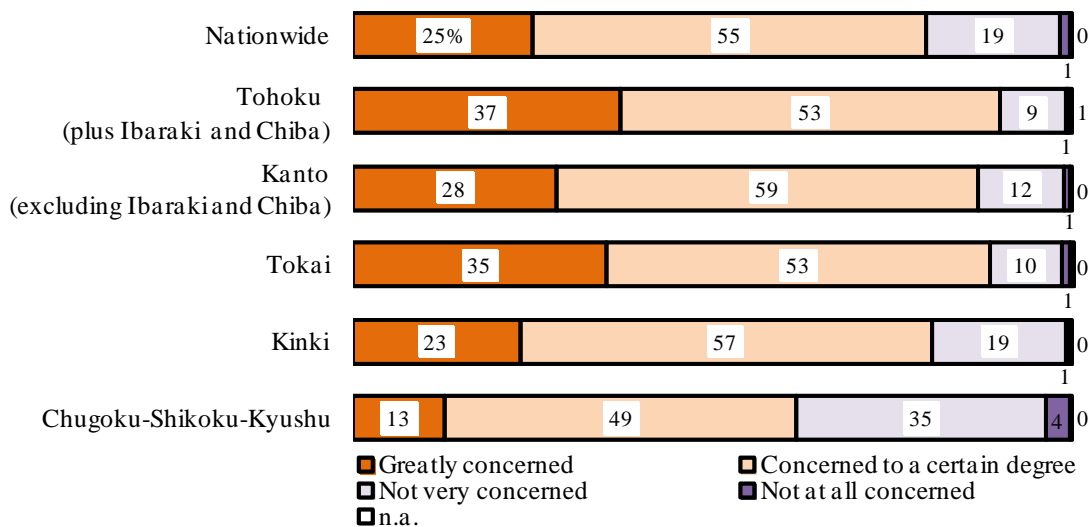
How have people’s attitudes changed since this unprecedented disaster hit Japan? To learn what has changed, we conducted a survey of persons 16 and over throughout Japan nine months after the disaster in December 2011. This paper reports on the major findings of the survey.

Disaster-Prevention Awareness

(1) Eighty Percent Concerned about Another Major Earthquake

First let us look at concern about the occurrence of a major earthquake. The results of the question asking, at four levels, about concern for the possibility of a major earthquake in their surrounding area, show the largest proportion (55 percent) said they were “concerned to a certain degree.” When combined with the figures for “greatly concerned” (25 percent), those who indicated concern represented the vast majority (80 percent; see figure 1).

Figure 1. Concerns about a Major Earthquake (by region)



Looking at the figures by region,⁴ the largest proportion (37 percent) of respondents was “greatly concerned” in Tohoku, plus Ibaraki and Chiba regions, from the area with

³ Reconstruction Agency figures as of April 5, 2012.

⁴ The number of survey sites in the Tohoku region was small and the error range would be large, so for calculations by region, we added to the Tohoku region Ibaraki and Chiba prefectures, where there were also large numbers of people affected by the disaster. There were also few survey sites for the southern regions of Chugoku, Shikoku, and Kyushu, so these, too, were combined. Hokkaido, the Hoku-riku region (the Sea of Japan side of northern Honshu island), and the Koshin’etsu region (Yamanashi, Nagano, and Niigata prefectures) were omitted from the study.

many victims of the March 11, 2011 disaster. The proportion for the Kanto region, excluding Ibaraki and Chiba, (28 percent) and the Tokai (eastern seaboard of Honshu island) region (35 percent) are both higher than the average level of concern of all surveyed. The reason many people are “greatly concerned” in these two regions is probably because major earthquakes are expected to occur there sometime in the near future, with the Tokyo metropolitan area in Kanto region expected to be hit by a strong vertical quake and the Tokai region by a major tremor off the Pacific Ocean coast, and local people’s awareness is strengthened by frequent mentions of these likely earthquakes. Concern about earthquakes is much lower in the southern regions of Chugoku, Shikoku, and Kyushu, at 13 percent.

(2) Concern about Tsunami among 60 Percent Living in Coastal Areas

Next we will look at the results when respondents were asked about what they foresee regarding the damage from a major earthquake in the areas where they live. Table 1 shows the results when respondents were invited to choose multiple items from a list of eight. The majority chose “collapse of buildings” (87 percent) and “fires” (72 percent). Thirty percent indicated concern about “land subsidence and ground liquefaction.”

Most of those who died as a result of the Great East Japan Earthquake were lost in the tsunami.⁵ The figures in Table 1 indicate that only 18 percent of respondents were concerned about tsunami damage, but that is because the proportion of respondents who live in coastal areas is small. Of people in the current survey who replied that they live in coastal areas, 59 percent—nearly 60 percent—were concerned about tsunami.

Table 1. Disaster Damage Forecast (Surrounding Area)

(multiple responses; in order of number of choices; all respondents)

Collapse of buildings	87%
Fires	72
Explosions of LNG and other dangerous substances	32
Landslides, falling rocks, etc.	31
Land subsidence and ground liquefaction	30
Tsunami	18
Dispersion of radioactivity from nuclear power plant	13
Not included in the above	2

(3) Personal Concerns Relate to “Safety of Family Members”

The current survey asked respondents what personal concerns they would have in case of

⁵ As announced by the National Police Agency on March 6, 2012.

major earthquake or tsunami. Table 2 shows the results when respondents were invited to choose multiple items from a list of eight. Concern about family members accounted for the vast majority (91 percent), with 78 percent of concern being about “shutdown of electricity, gas, and water utilities,” showing that nearly 80 percent concern about loss of basic “lifeline” services.

After the March 2011 earthquake, telephone and email services were shut down over quite a wide area, making it difficult for people to contact others in the disaster zone and check their safety. Indeed, 63 percent of respondents to the survey cited concerns about the “breakdown of means of communication”—especially 72 percent for those in the Tohoku (plus Ibaraki and Chiba) region and 69 percent for those in the Kanto region (excluding Ibaraki and Chiba).

Table2. Disaster Damage Forecast (Personally related)

(multiple responses; in order of number of choices; all respondents)

Safety of family members	91%
Shutdown of electricity, gas, and water utilities	78
Personal safety	73
Damage to home	72
Breakdown of means of communication	63
Become unable to obtain accurate information about the earthquake or tsunami	37
Public transportation becomes paralyzed, making it difficult to get home	34
Not included in the above	0

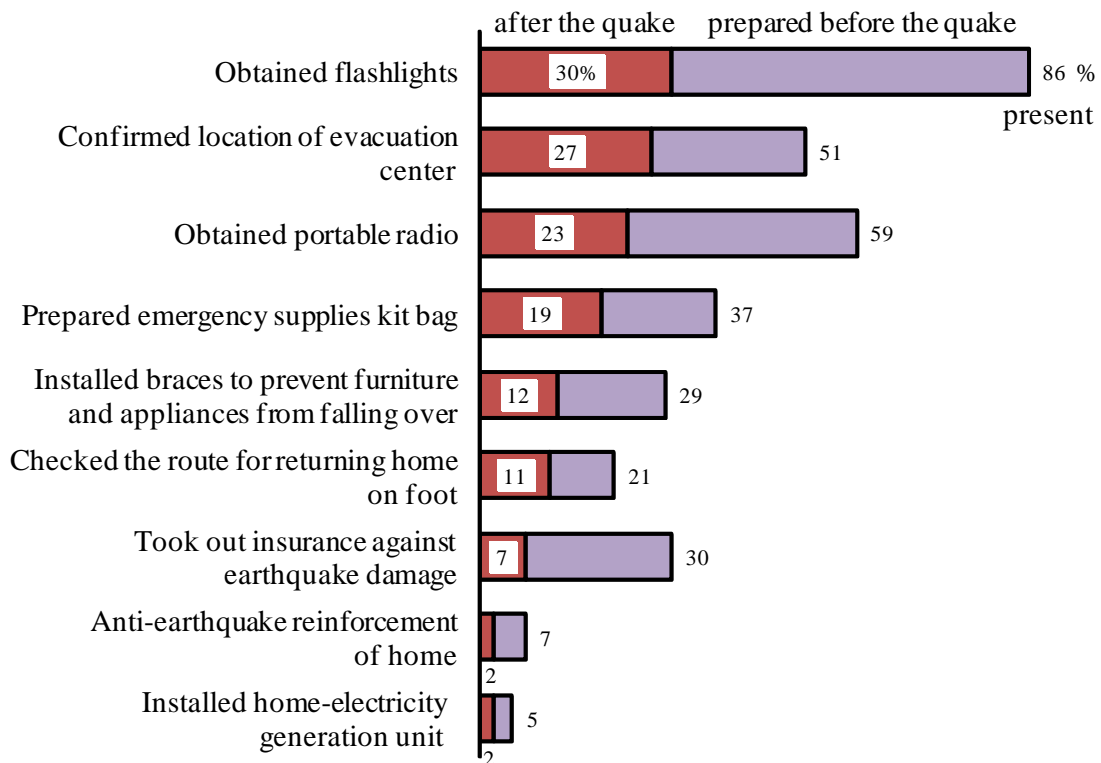
(4) Sixty Percent Improved Disaster Prevention Measures after the Quake

In order to learn how many people improved their home emergency preparedness after the March 11, 2011 quake and how prepared they were at present, the survey asked respondents to indicate “obtained after the quake” and “prepared at present” for nine items, along with one other “none of the above.” Figure 2 shows the multiple-choice results for the items other than “none of the above” and “no answer.”

The top three items respondents listed under “prepared after the disaster” included “flashlight(s)” (30 percent), confirmed location of evacuation center (27 percent), and obtained portable radio (23 percent). The experience many people had at the time of the disaster, when they were unable to obtain information because of the electricity shutdown, presumably made them realize anew the importance of a portable radio as an emergency information-obtaining device.

Figure 2. Preparations for Disaster

(in order of the number of “after the disaster” responses; all respondents)

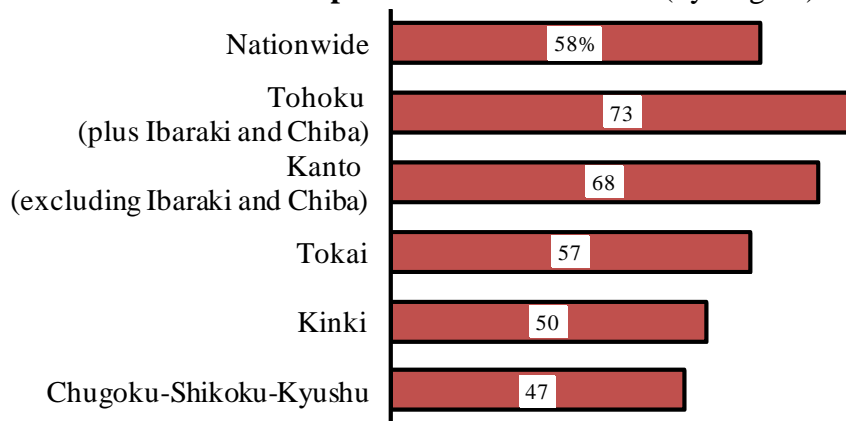


Excluding the cases of “none of the above” and “no answer,” improvement of disaster preparedness appears to have been occasioned by the March 11, 2011 disaster for 58 percent (see Figure 3). In other words, six out of ten people strengthened their preparedness after the quake. By region, the figures were greatest for the Tohoku (plus Ibaraki and Chiba) region (73 percent) and the Kanto (excluding Ibaraki and Chiba) region (68 percent). The percentage is smaller the farther away from the 2011 disaster zone (Tokai 57 percent; Kinki 50 percent; Chugoku-Shikoku-Kyushu 47 percent).

Next, let us look at “present” preparations for disaster. The top three items for those who are prepared at “present” were “flashlight(s)” (86 percent), “portable radio” (59 percent), and having checked their “evacuation center” (51 percent). These are the items that many respondents prepared only after the disaster occurred. (see Figure 2)

The proportion who had “presently” already “installed braces” to secure furnishings and appliances was only about 29 percent. While installing such bracing is the first step in assuring personal safety in the home, as these figures show, relatively few people have put this precaution into practice.

Figure 3. Those Who Got Prepared after the Disaster (by Region)



The proportion of respondents who said they had done “none of the above” in preparation for a disaster was small (8 percent), but for younger people represents a fairly large group of around 20 percent (males in their teens⁶ and 20s, 22 percent; males in their 30s, 16 percent; females in their teens and 20s, 17 percent).

(5) Two Out of Three: Family Meeting Place Is “Previously Agreed upon”

The Great East Japan Earthquake took place during the daytime, so many families were scattered, and when means of communication were cut off, many had difficulty ascertaining each others’ safety or whereabouts. The results of the question asking whether the family had previously agreed upon a gathering place in case of a major disaster showed that 19 percent had decided such a place from before the disaster; a high 66 percent had no “predetermined” gathering place and only 14 percent decided on such a gathering place after the disaster.

(6) Great Majority Aware They Are “Unprepared”

To conclude this section on awareness of disaster preparedness, let us look at the results of respondents’ evaluations at four levels. The largest proportion was “Rather unprepared” (54 percent); combined with “Unprepared” (32 percent), this means that 86 percent are fairly critical of their preparedness. Those who said they were “Rather prepared” were 13 percent and only 1 percent believed they were “Well prepared.”

As we saw in part (4) above on preparations made after the quake, although most people have equipped themselves since the disaster, they still evaluate their preparedness as inadequate. One reason for this may be that there are no clear standards for what is “adequate” preparation, but since they do see the situation as serious, given the

⁶ Teens:16-19 years (The same applies below.)

opportunity, they are more likely to remedy their lack of preparedness. From that point of view, it is important for the government and experts on disaster preparedness to provide very specific and proactive information about what each individual can do to protect themselves in a disaster.

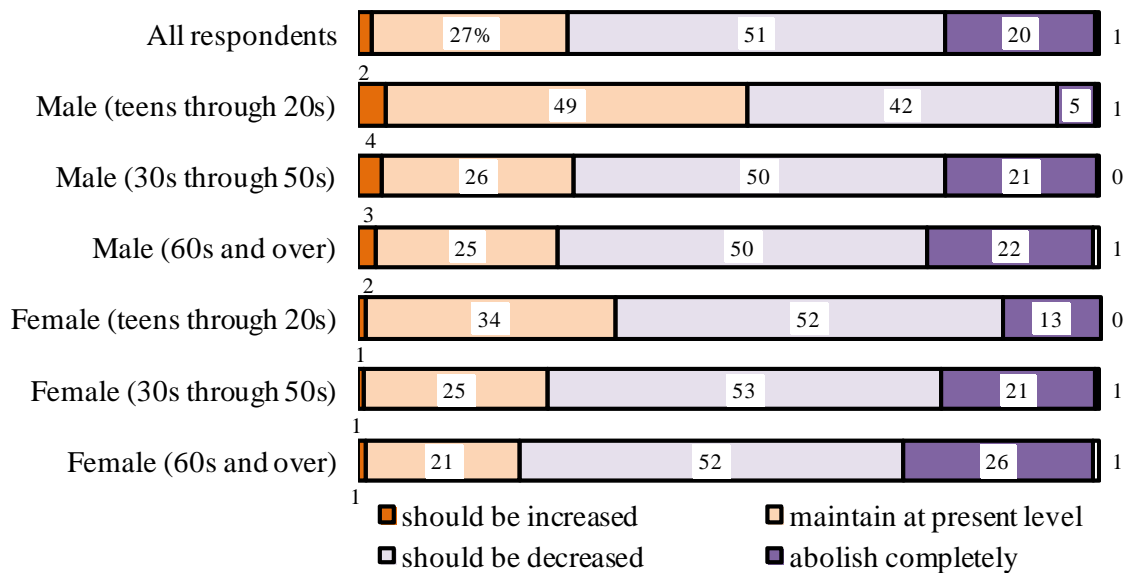
Attitudes about Nuclear Power Generation and Energy

(1) Seventy Percent Support “Curtailing” or “Abolishing” Nuclear Power

Since the accident at the Fukushima Daiichi Nuclear Power Plant following the earthquake and tsunami, Japan has been pressed to thoroughly re-examine what should be done about its nuclear power plants and review its energy policy. Here, let us look at respondent’s attitudes towards nuclear power generation and energy sources.

Regarding what should be done about nuclear power generation from now on, 2 percent of respondents said “should be increased” and 27 percent said “maintain at present level” (Figure 4). By contrast, the largest proportion, 51 percent, said nuclear power “should be decreased” and 20 percent said it “should be abolished.” Combining these latter two categories, 71 percent were negative about the promotion of nuclear power.

Figure 4. What Should Be Done about Nuclear Energy (by gender and age bracket)



For “maintain at present level,” young males in their teens through 20s make up the majority at 49 percent, and even for females in the same age bracket, 34 percent favored maintenance of the status quo. Both figures are higher than the average of all respondents. Supporters of the current state of nuclear power are numerous among the young.

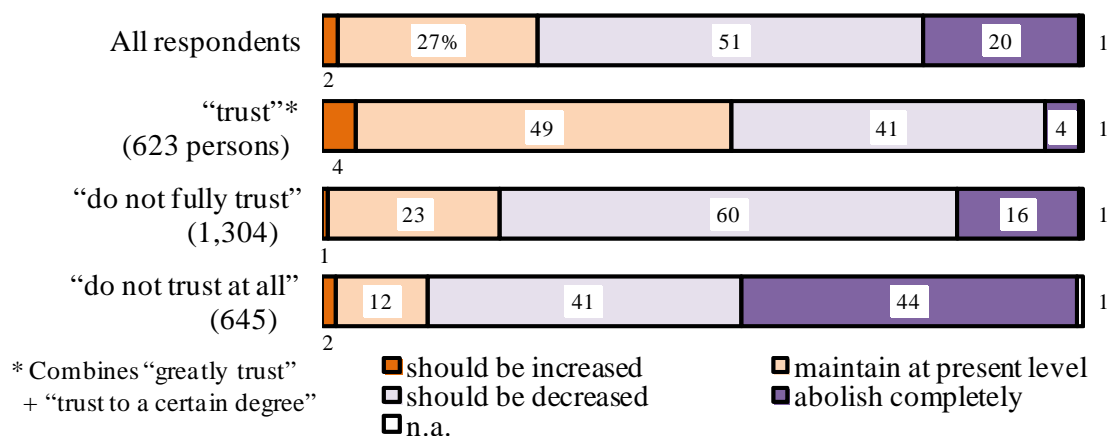
(2) Three Out of Four Do Not Trust Government Safety Management

Regarding the government’s management of the safety of the nuclear power plants, 51 percent of respondents said they “do not fully trust” and 25 percent said they “do not trust at all” in the government’s safety management of the plants—a total of 76 percent. Only 23 percent “trust to a certain degree” and 1 percent “greatly trust” national safety management.

Looking at how attitudes toward nuclear power fluctuate according to such levels of trust, we find that only 46 percent⁷ of those who “trust”⁸ government safety management think that nuclear power should be decreased or abolished altogether. (Figure 5) The proportion who think that way is large (76 percent) among those who “do not fully trust” the government, and when added to “do not trust at all,” they make up the vast majority (86 percent). The finding that trust in the government’s ability to manage and supervise the nuclear power plants influences their attitudes toward nuclear power is confirmed by numerous previous studies.⁹

Figure 5. What Do You Think Should Be Done with the Nuclear Power Plants?

(by degree of trust in government safety management)



(3) Majority Concern about a Nuclear Power Plant Accident

The survey asked about people’s concerns—at four levels—about a nuclear power plant accident, such as that which affected many local residents in the surrounding area following the earthquake and tsunami of March 2011. The largest proportion (48 percent)

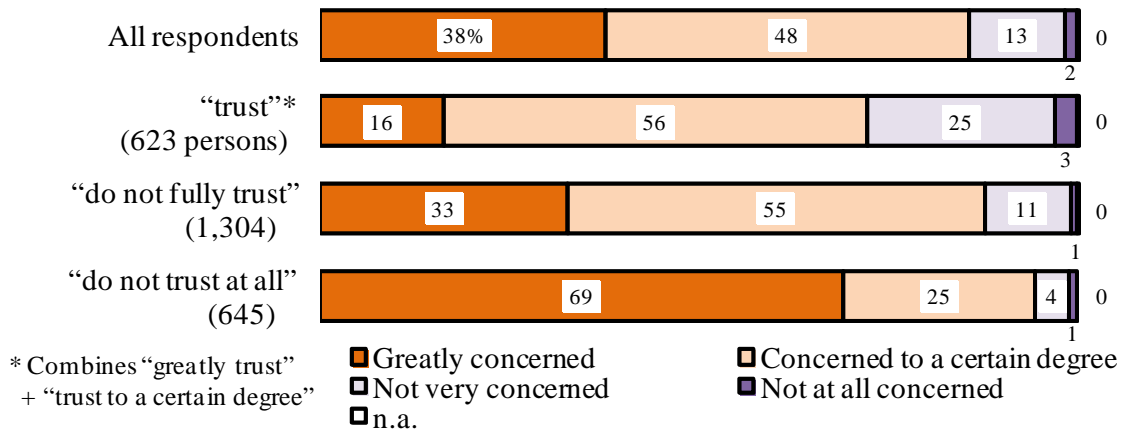
⁷ When adding together the response results, the numerical values are added and the percentage calculated, so this figure sometimes does not match the addition of the percentage values. The same applies below.

⁸ The proportion of “greatly trust” is very small, so we have combined it with “trust to a certain degree” for the purposes of this analysis. The same applies below.

⁹ For example, see Kimura Hiroshi and Furuta Kazuo, “Genshiryoku seisaku no sanpi wo handan suru yoin ha nanika” [Factors in Judging the Pros and Cons of Nuclear Power Policy], *Shakai gijutsu kenkyu ronbunshu*, vol. 1, (2003). pp. 307-16.

said they were “concerned to a certain degree” and 38 percent said they were “greatly concerned,” showing the concern of the great majority (86 percent) about a nuclear accident. (Figure 6)

Figure 6. Concernments about a Nuclear Power Plant Accident
(by degree of trust in government safety management)



The safety of a nuclear power plant is difficult for ordinary individuals to judge, and as has been pointed out, the matter comes down to whether people can trust the government’s safety management systems and the power companies’ operation of the plants.¹⁰ Looking at the relationship of anxieties regarding the nuclear power plant accident and level of trust in the government’s safety management apparatus, we can see that among those who are “greatly concerned,” a lower proportion “trust” (16 percent) or “do not fully trust” (33 percent) than the average of all respondents and a great majority “do not trust at all” (69 percent). People with less trust in the government’s safety management apparatus are likely to be more concerned with a nuclear accident.

(4) Most Important Priority in Power Generation: “Safety”

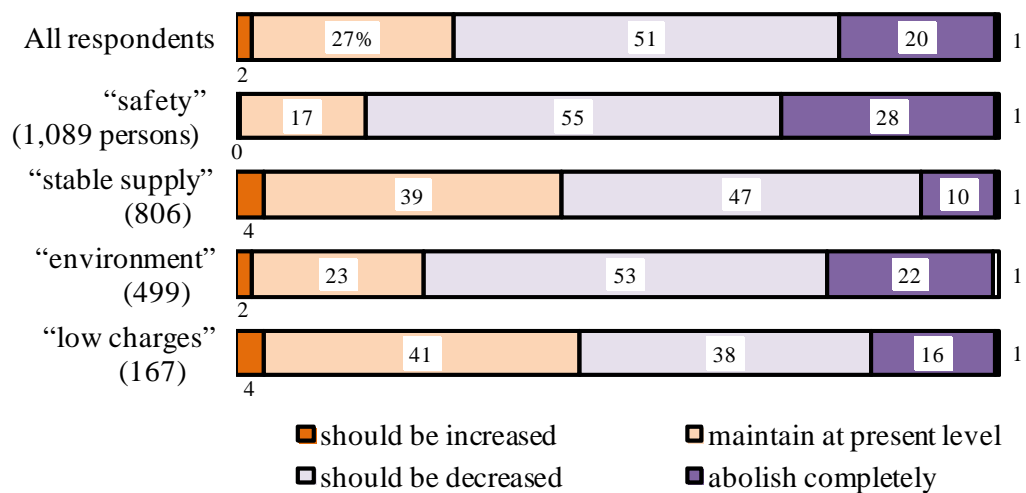
Above we looked at the large percentage of people who are concerned about a nuclear power plant accident. Now, what do people think is the most important priority when it comes to power generation?

Of the four options given in the questionnaire, the largest proportion (42 percent) felt “safety” was the most important factor in generating power, followed by 31 percent who prioritized “stable supply,” 19 percent stressing least possible impact on the “environment” (such as global warming), and 7 percent most concerned with “low charges.”

¹⁰ Shimooka Hiroshi, “Genshiryoku hatsuden ni taisuru koshu no taido kettei kozo” [The Structure of How People Take a Stand vis-a-vis Nuclear Power Plants]. *Nihon genshiryoku gakkaiishi*, vol. 35 (1993), pp. 115–23.

Figure 7. What Do You Think Should Be Done with the Nuclear Power Plants?

(by responses to “Most important priority in power generation”)



Looking at how attitudes toward nuclear power change according to these different priorities, we find that the majority (83 percent) of those who consider “safety” the most important factor think that nuclear power generation “should be decreased” or “abolish completely” (Figure 7) The proportion of people who think the same way is much lower among those who chose “stable supply” (57 percent) and “low charges” (55 percent). These figures are lower than the average of all respondents. For those who consider “environment” the most important, the figure was 75 percent, nearly the same as for the average. The government and the electric power companies have, from the beginning, touted nuclear power as “clean energy” that helps to limit CO₂ emissions, but it should be noted that even among respondents who stress the “environment” those who are negative about promoting nuclear energy make up the majority.

(5) Half Favor Reducing Power Consumption Even at Quality of Lowered Standard of Living

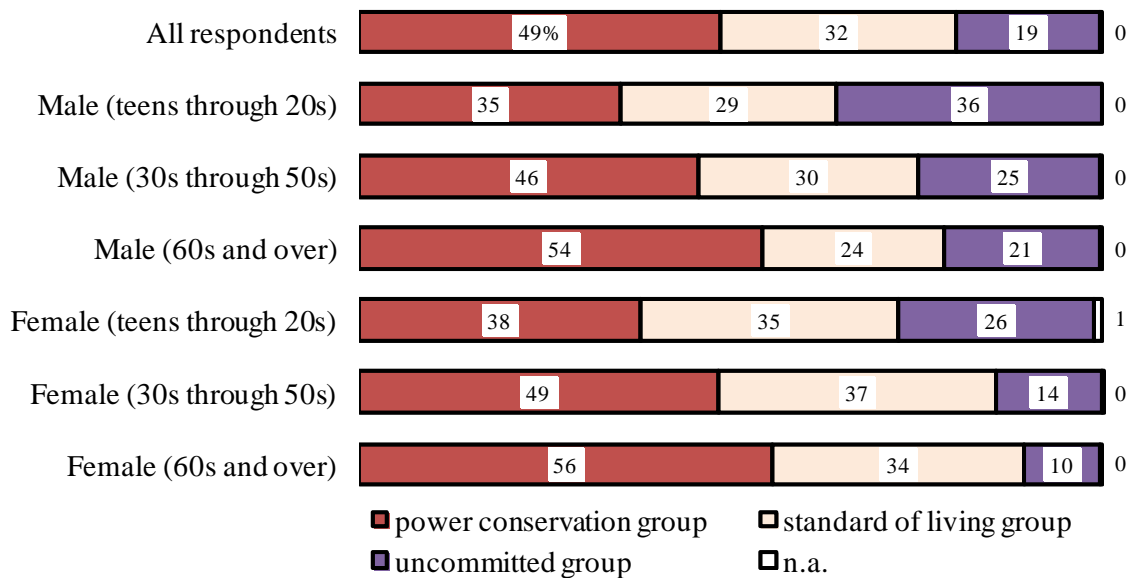
Following the accident at the Fukushima Daiichi Nuclear Power Plant, operation of nuclear power plants in Japan continued to decrease, and as of December 2011 when this survey was done, only nine reactors were in operation and by May 2012, power generation at all the nuclear power plants in Japan had been stopped. Concern has been expressed about the shortfall of electrical power supply and consumers have been called on to conserve on power use. Amid this situation, the survey asked people what they thought about the relationship between power consumption reduction and their own lives.

The respondents were asked if they agree or disagree with the statement “Power consumption should be reduced even if it lowers the standard of living” on three options

(rather agree, rather disagree, cannot say either way). Those who “rather agree” (whom we call the “power conservation group”) make up 49 percent and those who “rather disagree” (“standard of living group”) account for 19 percent. One out of three people do not commit themselves (32 percent; Figure 8).

The breakdown by age shows that for the “power conservation group,” young people are relatively fewer (for the teens and 20s age bracket, 35 percent for males and 38 percent for females). The proportion is larger for both men and women the older the age bracket, with more than half of both men and women sixty and over belonging to the “power conservation group.”

Figure 8. Standard of Living and Power Consumption (by gender and age bracket)



(6) Energy Source to Hold Largest Share: Three Out of Four for “Natural Energy”

With a list of eight items listing energy sources for generating electricity, the survey asked respondents to indicate which they believe should carry the largest share from now on, and the results are shown in Table 3. By far the highest percentage (75 percent) was for “solar, wind, and other renewable natural sources of energy.” Only 8 percent responded that the “current shares should be continued.” None of the other options drew even 10 percent of the responses, and only 2 percent chose “nuclear power.” Many problems remain to be solved before natural power sources can be made fully utilized for energy supply, but expectations are obviously high.

Table 3. Energy Source to Hold Largest Share

(in order of percentage of responses; all respondents)

Solar, wind, and other renewable natural sources of energy	75%
Natural gas	6
Hydropower	5
Nuclear power	2
Petroleum	1
Coal	1
Other	2
Current shares should be continued	8

Perspective by Chronological Comparison

The analysis that follows reports on the comparison with surveys conducted by NHK before the 2011 disaster to show how people's attitudes have changed since the Great East Japan Earthquake.¹¹ In selecting the questions for the current survey, we picked those that do not change over a short period of time unless there is some major social change. Our selection, moreover, centered on questions that are based on what can be considered basic values and regarding which we thought some change might have occurred due to the disaster.

Relationships between Men and Women, Parents and Children, and in Families

(1) Increase in "Marriage Is a Matter of Course"

We first look at views on marriage. The current survey asked respondents to indicate which of two alternatives was closer to their own way of thinking: "Marriage is a matter

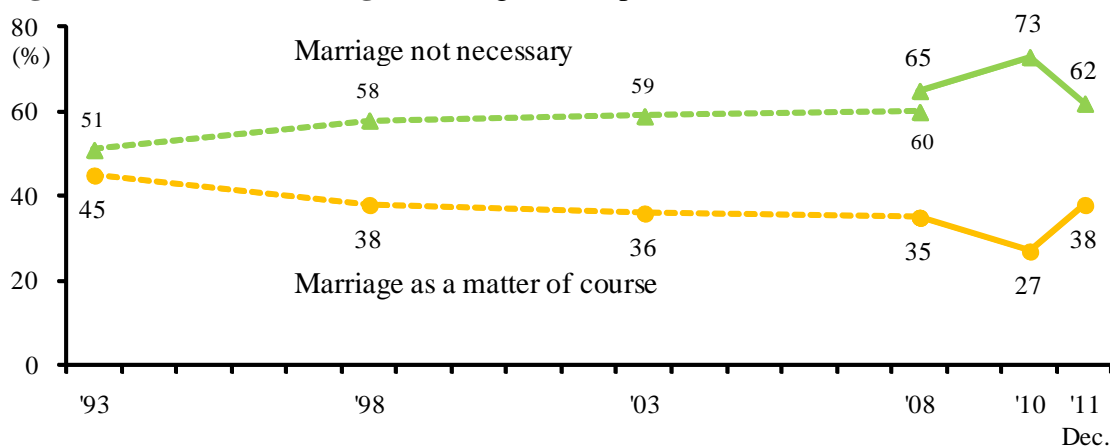
¹¹ The outlines of the surveys used in the comparison are as follows:

- "2008 The Survey of Japanese Value Orientations
~Comparative-experiments investigation of a method~"
Survey period: Saturday, June 28 to Sunday, July 6, 2008
Survey method: Drop off/pick up method
Sample: 1,200 people nationwide 16 years and older
Valid responses (response rate): 847 (70.6 percent)
Report published: *NHK Hoso bunka kenkyujo nenpo* 54 (January 2010).
- "Public Opinion Survey on the Family" (survey conducted one year before the disaster)
Survey period: Saturday, February 27 to Sunday, March 7, 2010.
Survey method: Drop off/pick up method
Sample: 3,600 people nationwide 16 years and older
Valid responses (response rate): 2,665 (74.0 percent)
Report published: *Hoso kenkyu to chosa*, July 2010.
- "Survey on Society and Living" (survey conducted just before the disaster)
Survey period: Saturday, February 26 to Sunday, March 6, 2011.
Survey method: Drop off/pick up method
Sample: 3,600 people nationwide 16 years and older
Valid responses (response rate): 2,627 (73.0 percent)
Report published: *Hoso kenkyu to chosa*, August 2011

of course” and “Marriage is not necessary.” The results showed a low proportion for “as a matter of course” (38 percent), with a very high proportion for “not necessary” (62 percent; Figure 9). And yet, it was an increase by 11 percent compared with the 2010 “Survey on the Family” conducted one year before the disaster, where “matter of course” was 27 percent.

The item regarding marriage has been included in each of the Survey of Japanese Value Orientations¹² conducted every five years since 1993, and the trend in responses can be charted as shown in Figure 9. The proportion who answered that marriage is a “matter of course” decreased over the five years from 1993 to 1998 and did not show any significant change after that for the following 10 years. Looking at that trend, it appears that the impact of the 2011 disaster accounts for an increase in thinking that “marriage is a matter of course.”

Figure 9. Views on Marriage (Marriage; all respondents)



Note: Dotted lines show results for the “face-to-face interview” method, and solid lines show results for “drop off/pick up” method, which was used (The same applies below.)

Looking at Ministry of Health, Labour and Welfare statistics (published February 20, 2012), the number of marriages (preliminary figures) was 676,899 for 2011, a decrease of 5.4 percent from 2010, which is the highest rate of decline in the last 10 years, almost the same rate as that for 2002. Reportedly, however, the number of inquiries to marriage

¹² The Survey of Japanese Value Orientations have been conducted by the face-to-face interview method every five years since 1973, but in 2008, for the purpose of research on survey methods, the drop-off/pick-up method was used along with the face-to-face interview. Of the results from the 2008 survey, those from using the drop-off/pick-up method were used for a direct comparison with the present survey, which employed the drop-off/pick up method. For detailed data on the surveys since 1973, see the following reports: *Gendai Nihonjin no ishiki kozo* [The Structure of Japanese Attitudes Today] (7th edition), NHK Broadcasting Culture Research Institute, February 2010 and *Hoso kenkyu to chosa*, April and May 2009 issues (in Japanese).

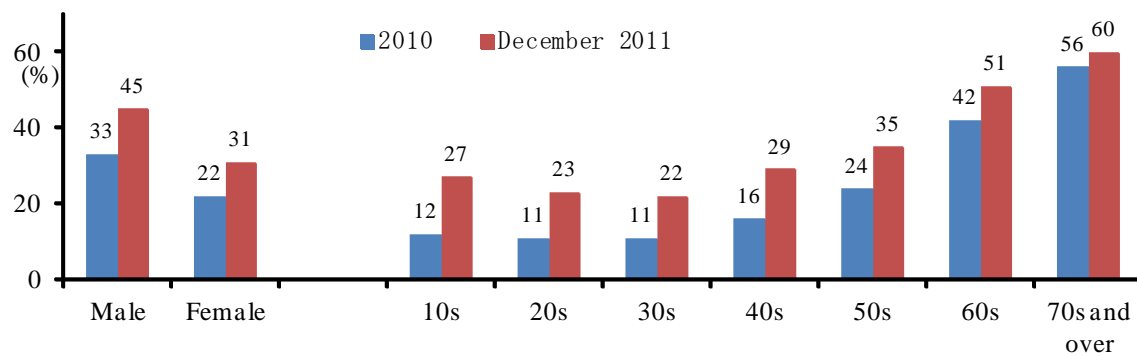
In English see, Kono Kei, Takahashi Koichi, and Hara Miwako, “The Survey of Japanese Value Orientations: Analysis of Trends over Thirty-Five Years,” *NHK Broadcasting Studies* 8 (2010), pp. 1-62.

agencies about finding a partner and membership in their databases have increased (*Asahi Shinbun* online report, May 15, 2011; asahi.com), suggesting that “bonds between people” was a theme nationwide in 2011.

The increase in people thinking “marriage is a matter of course” was recorded in various segments of society. As shown in Figure 10, the proportion increased for both men and women from the previous year of the disaster, except in the 70s-and-over age bracket.

Looking at the figures by region, the proportion of “marriage is a matter of course” rose in most regions, but for the Tohoku (plus Ibaraki and Chiba) region most seriously affected by the disaster, the figures have not changed.

Figure 10. Views on Marriage (marriage as “matter of course”; by age and gender)



(2) Increase in “Children as a Matter of Course”

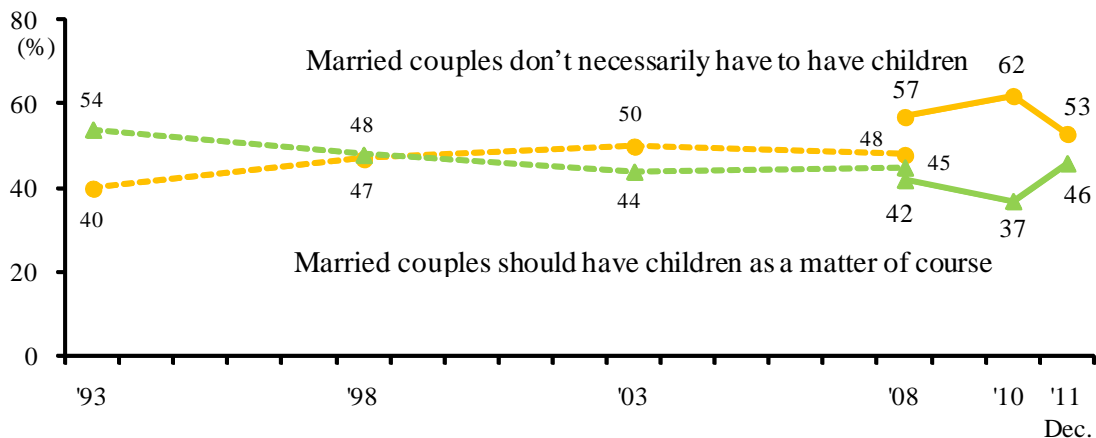
Regarding having children as well, respondents were asked to indicate whether they thought that “Married couples should have children as a matter of course” or that “Married couples do not necessarily have to have children.”

The percentage of those who chose “children as a matter of course” increased from 37 percent one year before the disaster to 46 percent in the current survey. (Figure 11) The trend applies to both men and women, increasing in the 20s to 50s age brackets. The percentages did not change, however, for the Tohoku (plus Ibaraki and Chiba) and Tokai regions.

The results of the Survey of Japanese Value Orientations, meanwhile, indicate that while the proportion of responses for “having children is a matter of course” did not change between 2003 and 2008, it had been on the decrease in the 10 years before 2003.

The results of the current survey showed an increase in the traditional thinking that people should marry “as a matter of course” and that once married they should “have children as a matter of course.”

Figure 11. Views on Marriage (having children; all respondents)

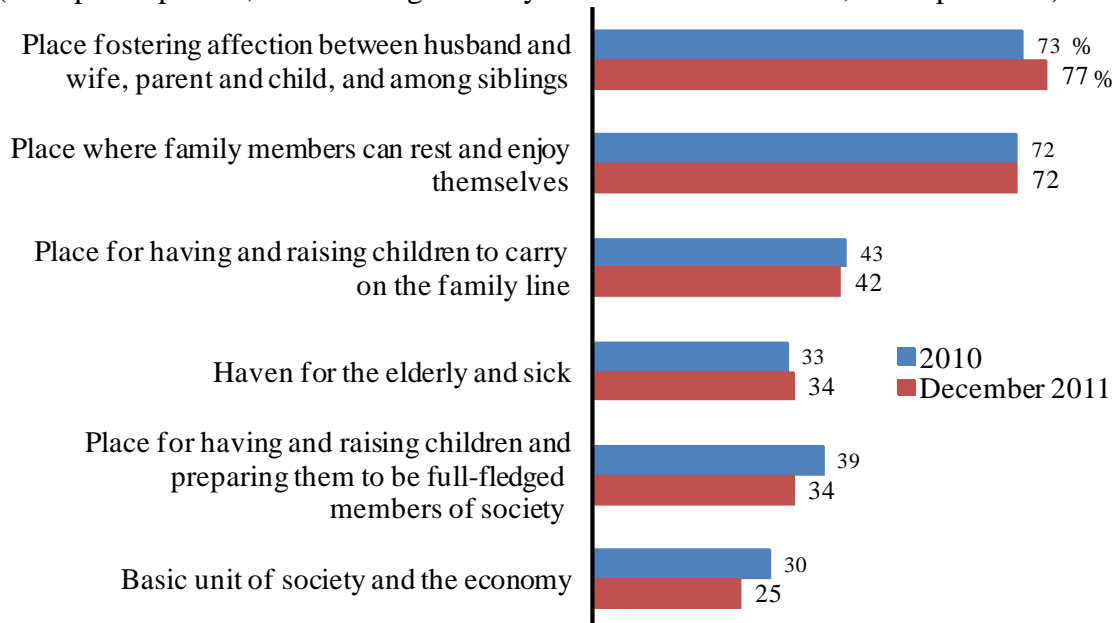


(3) Increase of Household as Place for Fostering Affection among Family Members

Let us now examine the nature of familial bonds. The survey listed six roles of the family and asked respondents to pick as some roles they considered important as they liked. The percentage of those who chose “place where husband-wife, parent-child, and sibling relationships are fostered” was the largest, at 77 percent, followed by “place where family members can rest and enjoy themselves” (72 percent; Figure 12).

Figure 12. Views on the Role of the Family

(multiple responses; in ascending order by December 2011 results; all respondents)



Comparing these results with those of the “Opinion Survey on the Family” conducted in 2010 show that the proportion who thought of the family as the “basic unit of society

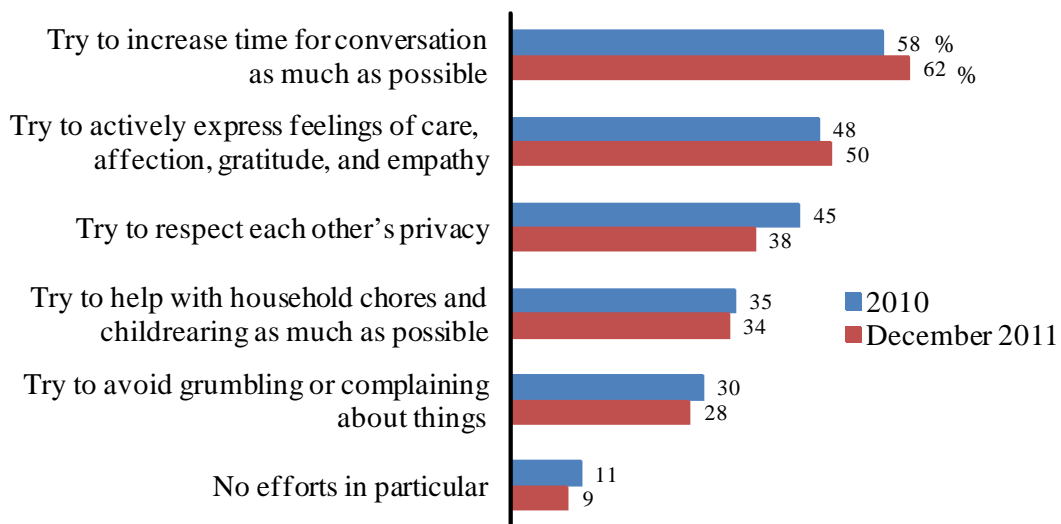
and the economy” and “place for having and raising children and preparing them to be full-fledged members of society” decreased, while that for “place fostering affection between husband and wife, parent and child, and among siblings” increased. The figures appear to show a decrease in thinking of the family in terms of its social function and increase in views on the family in terms of the affection it generates.

Thinking of the family as a “place fostering affection” was unchanged for males but increased for females. By age bracket, there were none for which this item decreased, but with increases for those in their 20s and 60s with a particularly notable increase from 68 to 79 percent for those in their 20s. By region as well, there were no regions that showed decrease and an increase for the Kanto (excluding Ibaraki and Chiba) and for the Chugoku-Shikoku-Kyushu.

Further, when respondents were asked to choose among five items regarding efforts they are making to “deepen family ties,” the largest share was for those who “try to increase time for conversation as much as possible” (62 percent) with the next largest share (about half) for “try to actively express feelings of care, affection, gratitude, and empathy.” (Figure 13)

Figure 13. Efforts Making to Deepen Family Ties

(multiple responses; in ascending order by December 2011 results; all respondents)



Comparing these results, too, with those one year before the disaster, we find that the only item that increased was “try to increase time for conversation as much as possible,” while “try to respect each other’s privacy” and “try to avoid grumbling or complaining about things” decreased. “No efforts in particular” also decreased, just slightly.

Efforts to “increase time for conversation” increased for females and also increased by

age bracket for those in their 40s and 60s, but decreased for those in their 70s and over. By region, this item increased for the Kinki region alone and unchanged for other regions.

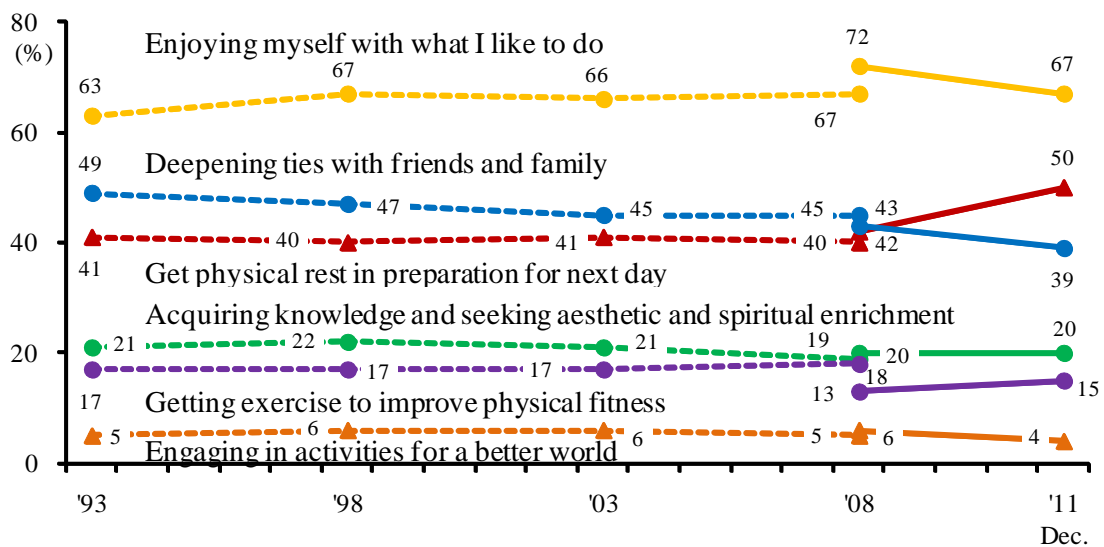
The survey results show that more people began to seek contact and conversation within the family after the disaster.

(4) Decline in Sense of Fulfillment

Next we look more specifically at kinds of interchange within the family and sense of fulfillment.

Figure 14 shows the results for “how I spent my free time” (combines the results of each respondent’s top two choices). Noteworthy here is the decrease for the “deepening ties with friends and family” item (39 percent), which had stood at 43 percent in the 2008 survey.

Figure 14. Ways of Spending Free Time
(current situation; top two choices; all respondents)



Regarding kinds of interchange with the family, since there was no usable question in the pre-disaster surveys, we used for the current survey the question—“deepening ties with friends and family”—included in the 2008 Survey of Japanese Value Orientations, and therefore we cannot tell from the results how family interchange has changed in the strict sense. Some respondents may have thought “ties have not deepened if ‘friends’ are included.” But if we interpret the results of the current survey as they are, it follows that people were not in fact using their free time to deepen ties with members of their family.

Now, let us look at level of satisfaction people feel with family interchange. Twenty-three percent said they were spending “plenty of time” with their families. This

figure shows a marked decrease from the 36 percent result in the survey one year before the disaster. Those who felt they were spending “adequate time,” however, increased from 44 to 53 percent, and those who said they were “not getting much time” increased from 16 to 21 percent (those who said “I live alone” were excluded in this case).

These changes can be interpreted in two ways. One interpretation is that time spent with family members has in fact decreased. As seen above, the proportion of people who deepened ties with family members decreased, although “friends” were included. In addition, while the 2010 survey was conducted from the end of February to the beginning of March, which is a relatively slow time for business, the current survey was conducted in December, the year-end season which is very busy at work, social events of the season, and so forth. For that reason, time available to spend with family may in fact have decreased for the respondents.

The second interpretation may reflect a background of heightened level of desire for such time. As mentioned earlier, those who said they spend their free time “deepening ties with friends and family” decreased from 43 to 39 percent in the three years between 2008 and 2011, the proportion of those who said they were spending “ample time” with family sharply decreased by 13 percent in less than two years from 36 percent to 23 percent.

An additional factor is, as reported earlier, the increase of people who said they wanted to cherish their families more than before. This sharp decrease, therefore, could also be interpreted as reflecting the decrease in proportion of those who feel they are spending “ample time” resulting from the heightened level of desire for time to spend with family members.

Community/Local Bonds (Increase in “Desire for Closer Ties” in Community)

The March 11, 2011 earthquake brought into focus the importance of relations in local communities in a variety of respects such as alerting others to flee from the tsunami, life in the evacuation shelters, shifting of rebuilt residential areas to higher ground, as well as return to homes from evacuation shelters after the nuclear power plant accident. The present survey, therefore, asked about changes in thinking regarding relations in the community.

Specifically, respondents were asked to choose the kind of community relations they thought was desirable by choosing one from among three items: “limited to formal acknowledgement when we meet,” “not too formal relations; we can talk easily to each other,” and “relationship in which we often consult each other about various things and help each other out.” The results were the majority those who preferred “limited to formal acknowledgement” (53 percent) and the smallest proportion (21 percent) those who preferred “often consult and help each other.” The latter figure did slightly increase from

18 percent immediately before the quake. This item increased for women and for those in their 40s, for both of whom it had originally been the smallest. By region, this item increased only for the Kanto (excluding Ibaraki and Chiba) region.

For “limited to formal acknowledgement” and “not too formal; can talk easily” remained unchanged nationwide.

The above summary looked at changes in thinking about relationships with others in the family and community. It may be concluded that less people use their free time to deepen relationships with friends and family but that an increasing number of people want to cherish ties with people close to them since the disaster.

Concern with Society: Increase over Broad Segments

One of the other themes of the present survey was to gauge how people’s concern with society in general might have changed following the Great East Japan disaster. In the case of such a major disaster, news related to its impact is such a frequent subject in the media that even those who might not actively be interested are exposed to information about people who were affected. The weak or vulnerable and in need of assistance are a constant presence in society, but in ordinary times, people are not likely to pay much attention to information about such people.

In the 2011 “Opinion Survey on Society and Daily Life” conducted just before the disaster, the research group led by Kuze Toshio included a question intended to gauge “interest in familiar and immediate phenomena; disinterest in social phenomena.”¹³ We have used the same question in current survey.

As shown in Figure 15, the present survey asked respondents to choose one from four options the degree to which nine statements including “No matter how hard I work, the world will not become a better place” (as listed in the figure) agree with their own thinking. All nine items are written to reflect “interest in familiar and immediate phenomena,” so those who “agree” are more interested in themselves than in society.

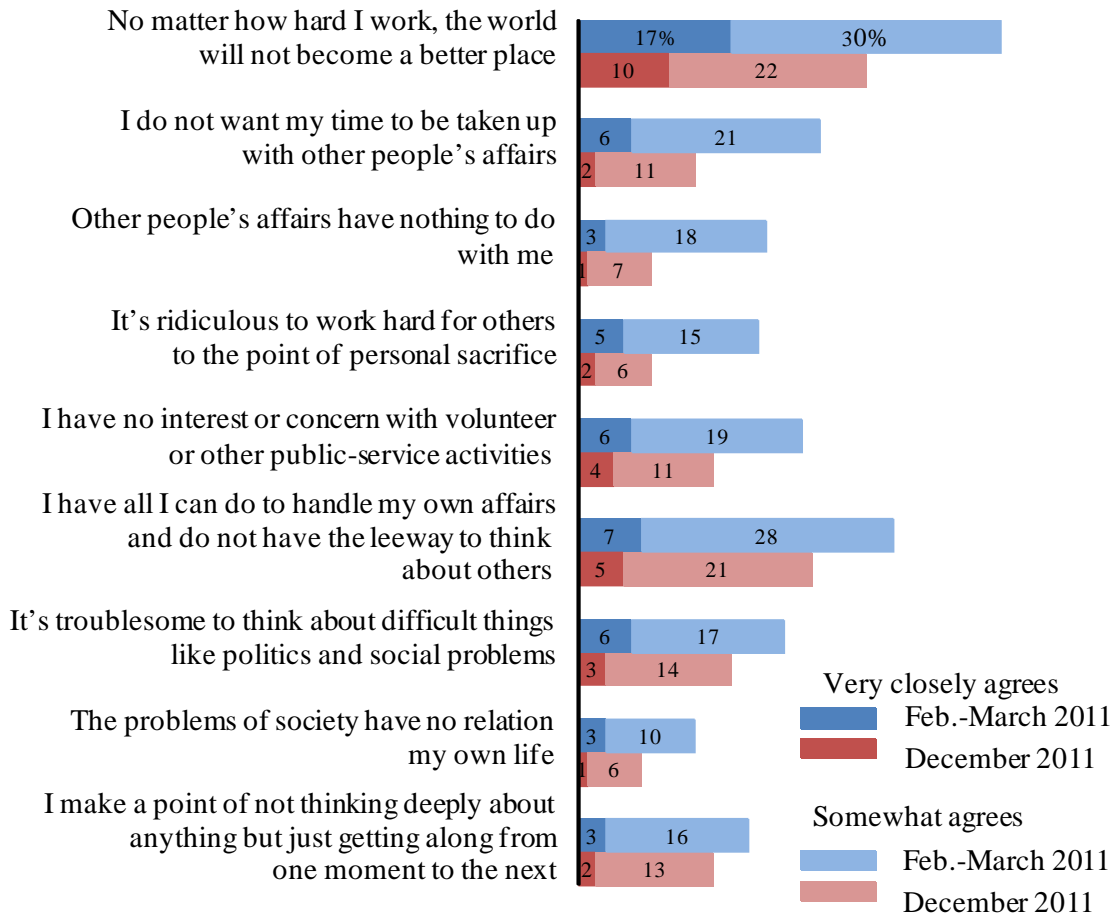
As the figure shows, compared to just before the Great East Japan Earthquake, those who “agree” on all nine statements has decreased. Only for “I make a point of not thinking deeply about anything but just getting along from one moment to the next,” has the “very closely agrees” proportion remained unchanged, and the “somewhat agrees” respondents have decreased. But for the other statements, there has been a decrease in “very closely agrees” as well as “somewhat agrees.” The decrease is particularly marked

¹³ Kuze Toshio et al., “Gendai seinen no kihan ishiki to shiseikatsu-shugi ni tsuite” [A Study of Norm Consciousness in Today’s Young People and Their Private-Life-Centered Attitudes], *Nagoya Daigaku Kyoiku Gakubu kiyō* 35 (1988), pp. 21-8; Wada Minoru and Kuze Toshio, “Gendai seinen no kihan ishiki to shiseikatsu-shugi” [A Study of Norm Consciousness in Today’s Young People and Their Private-Life-Centered Attitudes], *Nagoya Daigaku Kyoiku Gakubu kiyō* vol.35 (1990), pp. 23-30.

for the statements “Other people’s affairs have nothing to do with me,” “No matter how hard I work, the world will not become a better place,” and “I do not want my time to be taken up with other people’s affairs.”

Figure 15. Scale of Interest in Society

(in ascending order of degree of change; all respondents)

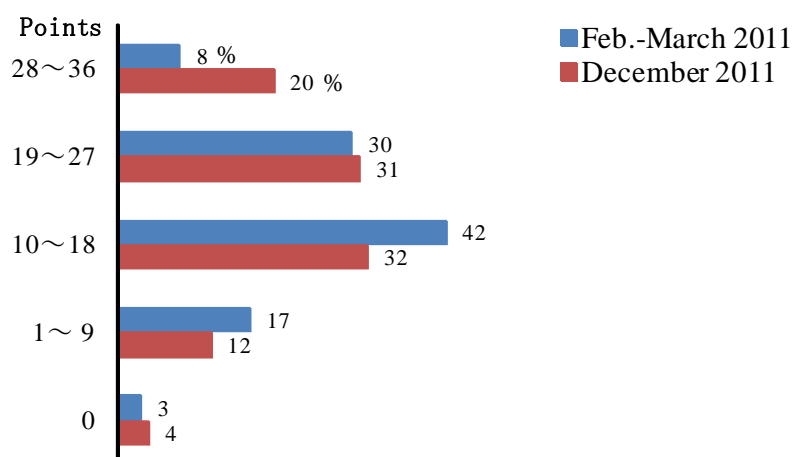


Then, to gain a comprehensive view on people’s interest in society, we scored each response option as shown in the following chart and then calculated a score for each respondent. The higher the score the greater is interest in society

Response options and scores

- 1. Very closely agrees 1 point
- 2. Somewhat agrees 2 points
- 3. Can’t say either way 0 points
- 4. Agrees very little 3 points
- 5. Does not agree at all 4 points
- 6. No answer 0 points

Figure 16. Scores for Interest in Society (all respondents)



People with a high interest in society (28 to 36 points) increased sharply from 8 percent to 20 percent (Figure 16). The increase was marked for both men and women. Interest in society also increased for all the age brackets (except for those in their teens), as well as for all the regions. The results showed then, that interest in society increased broadly throughout society after the disaster.

Spiritual and Religious Faith: Increase in Non-Believers

When natural disasters or extraordinary phenomena occur, some people find solace in their belief in God, Buddha, or other forms of the divine while others do not place their faith in anything in particular. The present survey asked respondents to indicate which of seven items, including “God [gods]” or “Buddha,” describe their beliefs or faith, along with the statement I “do not believe in anything related to a particular religion or religious faith.” The results, presented in Table 4, show an increase in those who “do not believe in anything.” At the same time, there was no increase in the items in which they believe and in fact the figures decreased for belief in “Buddha,” “God [gods],” and “the next world; the hereafter.”

In a separate question, the survey asked about what kinds of practices people actually conducted with regard to their “religion, faith, or other beliefs,” the proportion who said, “I do not practice anything,” increased. The proportion who responded that they “routinely perform prayers, chant sutras, engage in religious training, or propagate their faith” decreased.

These questions have been asked in the Survey of Japanese Value Orientations, so, as in Figure 9 and elsewhere, Table 4 shows the results from 1993 onward. From 1993 to 1998, those who “do not believe in anything” increased, and so did those who believed in “miracles,” but for most other items including “God [gods]” and “Buddha,” the

percentages decreased. In the following five years, those who “do not believe in anything” decreased and those who believed in “cosmology and divination” slightly increased. Further, in the next five years from 2003 to 2008, there was an increase in many of the items including “Buddha” and “the next world; the hereafter.”

Table 4. Faith and Belief

(multiple responses, ascending order by December 2011 responses; all respondents)

(%)	1993	1998	2003	2008	2008	Dec. 2011
Buddha	44	> 39	39	< 42	51	> 44
God [gods]	35	> 32	31	33	45	> 39
The power of talismans and amulets	16	> 14	15	< 17	22	21
Miracles	13	< 14	15	< 18	22	19
Next world; the hereafter	13	> 10	11	< 15	18	> 15
Bible, Buddhist scriptures, etc.	6	7	6	6	7	8
Cosmology and divination	6	6	< 7	7	8	7
I do not believe in anything related to a particular religion or religious faith	24	< 30	> 26	24	20	< 26
Survey method	Face-to-face survey				Drop off /pick-up survey	

</> indicate the significant increase (<) or decrease (>) in the intervening time period (p<.05)

In January 1995, the Great Hanshin Earthquake took place and the Tokyo subway sarin poisoning incident by Omu Shinrikyo members took place two months later. The events of that year also suggest how a major natural disaster can cause an increase in the number of people who do not believe in anything. However, although we have no space here to go into details, between 1983 and 1988, when there was no major natural disaster or incident, there was an increase in the number of people who “do not believe in anything” from 23 to 26 percent.

In addition, considering the possibility that some change may already have occurred during the nearly three years from the 2008 survey up to the Great East Japan Disaster, and considering that the changes between the 2008 and the present survey (December 2011) are not very marked compared with the changes from before 2008, it may be difficult to say that the changes shown in the present survey are directly the result of the Great East Japan Earthquake.

Basic Values: Future-Oriented and Self-Centered

Following a major disaster, do those who are determined to live as steadfastly as they can increase in number? Or, do more people just want to live pleasantly from one day to the

next than before? We can approach these questions by looking at changes in savings and consumption.

For this topic, too, we used the question that has been included in the Survey of Japanese Value Orientations. The question goes “Suppose that you receive one extra month’s worth of income for your household. What do you think is the best way to use that money?” And then respondents are given three options to choose from:

1. I would just use it for immediate wants without thinking of the future.
2. I would draw up a plan and use it according to that plan.
3. I would put it in savings for some future use when it is needed.

The largest proportion in the present survey (50 percent) chose 2. People’s thinking about savings and consumption has been monitored from the first Survey of Japanese Value Orientations in 1973 every five years and the greatest fluctuation has been by about only 5 percent. Comparing the responses between 1973 and 2008, there were no changes in the responses to the above three options. Even after the March 11, 2011 disaster, there was no change in the proportions of those who support these ways of thinking. It can be thought, then, that the disaster had no major impact on thinking with regard to savings and consumption.

For one final topic, the present survey looked at “daily life goals.” Sociologist Mita Munesuke, who believes that the most basic dimension of people’s values is determined by whether they emphasize the present or the future (temporal outlook) and by whether they stress themselves or society (social outlook), divides values into four types.¹⁴

The Survey of Japanese Value Orientations converted these four value categories into the following options and asked respondents to choose one that applies to them.

Present-oriented, self-oriented: Live freely and pleasantly, from one day to the next

Present-oriented, society-oriented: To live in harmony with the people around me

Future-oriented, self-oriented: Plan carefully and build an enriched life

Future-oriented, society-oriented: Work together with others to make the world a better place

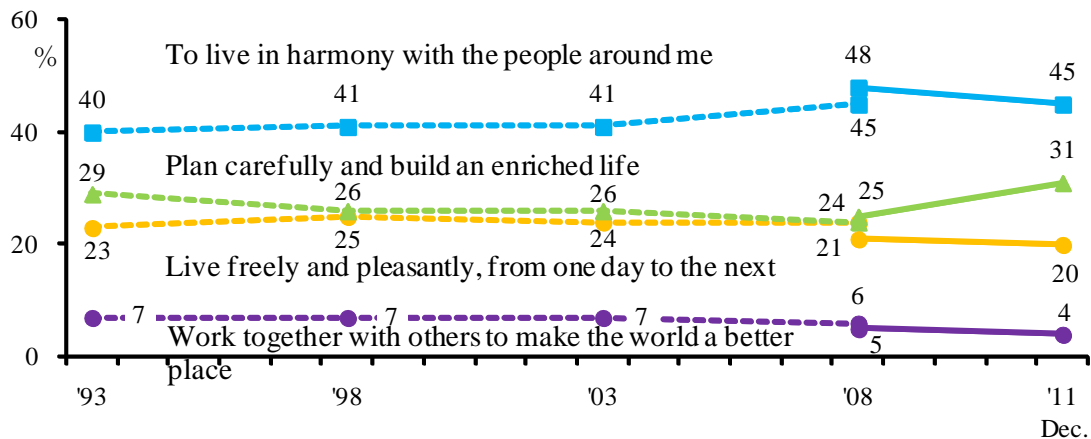
The present survey sought to determine, through this question, whether basic values were changed by the disaster.

First, comparing the figures from before the disaster and afterward, the only items that

¹⁴ Mita Munesuke, *Kachi ishiki no riron* [The Theory of Values and Attitudes], Kobundo, 1966.

changed was for those who would “Plan carefully and build an enriched life,” which increased from 25 to 31 percent.

Figure 18. Goals in Daily Life (all respondents)



With regard to long-term changes, “live in harmony with the people around me” accounted for the most responses in 1978 (several years after the first oil crisis) and has continued to increase since then. “Plan carefully and build an enriched life,” on the other hand, was the highest in 1973 (the year of the first oil crisis) and has continued to decrease since then.

These findings suggest that emphasis on the future rather than the present and on the self rather than on society have increased for the first time since 1973.

Conclusion

The present opinion survey was centered on topics that were believed to have changed as a result of the impact of the Great East Japan Earthquake, and indeed a number of changes were observed.

In analyzing the results, we referred to previous surveys for those topics for which long-term data has been accumulated. This brought to attention some changes in the direction of changes heretofore. It is not clear whether such new trends will continue. With the passage of time, people grow calmer and tend to forget, and thus it is quite possible that the trends may return to their former level or trajectory.

As this was a nationwide survey, the suffering of the disaster victims is not clearly reflected in the survey results. We felt, however, that it was important to grasp conditions for Japanese as a whole following the disaster, as a way to reflect upon and help build a better society.

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