

Paper:

Differentiation and Integration of Evacuees with Regard to Lifting the Evacuation Order Following the Nuclear Power Plant Accident: A Case Study of Naraha and Tomioka Towns, Futaba District, Fukushima Prefecture

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As of spring 2018, evacuation orders have been lifted from the entire area of Naraha Town and most of Tomioka, except for certain areas. While many evacuees have chosen their evacuation destinations as their permanent residences, some have returned to their former towns. This paper examines the factors involved in the “differentiation” and “integration” of Naraha and Tomioka residents before and after the disaster and the various forms they assume, based on the results of questionnaire surveys conducted in 2012 and 2015 as well as interviews conducted on a continuing basis since the disaster. In this process, it has become apparent that a split exists between Naraha, whose residents are moving toward “integration” with the lifting of the evacuation order, and Tomioka, whose residents are progressing toward “differentiation.”

Keywords: nuclear power plant accident, evacuation, return to town, differentiation, integration

1. Introduction

As of spring 2018, seven years have passed since the so-called Great East Japan Earthquake and Tsunami Disaster. Owing to the accident at the Fukushima Daiichi Nuclear Power Station that occurred on March 12, 2011, many residents of the towns and villages in Futaba District were forced to evacuate. Subsequently, beginning with the lifting of the evacuation order on March 31, 2012, for Hirono Town, the evacuation orders for Naraha Town and Tomioka Town,¹ excluding some areas,² which are the subjects of this study, were lifted³ on September 5,

2015, and April 1, 2017, respectively.

In Naraha, with a total population of 7,184 as of the end of August 2017, 1,846⁴ reside in the town proper⁵ while 4,170 reside in Iwaki City, that is, close to 60% live in neighboring municipalities. Meanwhile, with regard to Tomioka, with a total population of 13,172, as of April 1, 2018, 561 reside in the town, which was the site of the town office, while 5,870 and 2,369 reside in Iwaki City and Koriyama City, respectively; thus, over 60% live in these two cities.⁶

Many residents of Tomioka, which includes a “difficult-to-return zone,” as well as Naraha, all of which was either designated a “restricted residence area” or “zone in preparation for the lifting of the evacuation order,” are in the process of reconstructing their lives in localities outside their former residences, including places to which they evacuated. This is attested to by the rates of “house ownership (by household representative or family member)” of 38.8% and 53.0% for Naraha and Tomioka,⁷ respectively, among residents living outside these townships, according to a survey by the Reconstruction Agency.

In regard to this situation, the media have stressed the “low rate of return to their former towns,” giving as reasons the delay in infrastructure restoration, distance from Fukushima Daiichi Nuclear Power Station, or the passage of time until the evacuation order was lifted.⁸ While it

tion order.” Details can be found, for instance, in <http://www.minyunet.com/news/sinsai/saihen.php>.

1. I chose Naraha and Tomioka to make a comparison of the two, as the evacuation order was lifted from the entire area of the former, while a section of the latter has remained as a difficult-to-return zone.
2. The corresponding administrative wards (neighborhood association, “Gyousei-ku”) are Fukaya, Oragahama, Yonomori Ekimaekita, Yonomori Ekimaeminami, Shin Yonomori, and Ohsuge (on the east side of JR Joban Line).
3. This is based on the radiation dosage. Later, a reorganization took place and resulted in the “difficult-to-return zone,” “restricted residence area,” and “zone in preparation for the lifting of the evacua-

4. From the October 2017 issue of the Naraha Town public relations magazine. Beginning with the November issue, trends were presented only according to the administrative ward.
5. There are those who feel that this figure does not accurately depict reality. This is because there are cases in which the resident “stays overnight at the house in Naraha on weekdays (when he or she must work) but returns during the weekend to the house in Iwaki where his or her family is staying.”
6. From the official website of Tomioka: “Number of evacuees according to locations of residence within and outside of the prefecture.”
7. Reconstruction Agency FY2017 “Survey on residents’ intentions in municipalities affected by nuclear power station accident: Preliminary figures.” Note that the recovery rate is less than 50% in all cases. <http://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-4/ikoucyousa/>
8. For instance, “15% return rate in areas formerly subjected to evacuation order: Nine municipalities in Fukushima one year after lifting the evacuation order in all areas.” (March 4, 2018, Kahoku Shinpo, https://www.kahoku.co.jp/tohokunews/201803/20180304_63039.html)

cannot be denied that these factors do obstruct the return to their former towns, do they cover all the reasons? That there exists some underlying logic to the choice of whether to return to their former towns or not, is the starting point of the investigation of the subject treated in this paper. The problem can be broken down into five issues. They will be described in order in the context of the trend seen in previous studies.⁹

First are the “activities after returning to their former towns.” Although there are many studies that deal with the lives of people at the locations to which they evacuated, or the assistance provided to evacuees, there are very few studies that examine the residents’ lives after they have returned, or the formation of communities; one reason is because it is relatively recent that residents have begun returning to their former towns. Although there are studies that examine the residents who have returned from some external location (such as the evacuation destination), almost none examine the condition of being inside or outside of their former towns from the perspective of those who have returned.¹⁰ In this paper, I will examine this issue, including the perspectives of these returnees.

The second issue is “the wavering communities during evacuation and after the evacuation order has been lifted.” With respect to communities that were formed after the disaster, and specifically the residents’ associations of temporary housing complexes and salon activities, Yoshihara has discussed communities in Aizu Wakamatsu formed by former Ohkuma Town residents [3, 4], while Matsui et al. have examined the assistance provided to evacuees and associated salon activities in Niigata prefecture [5, 6]. Yet, they do not discuss them in the overall context of communities or in relation to neighborhood associations or to the entire town (although such omissions are perhaps understandable in view of the fact that these studies were conducted before the evacuation orders were lifted). For this reason, I feel that they do not constitute a comprehensive theory of communities, which this paper purports to discuss. The discussion in this paper will take into consideration the relationship of communities to neighborhood associations and entire towns.

The third issue is the “accumulation of social relations, that is, the social capital¹¹ that underlies the period start-

ing before the disaster until after the evacuation orders were lifted.” While the present author found that “those who had been influential before the disaster continue to be influential after the disaster” (for instance, [8–11]), there are studies on “new neighborhoods” [3], such as the salons mentioned earlier, which emerged from relationships newly created by individuals in the so-called deconstructed communities that were formed as a result of the disaster. However, the study does not explicitly (or, at least, quantitatively) deal with the relationship between social capital and evacuation, or the return to town. Furthermore, from the perspective in which “social capital” is viewed as a representation of “ways in which people become involved,” based on the view that “the ways in which people become involved with networks or communities may have not changed much between life before and after the disaster,” which lies at the base of the problem framework adopted in this paper, there is little mention in this study of the social capital, accumulated over time through the formation of relationships (networks) among people, and the lives of evacuees.¹² In this paper, I examine a model based on covariance structure analysis (SEM: structural evaluation models) in an attempt to understand such relationships.

The fourth issue is the discussion on the “‘transformation’ of communities.” Transformation as a representation and the underlying fixed point (area) can be examined in the context of a discussion on the flow¹³ of networks representing the ties between people, and perhaps on the stock (in the sense of a fixed point (area) lying at the base) of social capital. The finding mentioned above that “those who had been influential before the disaster continue to be influential after the disaster” is a solid fact.¹⁴ The majority of previous studies concentrated on compensation, the lives of and assistance provided to evacuees, and environmental and energy issues,¹⁵ but very few discussed the transformation of relationships surrounding the evacuees’ former towns or communities,¹⁶ as many researchers consider it difficult to study the transformation of local communities over time with regard to returning to their former towns. This concerns a discussion of the third issue at a more concrete level, and this paper will examine it based on the activities of a particular community leader before the disaster, during evacuation, and after returning to his original town.

The fifth and last issue concerns the question “why does one settle at the evacuated location (differentiation), or re-

9. I shall state why it is necessary to discuss the issue in relation to the entire town. The author feels that many of the discussions on related issues are based on predetermined conclusions, because a nuclear power plant accident is a unique event in many respects. While it is important to establish the target and begin the discussion from the perspective of individuals, one may fall into the trap of stretching individual findings to obtain general conclusions. For this reason, this paper sets the individual at the community level of the individual temporary housing complex or ward (neighborhood) association and the overall target on the town, and avoids the above risk through the intercommunication between the two.

10. There are studies that discuss the reconstruction of lives and rebirth of the local area based on an analysis of the trends of residents or town after lifting the evacuation order, from the standpoints of “residence,” “ties,” and “town,” [1] or argue that one’s “hometown has been stripped away” in the sense that it has ceased to be the place it used to be before the disaster even if the evacuation order has been lifted and one returns [2]. However, I feel that these studies are lacking with regard to examining how the issues in question relate to the undertakings of neighborhood associations and other residents’ organizations after the evacuation order was lifted.

11. For instance, Putnam defines social capital as “features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions” [7]. While there

are many arguments regarding its definition and the ways of measuring it, this paper avoids these questions and uses the term in the general sense of “networks, norms such as reciprocity, and trust within and outside of a group.”

12. Aldrich [12] discusses social capital in detail in relation to reconstruction following a disaster. Meanwhile, there are studies on the relation of social capital to disaster-preparedness awareness during normal times, such as [13]. Furthermore, there are also studies on the relation between social capital and health (e.g., [14]).

13. The “new neighborhood” mentioned earlier may also be related to this issue.

14. The underlying theme of [8] is an examination of the transformation of communities before and after the disaster primarily in the coastal areas of Iwaki City, Fukushima prefecture.

15. For example, Hasegawa and Yamamoto [15] present an argument based on the shifting of nuclear energy policies.

16. For example, the series of studies by Yoshihara, described earlier.

turn to one's former town (integration)?" The issue of the differentiation and integration of communities is both an old and a new subject, and it is true that social differentiation takes place because of life styles and their diversification, as these are centered on various socially integrative institutions in the past as well as today.¹⁷ There have been discussions regarding "differentiation" from the perspective of social disparity and conflict [17–18], but while there have been many studies on "integration" in the context of immigrant studies and festivals,¹⁸ there are not many that deal with disaster-related issues.¹⁹ As we have seen, there are few studies that deal with both aspects of differentiation and integration in the period beginning with life following evacuation up to the evacuees' return to their former towns. In this paper, this issue is examined mainly according to the results of SEM and interviews.

As mentioned above, there are many who opt to settle in the areas to which they evacuated, but there are also many who return to their home towns. From the standpoint of the five issues described above, this paper discusses the factors that have led to the differentiation or integration of the residents of Naraha and Tomioka and their various phases before and after evacuation orders were lifted. Specifically, the discussion will be presented in the following sequence. Section 2 describes the situation of Naraha and Tomioka residents, particularly with regard to temporary housing, before and after the disaster. Section 3 examines the residents' involvement with "ku-kai" (ward association)²⁰ before and after the disaster and with the residents' associations of temporary housing complexes, and the locations they plan to live in the future, based on questionnaire surveys conducted in 2012 and 2015 with residents of temporary housing units. This is followed by an examination of how involvement with neighborhood associations or residents' associations of temporary housing complexes affects future plans, including whether to return to their former towns or move elsewhere, based on SEM. Section 4 uses interviews to review the trends in the two towns and examines the activities of the residents' associations of temporary housing complexes and neighborhood associations after the evacuation orders were lifted. Section 5 summarizes the findings presented in this paper, argues the need to collect survey data during normal times, and presents future issues.

2. Overview of Naraha and Tomioka

2.1. Naraha Town

Naraha Town, located in the southern part of Futaba District, had a population of approximately 8,000 before the disaster. The town was formed when Tatsuta and Kido villages were merged in 1956; they are respectively described as the northern and southern parts of town in public relations documents. In **Table 1**, the wards from Kamiide to Ottojiro form the "northern part," while those from Kamikobana to Osaka form the "southern part." There are 20 wards, of which Kamiide has the largest population, followed by Yamadaoka (**Table 1**).

As a result of the Tohoku Earthquake on March 11, 2011, the coastal areas of Naraha were inundated by the ensuing tsunami, and the accident at the Tokyo Electric Power Company Fukushima Daiichi Nuclear Power Plant on the following day, March 12, forced the entire population of Naraha to evacuate, as most parts of the town lay within the zone of a 20 km radius of the power station. The town office was initially moved to Aizu Misato Town, with which Naraha had a prior agreement, but most of the municipal functions were later transferred to Iwaki City.

Many evacuees went to Iwaki City, which is about 20 km south of Naraha. Thirteen temporary housing complexes were set up in Iwaki and one in Aizu Misato Town, all of which were made available for occupancy from June 2011. **Table 2** presents the dates these complexes were opened and the dates the residents' associations were established and dissolved. The largest of these was the one in Aizu Miyasato with 250 units, followed by Kamiarakawa with 241 units, and the smallest was Iino, with 16 units. The residents' associations were established shortly after occupancy began in Takaku Nos. 5, 6, and 10; they were established a year or more after occupancy began in Iino, Takaku No. 9, Kamiarakawa, and Joban Zenita. In the latter case, the residents had first decided that a residents' association was unnecessary, but later decided to establish one after trouble occurred between the residents, or from the need to have a clearing-house function for relaying information.

2.2. Tomioka Town

Tomioka lies just north of Naraha, and Tokyo Electric Power Co. Fukushima Daini Nuclear Power Plant is located on the boundary between the two towns. Before the disaster, with a population of approximately 16,000, it was the second largest in the district, following Namie, and consisted of 27 wards (**Table 3**). The largest of these was Nishihara ward, followed by Yonomori ekimaemiami ward. It was formed when Futaba Town (previously Kamioka Village) and the former Tomioka Town merged in 1955, and can be divided into two parts: Yonomori, which is the previous Kamioka Village, and Tomioka. Tomioka Town, like Naraha, was also damaged by the tsunami, and the entire population evacuated on March 12, 2011, to Kawauchi Village and Iwaki City. The

17. For example, [16].

18. As an example of immigrant studies, Hirota discusses the possibilities of transnational communities in the context of "diversity and integration," where he lays out the relevant concepts and examines the possibilities [19]. Such discussions provide an important perspective on not only evacuees from nuclear power plant accidents but also those who are forced to evacuate over long periods and from a wide region, such as in the case of volcanic eruptions, and their reception. This paper will not delve into such a theoretical discussion, but leave it for a later study.

19. For example, Takahashi [20] discusses the summer festival and "Ebisuko-ichi" held in 2017 in Tomioka from a viewpoint similar to mine.

20. Ku-kai are treated in this paper as being on the same level as neighborhood associations (chonai-kai) and residents' associations (jichi-kai).

21. Compiled from the public relations brochure published and documents provided by the town office. The figures are based on those registered in the basic resident registers, and the actual figures are lower. The same holds for Tomioka.

Table 1. Population and number of households of Naraha Town wards before and after the disaster.²¹

Ward	No. of subunits	No. of households		Population	
		2011.3	18.3	2011.3	18.3
Kamiide	29	471	213	1,291	393
Shimoide	12	258	163	642	209
Kitada	10	196	261	571	510
Oya	12	135	70	420	144
Matsudate	9	81	31	249	65
Kamishigeoka	8	87	41	301	86
Asahigaoka	2	23	1	30	1
Shigeoka	7	181	66	449	100
Shimoshigeoka	6	111	60	356	112
Namigura	6	67	12	227	20
Eidan	6	179	69	485	137
Otojiro	1	10	1	14	1
Kamikobana	10	141	75	434	155
Shimokobana	19	311	163	859	370
Yamadaoka	15	417	220	1,082	441
Maehara	4	86	28	289	60
Yamadahama	8	80	34	270	79
Mominokishita	1	6	0	15	0
Onnadaira	1	21	14	66	27
Osaka	1	14	8	37	19
Total	167	2,875	1,530	8,087	2,929

Table 2. Trend in the number of evacuees from Naraha in temporary housing locations after the disaster.

Temporary housing	No. of house-holds	Starting for occupant acceptance	Resident association	
			Est.	Dissolved
Aizu Miyasato	250	Jun-11	Nov-11	Mar-18
Iino	16	Jul-11	Jul-13	Mar-17
Takaku No. 5	18	Jul-11	Aug-11	Mar-18
Takaku No. 6	17	Jul-11	Aug-11	Mar-18
Takaku No. 8	123	Jul-11	Jun-13	Mar-16
Takaku No. 9	193	Aug-11	Mar-13	Mar-18
Takaku No. 10	200	Jul-11	Dec-11	Oct-15
Kamiarakawa	241	Sep-11	Jul-12	Mar-18
Sakumachi Ichhome	57	Oct-11	Dec-11	Mar-18
Uchigo Shiramizu	61	Oct-11	Dec-11	Mar-17
Yotsukura Hosoya	40	Oct-11	Jan-12	Dec-16
Joban Zenita	50	Mar-12	Jul-13	Mar-17
Rinjo Hattanda	106	Jul-12	Dec-12	Mar-17
Onahama Aikoshima	40	Feb-13	May-13	Mar-18
Total	1,412			

Temporary housing	No. of resident households						
	Mar-12	Mar-13	Mar-14	Mar-15	Nov-16	Apr-17	Jan-18
Aizu Miyasato	229	172	157	140	110	77	29
Iino	16	16	14	15	11	8	5
Takaku No. 5	18	18	18	17	16	16	9
Takaku No. 6	16	17	16	17	17	15	13
Takaku No. 8	122	123	123	118	80	73	47
Takaku No. 9	191	193	191	187	171	144	95
Takaku No. 10	200	200	200	193	178	157	115
Kamiarakawa	237	239	236	235	194	166	109
Sakumachi Ichhome	57	57	57	57	49	41	33
Uchigo Shiramizu	61	61	60	59	50	40	28
Yotsukura Hosoya	40	40	40	39	33	26	14
Joban Zenita	—	45	43	47	37	29	15
Rinjo Hattanda	—	103	103	95	71	53	30
Onahama Aikoshima	—	34	37	34	25	21	15
Total	1,187	1,318	1,295	1,253	1,042	866	557

town office was subsequently set up in Koriyama City, while branch offices and substations, which involved partial functions, were set up in Iwaki City, Ohtama Village, and Miharu Town, the sites of temporary housing complexes.

As shown in **Table 4**, three, six, one, and three temporary housing complexes for Tomioka residents were set

Table 3. Population and number of households in wards of Tomioka Town before and after the disaster.

Ward	No. of subunits	No. of household	Population	
			2011.3	17.11
Sugiuchi	5	83	287	5
Nakamachi	10	130	428	3
Takatsuto	11	268	568	5
Shimosenri	9	130	449	12
Ohsuge	7	360	642	0
Yonomori Ekimaekita	12	267	619	-
Yonomori Ekimaeminami	17	472	1,122	-
Shinmachi	10	339	841	9
Akagi	6	37	124	0
Kamimotomachi	6	50	149	4
Ohtsuka	24	587	1,603	30
Motomachi	12	377	854	11
Iwaido	6	75	251	4
Shimizu	15	373	974	27
Kamikohri	2	38	137	0
Ohta	4	51	147	4
ShimoKoriyama	5	118	353	9
Kegaya	4	32	103	0
Hotokehama	5	42	101	2
Ekimae	8	100	271	0
Nishihara	20	511	1,125	31
Chuo	25	476	1,011	111
Kobama	11	361	964	79
Fukaya	6	116	316	-
Oragahama	8	133	357	-
Sakaemachi	2	42	112	-
Shin yonomori	18	725	1,925	-
Total	268	6,293	15,833	346

up in Koriyama, Miharu, Ohtama, and Iwaki, respectively, and began accepting occupants in June 2011. The largest complex was Adatara with 630 units, which was located in Ohtama Village; this was followed by Tomitamachi with 287 units, which was next to a temporary housing complex for evacuees from Kawauchi Village. In comparison to Naraha Town, the residents' associations of the complexes were established relatively early – within half a year – after they were opened.

3. Neighborhood Associations Before and After the Disaster

3.1. Results of the Questionnaire Survey

3.1.1. Survey Overview

This section provides an overview of the questionnaire surveys conducted in 2012 and 2015 with the residents of Naraha Town and Tomioka Town.

I first describe the survey conducted in 2012. The objective of the survey was to examine the evacuees' lives and the types of problems they encountered in their lives in relation to the local communities at the evacuation destinations and the wards before the disaster, a year after the disaster when life at the temporary housing units or rented housing had settled down to some extent. The survey took place from June to September 2012 and consisted of enclosing the questionnaire with a public relations brochure distributed to all households (Naraha 3,700, Tomioka

Table 4. Trend in the number of evacuees from Tomioka in temporary housing locations after the disaster.

Location	Temporary housing	No. of households	Starting for occupant acceptance	Resident association		
				Est.	Disolve	d
Koriyama	Minami Icchome	166	Jun-11	Jun-11	Mar-16	
	Midorigaoka 7	169	Jun-11	Oct-11	Mar-18	
	Tomitamachi	287	Jun-11	Aug-11	Sep-17	
Miharu	Kumagami	86	Jun-11	Aug-11	Mar-17	
	Hirasawa	84	Jun-11	Aug-11	Mar-17	
	Miharunosato	18	Jun-11	SMMR 2011	Mar-17	
	Momijiyama	34	Jun-11	Sep-11	Feb-16	
	Sawaishi	58	Jun-11	Sep-11	Mar-15	
	Shibahara Hagikubo	50	Jul-11	Sep-11	Mar-17	
Ohtama	Adatara	630	Jun-11	Sep-11	Mar-16	
Iwaki	Yoshima	62	Jun-11	Dec-11	Mar-17	
	Izumitamatsuyu	220	Sep-11	Dec-11	May-16	
	Shimotakaku	90	Oct-12	Mar-13	Sep-17	
Total		1,954				

Location	Temporary housing	No. of resident households				
		Mar-12	Mar-13	Mar-14	Mar-16	Apr-17
Koriyama	Minami Icchome	165	161	155	92	55
	Midorigaoka 7	125	121	110	64	35
	Tomitamachi	282	275	269	87	48
Miharu	Kumagami	75	64	55	32	11
	Hirasawa	71	57	53	37	4
	Miharunosato	17	13	13	10	0
	Momijiyama	29	29	26	20	0
	Sawaishi	31	31	26	0	0
	Shibahara Hagikubo	39	34	32	24	1
Ohtama	Adatara	259	253	224	59	23
Iwaki	Yoshima	61	62	57	46	37
	Izumitamatsuyu	220	219	200	122	87
	Shimotakaku	—	89	90	57	42
Total		1,374	1,408	1,310	650	343

7,200); the responses were to be returned by mail. The survey was targeted at the heads of households or those in a similar situation, and 477 and 1,389 responses were received from Naraha and Tomioka residents, respectively. The survey items²² consisted of 1) personal ties and community activities before the disaster, 2) activities immediately following the disaster, 3) personal ties and community activities up to the present, and 4) evaluation of present life and future plans or hopes. These items were presented in the form of a questionnaire and interviews. In the interviews conducted with those who were or had been an official of residents' associations or area associations, the items further included 5) the events surrounding the establishment of the residents' association, 6) organization and activities/events of the association, and 7) current issues and future action plans.

The 2015 survey was conducted from September to November with the residents of the two towns who were occupants of temporary housing units.²³ The questionnaire was distributed by presidents and liaison officers of the residents' associations of temporary housing complexes and the responses returned by mail. Responses were obtained from 243 Naraha and 149 Tomioka residents.²⁴ The survey items, based on those of 2012, consisted of 1) involvement with wards and local community

Table 5. Outline of surveys.

Survey title	2012 Naraha Town Community Survey	2012 Tomioka Town Community Survey
Survey period	June-August, 2012	August-September, 2012
Objective	Obtaining an understanding of Naraha residents' local involvement before and after the disaster and their wishes with regard to returning.	Obtaining an understanding of Tomioka residents' local involvement of Tomioka residents before and after disaster and their wishes with regard to returning.
Method	Written questionnaire returned by mail.	Written questionnaire returned by mail.
Subjects	Heads of households or those in a similar position of entire 3,700 households from Naraha Town	Heads of households or those in a similar position of entire 7,200 households from Tomioka Town
Valid responses	477 (140 from occupants of temporary housing units)	1,389 (208 from occupants of temporary housing units)
Survey title	2015 Naraha Town Community Survey	2015 Tomioka Town Community Survey
Survey period	September-October, 2015	October-November, 2015
Objective	Obtaining an understanding of local involvements before and after the disaster, life after moving to temporary housing unit, and wishes with regard to returning.	Obtaining an understanding of local involvement before and after the disaster, life after moving to temporary housing unit, and wishes with regard to returning.
Method	Written questionnaire returned by mail.	Written questionnaire returned by mail.
Subjects	Heads of households or those in a similar position of 1,191 households from Naraha Town in temporary housing units (12 locations) who agreed to cooperate	Heads of households or those in similar position of 621 households from Tomioka Town in temporary housing units (nine locations) who agreed to cooperate
Valid responses	243	149

Table 6. Respondents' attributes.²⁵

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Male	69.3	58.6	65.4	52.4
Female	29.1	37.1	30.8	45.5
Unknown	1.6	4.2	3.8	2.1
20s	0.8	2.1	0.5	-
30s	2.4	2.5	-	1.4
40s	5.5	6.8	7.6	8.3
50s	25.2	9.7	15.7	15.2
60s	30.7	30.0	35.1	25.5
70s and over	31.5	43.0	35.1	42.8
Unknown	3.9	5.9	5.9	6.9

before the disaster, 2) involvement with wards and local community after the disaster, 3) life after moving into the temporary housing unit, 4) wishes with regard to returning to their former towns or group relocation, and 5) basic attributes. The surveys are summarized in Table 5 and the respondents' attributes are presented in Table 6.

3.1.2. Survey Results

Below, I discuss how a respondent's involvement with neighborhood associations and residents' associations in temporary housing complexes is related to his or her future plans for living. Specifically, I use SEM to examine the relation between "involvement with neighborhood associations before the disaster," "involvement with neighborhood associations after the disaster," "involvement with the residents' association of the temporary

22. The survey framework is based on a previous survey of neighborhood associations in six cities in the Tohoku region conducted by the author and others [21].

23. Iino and Joban Zenita (Naraha), and Minami Icchome, Tomita and Kumagami (Tomioka) were excluded.

24. The sample numbers are different from those in the SEM described later, owing to the treatment of missing values.

25. In Table 6 and the remaining ones, the figures represent percentages unless otherwise stated.

housing complex,” and “future hopes.” In this section, as a preparatory step, I provide an overview of the items used in the SEM in Section 2 based on the results of the surveys in 2012 and 2015. “Involvement with neighborhood associations before the disaster” is examined in terms of the elements of 1) membership and position in the neighborhood association, 2) participation in activities and events, and 3) involvement with organizations; “involvement with the residents’ association of the temporary housing complex” in terms of 1) position, 2) participation in activities and events, 3) problems related to daily life; and “future hopes” in terms of 1) presence or absence of discussions regarding the future and 2) preference for next location to live; finally, “involvement with neighborhood associations after the disaster (in the 2015 survey only)” is considered in terms of 1) participation in activities and events and 2) expectations one has for neighborhood associations. The tabulation that follows is based on 127 and 237 Naraha residents and 185 and 145 Tomioka residents, respectively, in the 2012 and 2015 surveys, as only residents in temporary housing units were targeted.²⁶

3.1.2.1. Involvement with Neighborhood Associations Before the Disaster

(1) Membership and Position in Neighborhood Association

For both towns about 90% of residents were members of neighborhood associations before the disaster (**Table 7**). Less than 10% had held the positions of chairperson/vice chairperson in either town, while 20 to 60% had been leaders of the local neighborhood association or group. About 30 to 50% had held no position.

(2) Participation in Activities and Events

The activity or event in which respondents participated most frequently before the disaster was garbage disposal and collection, followed by general meetings (**Table 8**). In the case of Naraha, this was followed by shrine festivals, while for Tomioka residents this was about 20% points lower.

(3) Involvement with Organizations

The organization other than the neighborhood association that the respondents had been most frequently involved with was the parishioners’ organization for a shrine or temple, followed by a club composed of the elderly; these involvements reflect the high average age of the survey participants (**Table 9**). The rate of involvement with anti-crime associations or organizations for local children was about 10 to 20%.

Table 7. Membership and position in neighborhood association.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Member of neighborhood association	99.2	87.8	98.4	89.0
Non-member of neighborhood association	0.8	12.2	1.6	11.0
N=	126	208	182	129
Chairperson	1.6	9.1	3.8	7.8
Vice chairperson	3.2	4.3	1.6	7.8
Treasurer, general affairs, etc.	11.1	16.8	8.8	17.8
Leader of neighborhood association	21.4	52.9	23.1	57.4
Other	4.0	4.3	3.8	0.8
No position	54.8	32.7	53.3	27.9
Unknown	11.1	4.3	14.8	3.9

Table 8. Participation in activities and events.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Garbage disposal and collection	65.4	68.4	54.6	58.6
General meeting of neighborhood association	48.0	49.4	49.2	64.1
Shrine festival	48.8	47.3	27.0	26.2
Ceremonial occasions	33.9	44.7	27.0	40.0
Dinner or drinking party	26.0	24.5	18.4	26.2
Recovery of resource or waste materials	18.1	17.3	28.6	22.1
Sports events such as athletic meetings	23.6	18.6	16.8	22.1
Crime/fire prevention patrol	19.7	17.3	17.3	17.9
Disaster prevention drill	16.5	26.6	8.6	17.2
Welfare activities for the elderly and handicapped	7.9	7.6	5.9	5.5

Table 9. Involvement with organizations other than neighborhood associations.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Parishioners organization for a shrine or temple	20.5	27.4	17.8	22.1
Elderly’s club	15.7	27.0	21.6	17.9
Anti-crime associations	16.5	12.7	14.6	11.0
Organizations for local children	11.8	13.9	12.4	13.8
Fire brigade (local branch)	11.8	13.1	8.1	9.0
Social welfare council	8.7	10.5	4.9	6.2
Women’s association	6.3	6.8	5.4	10.3
Sports association	4.7	5.9	8.1	6.9
Social workers association, child welfare council	3.1	3.4	4.9	2.8
Young men’s association	2.4	2.5	1.6	2.1
Youth guidance council	3.1	1.3	2.7	0.7
None	16.5	26.6	19.5	33.8

3.1.2.2. Involvement with the Residents’ Association of the Temporary Housing Complex

(1) Position

Below, I present an overview of the residents’ associations of temporary housing complexes after the disaster (**Table 10**). Over half the respondents had not held a position, and from 10 to 20% were or had been leaders of neighborhood associations.

(2) Participation in Activities and Events

As in the case for the neighborhood associations before the disaster, garbage disposal and collection were the activities in which the respondents most often participated (**Table 11**). With Naraha residents, the participation rate increased by 30% points in 2015 from 2012, and it also increased for general meetings, explanatory or study meetings, and sports events, indicating that the occupants were getting involved with activities and events more fre-

26. Only occupants of temporary housing were treated for the following reasons. The future residences of those who are not occupants of temporary housing are decided (at least for the following several years), as they have purchased or rented housing in Iwaki or Koriyama, and the environment, including residential life, differs greatly between temporary housing and purchased or rented housing. For these reasons, it is difficult to make a comparison of occupants of temporary housing and those of purchased or rented housing, which is why I limited the analysis to the former. A study of the latter group based on a similar awareness of the issues should also be undertaken, but this must await another study. In addition, those for whom the administrative ward of the pre-disaster residents are unknown were excluded as their community involvement before and after the disaster cannot be known.

Table 10. Positions held in the residents' association of temporary housing complexes.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	66	237	158	145
Chairperson	-	4.6	4.4	6.9
Vice chairperson	4.5	5.5	4.4	5.5
Treasurer, general affairs, etc.	3.0	6.8	7.6	11.7
Leader of neighborhood association	16.7	12.7	10.8	13.8
Other	-	2.1	1.3	1.4
No position	69.7	65.8	70.9	56.6
Unknown	9.1	7.6	6.3	9.0

Table 11. Participation in activities and events held by the residents' association of temporary housing complexes.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	113	237	178	145
Garbage disposal and collection	42.5	74.3	55.1	53.1
General meeting of neighborhood association	22.1	32.1	47.2	52.4
Explanatory or study meetings	15.9	27.0	21.3	34.5
Sports events such as athletic meetings	5.3	36.7	6.2	36.6
Recovery of resource or waste materials	16.8	16.5	27.0	17.9
Disaster prevention drill	6.2	8.4	7.3	15.9
Crime/fire prevention patrol	3.5	5.5	10.1	17.2
Ceremonial occasions	12.4	10.1	3.4	6.2
Welfare activities for the elderly and handicapped	4.4	4.2	6.2	5.5

quently. The same trend can be seen among Tomioka residents.

(3) Problems Related to Daily Life

In terms of problems related to daily life in the temporary housing units (**Table 12**), the “increase of occupants whose names are unknown” increased by over 10% points among residents of both towns, as did “the presence of occupants who do not observe rules,” indicating the effect of the shifting members of the temporary housing complexes caused by incoming and exiting occupants. All of the items either increased or stayed at about the same level in 2015 compared to 2012, which may indicate that the problems encountered in daily living in 2012 had not been resolved three years later.²⁷

3.1.2.3. Future Hopes

(1) Presence/Absence of Discussion Regarding the Future

Over half of the residents of both towns responded that they had “engaged in discussions” about the future since the disaster as of 2012 and 2015 (**Table 13**). In particular, the figure rose by more than 15% points among Naraha residents, one reason for which may have been the lifting of the evacuation order in 2015.

(2) Preference for Next Location to Live

Among Naraha residents, the greatest number hoped to return to Naraha Town (60.6% and 67.5% in 2012 and

Table 12. Problems related to daily life in temporary housing units (top ten items averaged for both towns).

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Increased number of occupants whose names are unknown	23.6	46.4	28.6	42.1
Aging of occupants	18.9	19.0	28.1	34.5
Presence of occupants who do not observe rules	11.0	23.6	18.9	29.0
Few opportunities of getting together with other temporary	15.0	20.3	15.7	28.3
Only part of the occupants participate	14.2	12.7	14.1	22.8
Lack of shopping facilities such as supermarkets	11.8	13.9	14.1	18.6
Low participation level in activities sponsored by residents'	7.1	15.6	15.1	19.3
Problems related to garbage disposal	16.5	14.3	9.7	14.5
Increased isolation of elderly or single occupants	9.4	10.5	18.4	16.6
Dealing with elderly occupants living alone	14.2	8.9	15.7	14.5

Table 13. Discussions regarding the future.

	Naraha Town		Tomioka Town	
	2012	2015	2012	2015
N=	127	237	185	145
Have engaged in discussions	51.2	68.4	65.9	62.1
Have not engaged in discussions	29.9	14.8	17.3	20.0
Don't know	11.0	11.4	10.8	11.7
Unknown	7.9	5.5	5.9	6.2

2015, respectively), followed by Iwaki City (35.4% and 26.2% in 2012 and 2015, respectively), indicating the relative increase in the number of those who wished to return to Naraha. Meanwhile, among Tomioka residents, the greatest number selected Iwaki City (52.4%) in 2012, followed by Tomioka Town (40.5%), and “other locations in Fukushima prefecture” (16.2%), indicating the high share of those who selected Iwaki. In 2015, the results were tabulated according to the temporary housing site, where among the occupants of temporary housing in Iwaki and Koriyama (60 respondents), the greatest number selected Iwaki (46.7%) as their next place to live, followed by “public housing planned for construction in Tomioka Town” (25.0%), “public housing planned for construction in locations other than Tomioka Town” (23.3%), and “house owned in Tomioka” (21.7%). Among occupants of Adatara temporary housing (36 respondents), the greatest number selected “Yokoboridaira public housing complex – planned for construction on the grounds of the temporary housing site” (55.6%), “house owned in Tomioka” “location in Fukushima prefecture other than Iwaki” (16.7%), and Iwaki City (13.9%). Among occupants of temporary housing units in Miharu Town (29 respondents), the results were “Hirasawa public housing complex” (planned for construction in Miharu) (62.1%), “house owned in Tomioka” (27.6%), and Iwaki City (17.2%).

As the above results show, among Naraha residents, for whom the evacuation order will be lifted for the entire town, the greatest number selected their home town, Naraha, as the location of their next residence, while among the former residents of Tomioka, some areas of which are still designated as a “difficult-to-return zone,”

27. This view needs some qualification. While things had more or less settled down with the passing of several years after the 2011 disaster, there was a feeling of life going back to a routine as well as an increase in expectations concerning the lifting of the evacuation order, so it is possible to interpret the results in terms of “lowered tension” (Rinjo Hattanda Temporary Housing Complex) at the time the 2015 survey was conducted.

Table 14. Participation in activities and events hosted by neighborhood associations after the disaster.

	Naraha	Tomoka
	2015	
	N=	237
General meeting of neighborhood associations	39.7	43.4
Explanatory meetings on compensation, return to town, etc	40.5	33.8
Day or overnight trip	21.9	29.0
New year's party, year end party	15.6	19.3
Other	3.4	2.1
None	30.8	29.0

Table 15. Expectations for neighborhood associations.

	Naraha	Tomoka
	2015	
	N=	237
Information disclosure on radiation decontamination	44.7	44.8
Information disclosure on compensation	41.8	37.2
Information disclosure on ward or neighborhood	41.8	34.5
Information disclosure on relocation, including the return to town	37.6	38.6
Consultation regarding relocation such as the return to town	25.3	30.3
Planning of vision for wards and town	29.1	24.1
Negotiation with national or local government or company on compensation, etc.	24.5	22.8
Consultation regarding current life	25.3	15.9
Hosting of social events such as drinking parties	11.8	12.4
Other	2.1	—
None	10.5	15.2

the greatest number selected some location other than Tomioka as the next place they wished to live.

3.1.2.4. Involvement with Neighborhood Associations After the Disaster (Only in 2015 Survey)

(1) Participation in Activities and Events

What kind of involvement do the occupants of temporary housing have with the neighborhood associations of their home towns prior to the disaster (**Table 14**)? Among activities and events, participation in general meetings was highest for the residents of both towns at about 40%, which was followed among Naraha residents by “explanatory meetings regarding compensation, etc.,” while the number of those who participated in “day or overnight trips” was high among Tomioka residents. Could this difference be because Naraha residents are planning for future moves, including their return to Naraha, while Tomioka residents view neighborhood associations as a channel through which they can confirm their identity as Tomioka residents by participating in social gatherings?

(2) Expectations for Neighborhood Associations

I review the expectations that the residents of both towns had at the time of the survey (2015) for neighborhood associations (**Table 15**). The residents of both towns display a similar trend, and expect the neighborhood associations to provide information on “radiation decontamination,” “compensation,” “issues regarding ward or neighborhood,” and “relocation, including the return to town.” Although one must be cautious of making a simple comparison, the figures among Naraha residents are generally higher than those of Tomioka residents, which may be

an indication that they feel that the return to their former town is becoming a real possibility.

3.2. Interpretation Based on SEM

3.2.1. Concept of Model Setting

The objective of the analysis is to examine how the residents’ activities of the two towns in the neighborhood associations before the disaster have affected their participation in residents’ associations after the disaster as well as in the residents’ associations in temporary housing complexes. Through this examination, I hope to clarify in what manner their involvement in neighborhood associations during “normal times” (before the disaster) is related to the “emergency situation” of life reconstruction (particularly their involvement with the community) following evacuation.

The establishment of the variables can be explained as follows. In the 2012 model, the latent variable “involvement with neighborhood associations before the disaster” is composed of the observable variables: “number of times one has been appointed to a position,” “ward of residence before the disaster,” “number of times one has participated in an event,” and “number of organizations with which one has been involved.” Appointment to a position, participation in events, and the organizations involved consist of the numbers stated in the response. The wards of residence were divided into northern (1) and southern (2) parts in the case of Naraha. This was based on the views often expressed in the interviews that “there may be fewer residents planning to return to the northern part, which is close to the nuclear power plant.”²⁸ In the case of Tomioka, the wards were divided into the “difficult-to-return zone” (1), and the variables consisted of “restricted residence area” and “zone in preparation for the lifting of the evacuation order” (2). Next, the latent variable “involvement with residents’ association of temporary housing complexes” is composed of the observable variables: “number of times one has been appointed to a position,” “problems related to daily life,” “number of times one has participated in an activity,” and “number of times one has participated in an event.” All of these variables are indicated in the numbers stated in the responses. Finally, the latent variable “future hopes” is composed of the observable variables: “preference for next location to live” (Naraha and Tomioka residents), and “have or have not engaged in discussions on return to town and relocation” (Naraha residents only). In the former case, the responses were classified into “town of residence before the disaster” (4), Iwaki (3), other locations in Fukushima prefecture (2), other (1), and undecided or unknown (0). The responses to the latter variable consisted of “discussions took place” (3), “no discussions took place” (2), “don’t know” and “unknown” (1).²⁹ The missing values

28. It is becoming clear from the current status of returnees released by the town office that there is little difference between these areas.

29. The reason for assigning a low number to “don’t know” and “unknown” (1) is that I felt that the response “no discussions took place” still indicates a certain attitude toward holding discussions (including a deliberate decision to avoid discussions), while “don’t know” and “unknown” indicate apathy.

were treated as follows. No response to “number of times one has been appointed to a position” was interpreted as “never having been appointed to a position,” while in the case of the other observable variables, i.e., “number of times one has participated in an event,” and “number of organizations with which one has been involved,” a no response was treated as zero (0). Variables employed in the 2015 model but not in the 2012 model are as follows. The latent variable “involvement with neighborhood associations before the disaster” is composed of the observable variables “number of times one has participated in an activity or event”³⁰ and “number of organizations with which one has been involved.” In the 2015 model, the latent variable “involvement with residents’ associations in temporary housing complexes” is additionally composed of the observable variable “expectations one has for neighborhood associations.” These observable variables are scored by the numbers stated in the responses. The missing values were treated in the same manner as in the 2012 model.

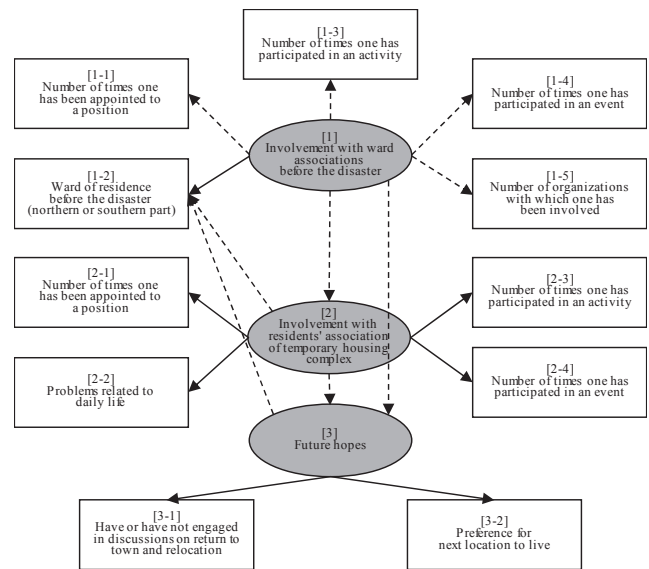
3.2.2. Analysis Results

3.2.2.1. Naraha Town

(1) 2012

I first examine the 2012 model for Naraha. The goodness-of-fit was considered to be satisfactory based on the indices RMR = 0.177, GFI = 0.948, AGFI = 0.913, CFI = 0.995, and RMSEA = 0.014.

With respect to the model (Fig. 1), “involvement with neighborhood associations before the disaster” is related to “ward of residence before the disaster (northern or southern part)”; “involvement with residents’ association of temporary housing complexes” is related to “number of times one has been appointed to a position,” “problems related to daily life,” “number of times one has participated in an activity,” “number of times one has participated in an event,” “future hopes” to “have or have not engaged in discussions on return to town and relocation,” and “preference for next location to live.” At this point, when only one-and-a-half years had passed since the respondents began living the life of evacuees, the pre-disaster neighborhood associations may just have been “symbols” that represented “places one used to live.” Moreover, the connection is weak among the latent variables “involvement with neighborhood associations before the disaster,” “involvement with residents’ association of temporary housing complex,” and “future hopes.” Judging from the results, we may be able to state that the residents living in temporary housing units in the summer of 2012 placed their pre-disaster connections to the side in the process of getting used to life in the temporary housing complex; although they were thinking of the future, they did not link their “former location of residence (neighborhood associ-



Path	Estimated value	t-value	Probability	Path	Estimated value	t-value	Probability
[2] ← [1]	0.30	0.98	0.33	[2-1] ← [2]	0.20	—	—
[3] ← [2]	0.24	1.37	0.17	[2-2] ← [2]	0.52	1.94	0.05
[3] ← [1]	0.10	0.62	0.54	[2-3] ← [2]	0.90	1.93	0.05
[1-1] ← [1]	0.15	0.94	0.35	[2-4] ← [2]	0.52	1.94	0.05
[1-2] ← [1]	0.12	—	—	[1-2] ← [1]	-0.06	-0.51	0.61
[1-3] ← [1]	0.68	1.19	0.23	[3-1] ← [3]	0.76	—	—
[1-4] ← [1]	0.89	1.19	0.23	[3-2] ← [3]	0.46	1.68	0.09
[1-5] ← [1]	0.66	1.19	0.23	[1-2] ← [3]	0.18	1.19	0.23

Fig. 1. 2012 Naraha model.

ation before the disaster)” with “present location of residence (temporary housing).”

(2) 2015

Here, we discuss the model used in 2015, three years later (Fig. 2). The goodness-of-fit, as indicated by the indices RMR = 0.372, GFI = 0.857, AGFI = 0.784, CFI = 0.803, and RMSEA = 0.104, is weaker than in 2012.³¹ Examining the relation between the latent variables with this in mind, we see that the following path exists: “involvement with neighborhood associations before the disaster” → “involvement with neighborhood associations after the disaster” OR “involvement with residents’ association of temporary housing complex” → “future hopes.” This can be taken to mean that, with the passing of four years since the disaster, residents have become used to life in the temporary housing complex, which has allowed them to connect with the residents’ association of the temporary housing complex or neighborhood associations, and that this involvement has resulted in their forming future hopes.

3.2.2.2. Tomioka Town

(1) 2012

We next look at the Tomioka residents. A considerable difference between Tomioka and Naraha is that Tomioka

30. The reason for using the item “number of times one has participated in an activity or event” instead of separating the “number of times one has participated in an activity” and “number of times one has participated in an event” as in 2012 is because “activity and event” were considered as a set in the 2015 survey.

31. One factor is that, although the residents were in the process of making various decisions around 2015, this manifested itself in the form of differentiation, which lowered the model’s goodness-of-fit.

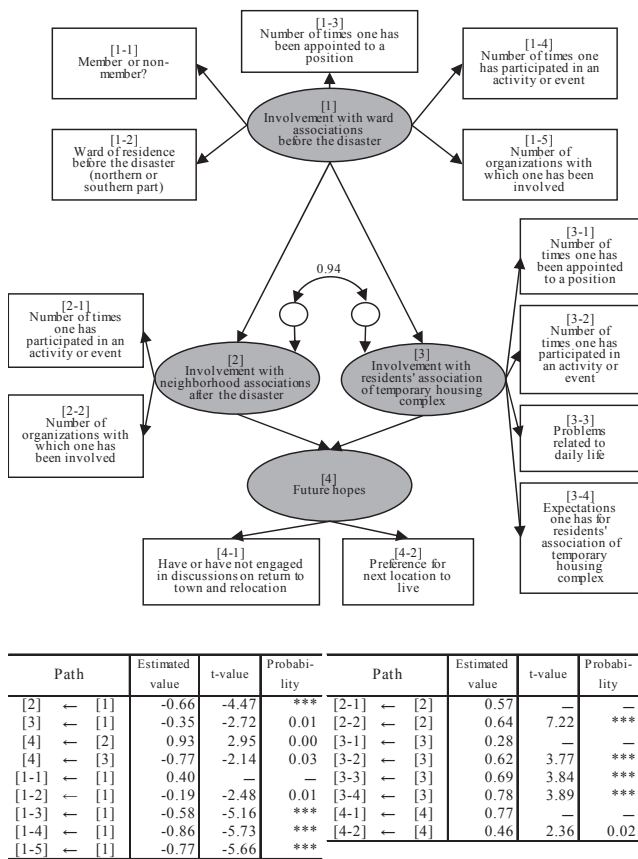


Fig. 2. 2015 Naraha model.

includes a “difficult-to-return zone.” The goodness-of-fit is satisfactory as RMR = 0.222, GFI = 0.953, AGFI = 0.924, CFI = 0.979, and RMSEA = 0.036.

The model is described in (Fig. 3). It can be seen that “involvement with neighborhood associations before the disaster” is formed by “number of times one has been appointed to a position,” “number of times one has participated in an activity,” “number of times one has participated in an event,” and “number of organizations with which one has been involved”; it is unrelated to the ward of residence (type of evacuation). “Involvement with residents’ association of temporary housing complex” is related to “number of times one has been appointed to a position,” “problems related to daily life,” “number of times one has participated in an activity,” and “number of times one has participated in an event,” while the variable “future hopes” is related to “preference for next location to live.” In terms of the relationship among latent variables, it can be seen that a strong correlation exists only between “involvement with neighborhood associations before the disaster” and “involvement with residents’ association of temporary housing complex” but not in any other pair. The difference in Naraha residents around the same period is that some relationship exists between activities in the residents’ association of the temporary housing complex and those in the neighborhood associations before the disaster (although the cause is unknown); in other words,

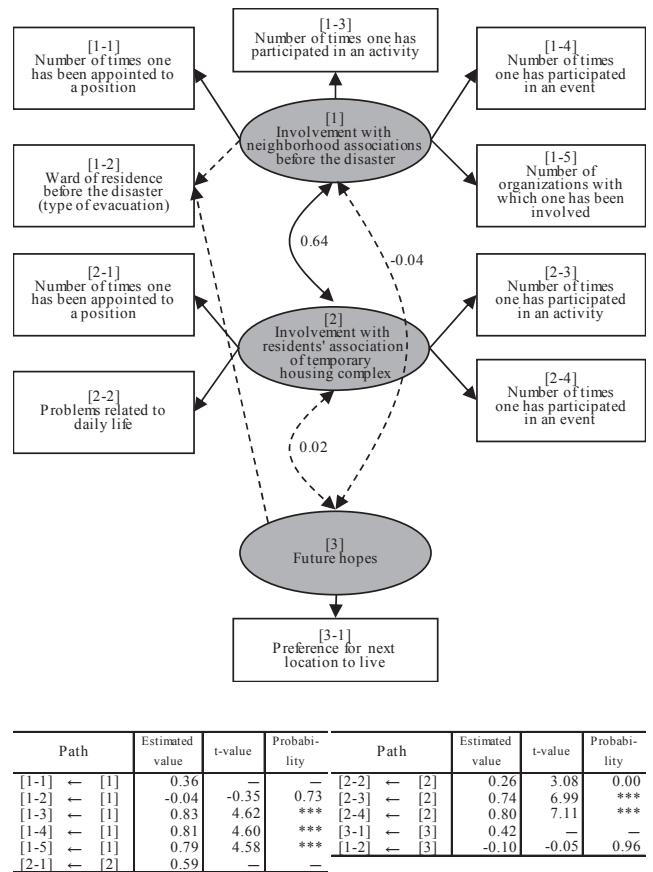


Fig. 3. 2012 Tomioka model.

the knowhow acquired through activities before the disaster has some relationship to the activities in the residents’ association of the temporary housing complex.

(2) 2015

How has the situation changed three years later? The goodness-of-fit, as indicated by the indices RMR = 0.384, GFI = 0.861, AGFI = 0.791, CFI = 0.828, and RMSEA = 0.098, is weaker compared to the 2012 model (Fig. 4).

Looking at the latent variables, we see that a relationship exists between “involvement with neighborhood associations before the disaster” and “involvement with neighborhood associations after the disaster” and between the former and “involvement with residents’ association of temporary housing complex,” but that only “involvement with neighborhood associations before the disaster” is tied to “future hopes.” In other words, it is the pre-disaster activities that have affected the formation of future hopes. Meanwhile, a strong correlation is found between “involvement with neighborhood associations after the disaster” and “involvement with residents’ association of temporary housing complex.” What do these relationships signify?

Although this issue is partially discussed in Section 4, it can be considered to represent the differentiation between those who plan to return to town and those who do not, so that the path between “involvement with neighborhood associations before the disaster” and “future hopes” will

4. Town, Residents' Association of the Temporary Housing Complex and Neighborhood Association After the Lifting of the Evacuation Order

4.1. Major Trends in the Two Towns

The evacuation orders were lifted for the entire area of Naraha Town on September 5, 2015, and for Tomioka Town, except in certain areas, such as Yonomori, on April 1, 2017.

In Naraha, the Reconstruction Prayer Event, Ward Mayors Conference, and other events were held within the town limits in September, following the lifting of the evacuation order.³³ The following October, the "Futaba World 2015 in Naraha," which is hosted once a year on a rotating basis among municipalities in Futaba District, was held and in January, official events, such as the coming-of-age ceremony, began to be held for the first time since the evacuation order was lifted. The so-called life-support infrastructure, such as the onsen (spa) facility Shiokaze So (September), Naraha Post Office, Salon Furatto, Toki Clinic (October), Nursing Facility Yamayuri So (November), Futaba Restoration Clinic (provisional name), JA Futaba Naraha Branch (February), and Nursing Facility Lily En (March), were opened or reopened during the fiscal year (FY) 2015. In FY2016, meetings of the residents associations, such as the Liaison Conference of Presidents of Residents' Associations of Temporary Housing (April in Iwaki City), which convened the presidents of residents' associations, and the Conference of Ward Mayors (May, October, and March of the following year) took place. Events held in FY2016 included Operation Cleanup (June), Naraha Town Summer Festival 2016 (July), Naraha Naradewa Garbage Cleanup, Hottare Bonrakusai Festival 2016, Bon Baseball Game (August), Township 60th Anniversary Commemorative Ceremony (September), Chomin-Go (group bus trip consisting of residents), and the Gathering to Pray for Reconstruction (November). Life-support infrastructure continued to improve, including the opening or reopening of the Toho Bank Naraha Branch (April), Naraha Learning Center, and Gamou Dental Clinic (July). The opening ceremonies for Nakaman Minami Housing Complex, a town-managed public disaster housing complex, took place in December. FY2017 saw the reopening of Naraha Elementary and Junior High Schools (April), a ceremony to pray for safety in the Naraha Town Commercial Exchange Zone (April), a ceremony for completion of the INFINI Co. New Fukushima Plant (July), a ceremony for service resumption of the JR Joban Line between Tomioka and Tatsuta Stations (October), and a ceremony for completion of the Namikura Megasolar Power Plant (November). Meanwhile, the Iwaki and Aizu Misato branch offices were closed (March) to return most of the municipal functions to Naraha Town Office, which can be seen as a move to encourage the residents' return to Naraha. Var-

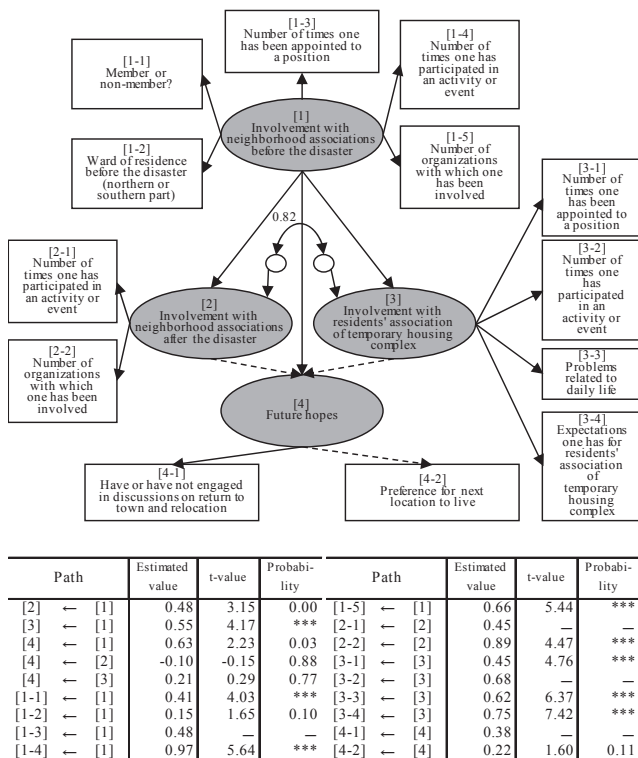


Fig. 4. 2015 Tomioka model.

exist for those who plan to return, but the "current" relationship with neighborhood associations or the residents' associations of the temporary housing complex is maintained among those who do not plan to return. In other words, differentiation has led to either further differentiation or integration. Thus, there are two paths manifested: either integration, in which a person returns to his or her former town based on his or her association with the neighborhood association before the disaster, or differentiation, in which a person chooses not to return to his or her former town (at the time of the survey) because of his or her relationship with the "current" neighborhood association and residents' association of the temporary housing complex.³²

In this regard, the Tomioka model differs greatly from the 2015 Naraha model, where Naraha Town was undergoing a phased shift toward integration, from the "lifting of the evacuation order" to the "return to town"; one reason for this difference may be the presence of the "difficult-to-return zone."

32. Because differentiation and integration are two sides of the same coin, one can say that the "integration" of returning will appear from the standpoint of those who do not return as "differentiation," and vice versa.

33. The information here and that which follows was taken from issues of the Naraha public relations brochure.

ious events were held in this manner, and the functions required for living (commerce, medical and welfare, education, employment, etc.) were improved, which can be viewed as undertakings toward “integration” by encouraging the residents to return.³⁴

What about Tomioka since April, 2017?³⁵ There was a rush of events, including the 2017 commemorative ceremony to begin the return to Tomioka including the gathering for reconstruction of Tomioka Town, the Fire Brigade Spring Inspection Ceremony (April), held for the first time in the town, the Tomioka Summer Festival (August), held for the first time in seven years, the Tomioka Meeting to Show Respect for the Aged, the Futaba World 2017 in Tomioka (September), Chomin-Go, the 89th Tomioka Ebisuko-ichi (market) (November), and the coming-of-age ceremony (January). Events related to life-support infrastructure included starting to accept occupants to disaster public housing (Magata No. 1 Housing Complex),³⁶ resuming the operation of fixed-route and on-demand buses, reopening the Tateyamaso Day Service Center Motomachi (April), opening the Tomioka Hotel, service resumption of the JR Joban Line between Tomioka and Tatsuta Stations (October), completion of the Bansho Holdings Tomioka Plant (November), which was the first enterprise to be attracted after the disaster, and completion of the Tomioka Reconstruction Megasolar Sakura power station (December). The publicly built and privately operated commercial facility, Sakura Mall Tomioka, located adjacent to the Magata Housing Complex, was partially opened in November 2016, and fully opened in April 2017, while the medical facility, the Tomioka Town Clinic, was opened in October of that year. We should also include, among the major events, submission of the Reconstruction and Recovery Plan for Specific Base Areas of Reconstruction and Recovery, aimed at recovering the difficult-to-return zone located in the northern part of Tomioka for certification (February) and subsequent approval by the national government (March).

As these development show, the difficult aspects, including life-support infrastructure, and the easier aspects, including the promotion of social exchange among town residents through events, are being steadily improved in both towns. While the “devices” aimed at the residents’ return are being prepared, what are the movements and thoughts of the residents for whom these preparations are intended?

Table 16. Transitions of the in-town resident population since lifting the evacuation order.

Year	Month	Naraha Town			Tomioka Town		
		Population	Number of returnees	Rate of return	Population	Number of returnees	Rate of return
2015	9	7,366	87	1.2	13,928	—	—
	12	7,376	262	3.6	13,864	—	—
2016	3	7,357	556	7.6	13,795	—	—
	6	7,345	600	8.2	13,718	—	—
	9	7,315	696	9.5	13,674	—	—
	12	7,282	767	10.5	13,597	—	—
2017	3	7,215	1,508	20.9	13,437	—	—
	6	7,233	1,740	24.1	13,389	193	1.4
	9	7,160	1,947	27.2	13,298	304	2.3
	12	7,141	2,203	30.9	13,260	400	3.0
2018	3	7,047	2,929	41.6	13,172	561	4.3

4.2. Trend Among Residents and Residents’ Associations

4.2.1. Trend for Returning to Town

The transitions of the residents of the two towns³⁷ are summarized in **Table 16**.

In Naraha, although there were 87 returnees when the evacuation order was lifted, and the number remained below 1,000 during 2016, the number of returnees exceeded 2,000 by the end of 2017 owing to the improvement of the town’s infrastructure. In March 2018, when temporary housing was vacated in principle,³⁸ the number reached approximately 3,000. Meanwhile, in the case of Tomioka, the evacuation order was lifted (except for certain areas) in April 2017, and the number of returnees in March, 2018, was 561, which is less than 10% of the total.

4.2.2. Residents’ Associations of the Temporary Housing Complex After Lifting the Evacuation Order

The resident’s associations of the temporary housing complex underwent changes, including their dissolution after 2015, when the evacuation orders were lifted or the approximate date of lifting became known, as the dates of their dissolutions presented in **Tables 2** and **4** show.

After the evacuation order was lifted in Naraha, many of the residents’ associations that dissolved shortly afterward did so because the “president had left the temporary housing complex to return to Naraha, and there was nobody to take over his position” (for instance, Takaku No. 8, Rinjo Hattanda). On the other hand, there are cases in which the president remained in the temporary housing complex, thus allowing the residents’ association to exist until the end of March 2018, when they had to vacate

34. Incidentally, according to the April 2018 issue of the public relations brochure, the events planned for FY2018 are mostly the same as those in FY 2017. One exception was the J Village Opening Event planned for July, J Village being a soccer facility located adjacent to Hirono Town that was also used as an operational base following the nuclear power plant accident.

35. Compiled by the author from issues of the Tomioka public relations brochure.

36. In addition, there are the Magata No. 2 and Sakaemachi Housing Complexes, both completed in FY2017, in town.

37. There are various views among the residents regarding the number of residents living in the two towns. This stems from the situation, particularly in the case of Naraha, where those who “stay by themselves in town during the weekdays to work, but spend their time with their families living in Iwaki over the weekend” are also included in the figures, and the observation that there are quite a few of these people (although the actual number is unknown).

38. There is a system that allows special extension in case the occupant, for whatever reason, is unable to relocate until the end of March even though his or her next residence has already been decided. According to the town office, about 40 households in temporary and rented housing, of which about ten occupy temporary housing, fall into this category. The temporary housing complexes at Takaku No. 8 and Yotsukura hosoya will continue to exist after April 2018.

(for instance, Kamiarakawa and Aizu Miyasato). Meanwhile, there was a case in which the president moved his base of activities back to Naraha but the functions of the residents' association remained (Onahama Aikoshima).

In the case of Tomioka, the residents' associations also tended to dissolve because "there was nobody to take over from the president," but the situation was somewhat different. This was because the date when the occupants of temporary housing should have vacated had not been clearly specified, which was related to the presence of the difficult-to-return zone. Even when a fair number of residents had purchased a house or entered public housing established in Tomioka or other locations within Fukushima, there was a need for a residents' association that could function as a clearinghouse for the temporary housing complexes with respect to government bodies and other external organs.³⁹ As the results of the SEM of Section 3 also suggest, it appears that the occupants of temporary housing from Tomioka displayed a differentiation between returning and not returning, as compared to the Naraha residents, and this was perhaps the reason for the early dissolution (compared to Naraha residents) of the residents' associations of temporary housing complexes.⁴⁰

One of the reasons why many of the residents' associations of temporary housing complexes composed of Naraha residents "did not dissolve so easily and continued to function to the end" is that the evacuation order was lifted from the entire township area, which set up the single goal (integration) of returning (as indicated by the results of the 2015 model), as compared to the Tomioka residents, some of whom had to contend with the difficult-to-return zone; these individuals were difficult to unify under the goal of returning to their former town, as many of them were moving to public housing complexes (permanent and established in locations outside of Tomioka) or purchasing their own houses.

4.2.3. Neighborhood Associations After Lifting the Evacuation Orders

Given such trends outside of the towns, what is the situation surrounding the neighborhood associations within the towns? Owing to the absence of substantive activities other than general meetings, (which were held in some cases, but were the only activity) for several years following the disaster, many neighborhood associations had not undertaken activities in earnest even after the evacuation orders were lifted. Although it would be preferable to

examine all neighborhood associations, due to the limited space and survey period I limit the description to the situation in Shimoshigeoka Ward, Naraha, after the evacuation order was lifted, and Kobama Ward, Tomioka, based on interviews with key persons in the two wards.

4.2.3.1. Shimoshigeoka Ward, Naraha

Shimoshigeoka Ward is located in the northern part and originally consisted of 48 households, but with the influx of electric power company workers, had grown to 111 households with 356 residents as of March 2010, which was a moderately-sized ward in town. As of March 2018, it is considered to have 60 households, consisting of 112 residents. While general meetings had been held following the disaster, activities within the ward have become active since FY2017. The mayor at the time was Mr. N, who had assumed office in April 2016, and was in his second year;⁴¹ he had been a truck driver and was away from town most of the time before the disaster. After the disaster, he founded the evacuee assistance group "Ippokai"⁴² in Koshigaya city, Saitama prefecture, to which he had evacuated, and became its president. In February 2013, he relocated to Onahama Aikoshima Temporary Housing Complex, and subsequently became the president of the residents' association. He completed the renovation of his house in the summer of 2016, and since the fall of that year had gradually shifted his living base back to Naraha Town. It was decided to begin ward activities in earnest beginning in FY2017, and a social gathering was held at the Shimoshigeoka Community Center for the first time since the disaster on April 22; this saw the participation of 54 residents, including electric power company personnel.⁴³ On June 4, flower planting was carried out by the ward around the community center, with the participation of 50 residents, following a town-hosted cleaning operation. The ward weeding on July 15 was attended by 41 residents, followed by a noodle-making party on September 23, and an imoni (taro and meat soup) party on November 18, with about 100 participants, including some 30 employees of a firm that had been invited to set up a plant in the ward.⁴⁴

41. The office of the ward president of Shimoshigeoka, with a two-year term, is held on a rotational basis starting (mostly) from the more senior residents. This was a one-year term until about 20 years ago, but was changed to two years because it was irrational to change when an individual had just become used to the duties involved.

42. The details are described in [22].

43. Tokyo Electric Power Company and other electric power companies were providing personnel and financial assistance to local community activities and events before the disaster, and this has continued in the post-disaster period, including weeding the grounds of temporary housing complexes. The figures that follow all include electric power company personnel.

44. The high number of participants (relative to the number of residents living in the ward) appears to be due, in large part, to the effort of the ward president Mr. N. For example, he disseminated information for the June events, "going around the previous day to visit each household on my bicycle. I think it was a good idea since some people had not read the circulation notice" (comment by the ward president on June 4, 2017); he also visited the top management of the solar-panel manufacturing plant, which was encouraged to locate in town after the disaster, and invited them to attend social events between the employees and local residents. In particular, he undertook the latter action because many residents had voiced concern about "strangers" working for reconstruction businesses in those areas in which the evacuation order had been lifted, and it would

39. There have been "liaison officers," under contract with private firms, who serve to connect the temporary housing occupants with the town office, and although their roles have undergone some changes, they still work for both Tomioka and Naraha. However, consultation with regard to the occupants' destinations of relocation after they vacate temporary housing units is done by municipal workers charged with this role by visiting each household. For example, Tomioka officials individually visited the former residents of the "zone in preparation for the lifting of the evacuation order" and "restricted residence area" during the one-year period of FY2016, and listened to their wishes.

40. There are some temporary housing complexes, in which the residents' associations have ceased to exist, but which continue to host events or morning radio exercises to provide opportunities for social exchange to the remaining occupants. Izumi tamatsuyu and Shimotakaku are two such examples.

4.2.3.2. Kobama Ward, Tomioka

Kobama Ward is located adjacent to the difficult-to-return zone, and consisted of 361 households with 964 residents as of March 2011 before the disaster, which was reduced to 79 households, with 92 residents⁴⁵ as of March 2018. The original inhabitants made up about 100 households, with the remainder consisting of newcomers who had moved into new residential developments, including many young electric power company employees. Following the disaster, a FY2012 general meeting was held (in spring 2013) for re-election of the ward mayor, after which general meetings have been held once a year. The current mayor, Mr. M, used to work for the Futaba Fire Department, but after retirement has served since 2008 as the ward mayor. After moving into the Kumagami Temporary Housing Complex in Miharu, Mr. M became the president of the residents' association. Subsequently, he founded the Liaison Committee for Residents' Associations of Temporary Housing Complexes, which served as the liaison for the six temporary housing sites for Tomioka residents within Miharu Town, published the Miharu Newsletter,⁴⁶ – the objective of which was to introduce the activities of the temporary housing complexes – and was involved as a central member in the planning and operation of the Kumagami Summer Festival Bon Dance,⁴⁷ which revived a festival that used to be held in Kobama Ward before the disaster. Mr. M moved his base to Tomioka in the summer of 2017. The executive board began meeting once a month to plan a social gathering that was held in Naraha Town in March 2018. The social gathering saw the participation of 32 residents, consisting of 13 from Iwaki City, three from Koriyama City, and 11 from the ward.⁴⁸ According to Mr. M, the projects for FY2018 are limited to the flower planting on June 10 and the year-end general meeting, owing to the small number of residents living in the ward, including board members.

5. Conclusion: Residents Drifting in the Gap Between Differentiation and Integration

5.1. Conclusion and Issues

In this paper, I presented the following discussion with the objective of examining the factors involved in various patterns of “differentiation” or “integration” among residents of Naraha and Tomioka before and after the evac-

seem that such social exchanges were an effective way to alleviate such concerns.

45. From documents distributed at the “FY2017 social gathering of residents of Kobama Ward, Tomioka.”

46. For details, see [23]. Also downloadable from the website of Tohoku Urban Sociology Study Group, <http://tohokuurban.web.fc2.com/>.

47. Held annually since August 2013. As Mr. M was the ward president, the participants included Kobama Young Men's Association and Kobama Fudo Taiko, members of which had evacuated to a location outside of Tomioka. The fourth festival held on August 6, 2016, was the last one since the Hirasawa Public Housing Complex, which is located in town, began accepting occupants and became the recipient of all temporary housing in the fall of 2016.

48. From documents distributed at the “FY2017 social gathering of residents of Kobama Ward, Tomioka.”

uation order was lifted, in terms of five issues: 1) activities after returning to their former towns, 2) the wavering communities during and after the evacuation order being lifted, 3) accumulation of social relations, that is, social capital, that underlie the period starting before the disaster until after the evacuation orders were lifted, 4) ‘transformation’ of communities, and 5) why one settles at the evacuated location (differentiation) or returns to one's former town (integration)? Section 2 presented an overview of Naraha and Tomioka towns before and after the disaster, and the status of temporary housing for the residents (transitions in the occupants, and establishment and dissolution of residents' associations of temporary housing complexes). Section 3 examined the residents' involvement with the neighborhood associations before and after the disaster and with the residents' associations of temporary housing units and the locations they plan to live in the future, based on questionnaire surveys conducted in 2012 and 2015 with residents of temporary housing units. The questionnaire items were quantified into indices and subjected to SEM to examine how involvement with neighborhood associations or residents' associations of temporary housing units affect future plans, including whether to return to their former towns or move elsewhere. The results identified the difference between Naraha residents, who were moving toward “integration” with the lifting of the evacuation order, and Tomioka residents, who were undergoing “differentiation” (although this was affected by factors such as the fact that the date of lifting the evacuation order had not been announced at the time, or that Tomioka includes a difficult-to-return zone). Using mostly interview evidence, Section 4 reviewed the trends in the two towns and the activities of the residents' associations of temporary housing units and neighborhood associations after lifting the evacuation orders. The findings here agreed with the interpretation of the SEM of Section 3, namely, integration for Naraha and differentiation for Tomioka, at least up to the stage of writing this paper (April, 2018).⁴⁹

The survey harbored the issue of representativeness. In particular, the 2012 survey had a recovery rate of about 20%, so there is a high probability that those who display the features of “differentiation” as defined in this paper did not respond. In addition, since the most recent survey was conducted between the fall and winter of 2015, it is possible that the situation has changed by the time of writing this paper (April 2018). These are the issues I hope to address in the future, including a follow-up survey based on a similar questionnaire.

The issue of disaster statistics also requires some dis-

49. The five issues described earlier are not examined individually but from several perspectives. The means by which they were examined are as follows. Item 1 was examined from the perspective of returnees based on statistics of returnees released by the town office, the events held, and interviews regarding the neighborhood associations' undertakings. Item 2 was examined in terms of the trend among the residents' associations of temporary housing complexes, including their dissolution, based on the questionnaire survey and interviews. For items 3 and 4, the models of SEM were used to examine the situation regarding differentiation and integration in the two towns. Item 5 requires a discussion of the future based on the other Items, 1–4, and will be discussed in detail in Section 5.2.

discussion. As the questionnaire survey results show, it is clear that the residents' community activities during normal times before the disaster had a great influence on their actions after the disaster. I feel that it is therefore necessary to periodically conduct a comprehensive survey targeting community residents' organizations, such as the neighborhood associations or residents' associations, during normal times. Specifically, this would entail a questionnaire survey targeting the president, officers, and other general residents, and the collection and database storage of annual reports (documents distributed during the general meeting held at the end of the year). After the evacuation order was lifted, it was difficult to carry out a quantitative survey focusing on individuals for a certain period, and so the Reconstruction Agency periodically conducts questionnaire surveys. Yet, instead of just asking whether the residents wish to return to their former towns, it is necessary to examine the actual involvement of each individual household (and its members) with the community and their expectations. To collect the necessary data and build up a database to this end, it will be necessary to set up a survey system based on linking up not just the town office but also the neighborhood associations or the local social welfare councils.

5.2. Directions for the Town Residents

As discussed so far, the differentiation of occupants with regard to temporary housing, and particularly the residents' associations, is greatly dependent on whether they wish to return to their former towns, or are undecided. For many who fall under the former category and vacate temporary housing, the temporary housing and its residents' association have changed from being "something temporary" to becoming "something of the past," which differs drastically from those who remain (and feel that the residents' association is necessary in its function as a clearinghouse or for social exchange). There are cases in which the residents' association was dissolved because the president left the temporary housing complex, but social exchange continued on an individual basis or in the form of groups or clubs.⁵⁰ Looking back to the summer of 2011 when the residents first moved into temporary housing, "integration" itself has gradually been transformed from that with those of the same town, albeit from different wards (neighborhood associations), to that with residents of the same temporary housing complex, while "differentiation" perhaps occurred with regard to their next destination, i.e., whether to return to their former town.

Where does this "differentiation" lead? Below, I discuss this in the case of Tomioka residents.⁵¹ Among those who return to Tomioka, some will return to their former houses where they lived before the disaster, while others will enter newly constructed public housing (Magata, Sakaemachi). Those who do not return to Tomioka will

purchase or rent a house in Iwaki or Koriyama City, or enter public housing complexes set up in various locations in the prefecture. Thus, a simple classification, or "differentiation," results in four groups. It is perhaps overly optimistic to think that those entering public housing will once again move toward "integration," in view of the interviews conducted so far.⁵² The reason is that the general outlook has shifted from "I shall cooperate (although in a passive manner) since temporary housing is only temporary" to "I shall live as I wish since the public housing complex will be my permanent residence,"⁵³ as illustrated by the following cases. Although the residents' association was established some three months after occupancy began in the Hirasawa Housing Complex established in Miharu Town, "the number of people who cooperate or participate is lower compared to when I was in temporary housing" (president of residents' association); meanwhile, no residents' association has been established at the Magata Housing Complex in Tomioka although a year has passed since occupancy began.⁵⁴

The finding that "a community existed, but in name only" was pointed out with regard to pre-disaster neighborhood associations in Okuma Town, also located in Futaba District, in a study on evacuees from Okuma [24], but it is this tendency that has now manifested itself again. In other words, perhaps the "integration" that was observed, for instance, in the residents' associations of temporary housing complexes was one aspect of "disaster utopia" [25]. The "new neighborhood" [3] can be said to represent a new form of "integration." An example of this is seen in Tomioka, where a wide-area residents' association⁵⁵ was formed by those who have rented or purchased housing in locations outside of Tomioka. Meanwhile, what is taking place within the town of Tomioka? While many town-sponsored events are being held in 2018, they represent a virtual (as opposed to real) "integration," where the participants are able to merely confirm their identities as current or former town residents, instead of a real "integration," in which participants are encouraged to return to town; this is quite evident from the current population of the town.⁵⁶

52. A similar view is shared by a member of an organization that assists in the reconstruction of communities in Fukushima prefecture, who stated that it is more difficult to develop social intercourse among the residents than when they were in temporary housing.

53. There is also the fact that, in general, fewer events are hosted by public housing complexes than temporary housing complexes, so there are fewer occasions to enlist the cooperation of occupants. Yet, "cooperation burnout" may be a factor, although it may apply only to those interviewed by the author. Life in temporary housing units for people who had been accustomed to living in relatively large single-family houses before the disaster, requires the residents to make "various adjustments" involving garbage collection or noise issues, and perhaps passive cooperation, including running events and participating in them as an extension of this adjustment. It is likely that many who moved into public housing complexes no longer felt the need to make such adjustments.

54. This observation stands as of April 2018, at the time of writing this paper. From interviews with housing complex caretakers, I have learned that they are making preparations to hold a general meeting to establish residents' associations before the end of April. I plan to discuss this issue in another paper.

55. The Sakura-no-kai and Sumire-kai are both based in Iwaki City, while the Koriyama Area Residents' Association is located in Koriyama. These organizations were all formed at the residents' initiative. For details, see [9] and [26].

56. This was also experienced at a social gathering of a certain ward in Tomioka that took place in Naraha in April 2018. While the ward con-

50. Such complexes include Onahama Aikoshima for Naraha residents and Izumi Tamatsuyu for Tomioka residents.

51. The main reason for discussing Tomioka is that, unlike Naraha, Tomioka includes a difficult-to-return zone. I plan to discuss the case of Naraha on another occasion.

In the end, it can be said that differentiation and integration exist in layers. Roughly divided, three levels may be identified: that of the basic municipal government, such as the town office (level 1); ward (neighborhood association) (level 2); and the association, the so-called “new neighborhood” that transcends administrative units (level 3). The virtual “integration,” mentioned above, can be considered as a derivative form of level 3. What is complicating the situation surrounding Tomioka is that, while it appears that “integration” is taking place toward reconstruction following the post-disaster deconstruction, through the hosting of events aimed at “integration” at the town level⁵⁷ (level 1) described earlier, the reality at the residents’ level,⁵⁸ i.e., levels 2 and 3, is better described in terms of “differentiation” than “integration.”

Is returning to Tomioka an unrealistic option? Some residents of Magata Housing Complex have voiced the view that “having moved in, I find it rather convenient. The complex includes Sakura Mall Tomioka (consisting of a supermarket, drugstore, and home improvement store), and it is safe since the police station is located nearby.” Meanwhile, neighborhood activities⁵⁹ led by the neighborhood association and residents are just beginning to take place. The comment from an interview describing the current situation that “things are back to when Tokyo Electric Power Company was not here. We’ll just have to take things from here!” (resident living in Tomioka), points out another truth, and we must not forget that.

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sists of some 30 households, almost all showed up for this gathering. Yet, only a few households were considering returning to Tomioka as the overwhelming majority had already purchased houses in Iwaki or some other location; the same pattern is likely to be observed in the other wards.

57. For instance, the summer festival held for the first time after the disaster in August 2017 was attended, so far as I was able to observe, mostly by the child-rearing generation who were in their 20s to 40s; it felt like a reunion of the younger generation, although there may have been other reasons for this, including its late-night ending or its inconvenient traffic access for the elderly. Meanwhile, according to personnel involved in the social salons, the fact that events are increasingly being held in Tomioka has made it more difficult for those living in Iwaki or Koriyama, particularly the elderly, to attend. One can say that a “differentiation” has occurred with respect to access.
58. Events such as social gatherings are hosted by the ward at the ward level (level 2), while the “association of returnees,” which is still in the planning stage, can be said to be an example at the association level (level 3).
59. The Futaba Future Meeting can be cited as a noteworthy case [27].

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