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Symposium Theme

How do we mitigate Natural Disasters?

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ON THE EVOLVING FORM OF THE "NEWSLETTERS" BY RESIDENTS AND THE SOCIAL SYSTEM OF THE RISK MANAGEMENT OF DAILY LIVING INFORMATION

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When considering the daily living information at the time of a catastrophe, the necessity for information increases according to the degree of the damages. However, depending on the proportions of the damages, the ability to release information decreases tremendously. Furthermore, due to the difficulties in distributing proper daily living information at the site of the catastrophe immediately following it, to insure an efficient damage control, it is very crucial to understand the character of the information released in the event of a catastrophe.

Using a database of 38 newsletters, released by residents at the aftermath of the (Kobe) Earthquake, recorded in Shinsaibunko (Library for Kobe Earthquake) at the Kobe University, the following factors were analyzed: name, address, the published date, the content of the articles and the number of characters. Based on this analysis, we observed evolving characteristics in the newsletters; birth, growth and extinction. This phenomenon is defined by four factors: the date of the first release of information ("resident-generated newsletter"), the news source, the frequency of news release and the duration of the news. From the analysis of the interactions between the date of the first information release and three other factors. The information contained in these "newsletters" can be grouped into three periods which we will call, the first, second and third period information from residents

In order to efficiently control the damages, it is mandatory to analyze the nature of the first period information from residents.

The first period information takes a very spontaneously form due to its contribution by Non-Governmental Organizations (N.G.O), volunteer groups and civil activism. Designing a regionally specific manual pertaining to daily living information in the event of an earthquake is insufficient because of the impairment of the situation at hand.

In conclusion, there should be understood different concepts for security system and risk management. It is necessary to organize risk management in response to the damage with a network system composed of volunteer groups and the administration of the peripheral area in

order to establish a rescue system. This idea will be an effective and adequate social system in the event of a catastrophe. In order to make this idea real (the proper risk management of daily living information), we need to introduce an new cultural thought system. It would be important to encourage the activity of N.G.O., volunteer groups and civil activism, and to build a culture revolving around people-based leadership.

ON THE EVOLVING FORM OF THE "NEWSLETTERS" BY RESIDENTS AND THE SOCIAL SYSTEM OF THE RISK MANAGEMENT OF DAILY LIVING INFORMATION

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1. Objective of this study
2. Materials and Methods
3. Results
4. Conclusion

Objective of this study

1. Establish the theory and methodology for the analysis of information from residents on the catastrophe

2. The risk management of daily living information in a crisis situation

Materials and Methods

1. The database of 38 information from residents at the aftermath of Kobe Earthquake, recorded in Shinsaibunko (Library for Kobe Earthquake) at the Kobe University were used

2. The following factors were used for the analysis : name, address, the published date, the content of the articles and the number of characters

3. The following four factors were statistically analyzed : the date of the first release of information, the news source, the interval of news release and the duration of the news.

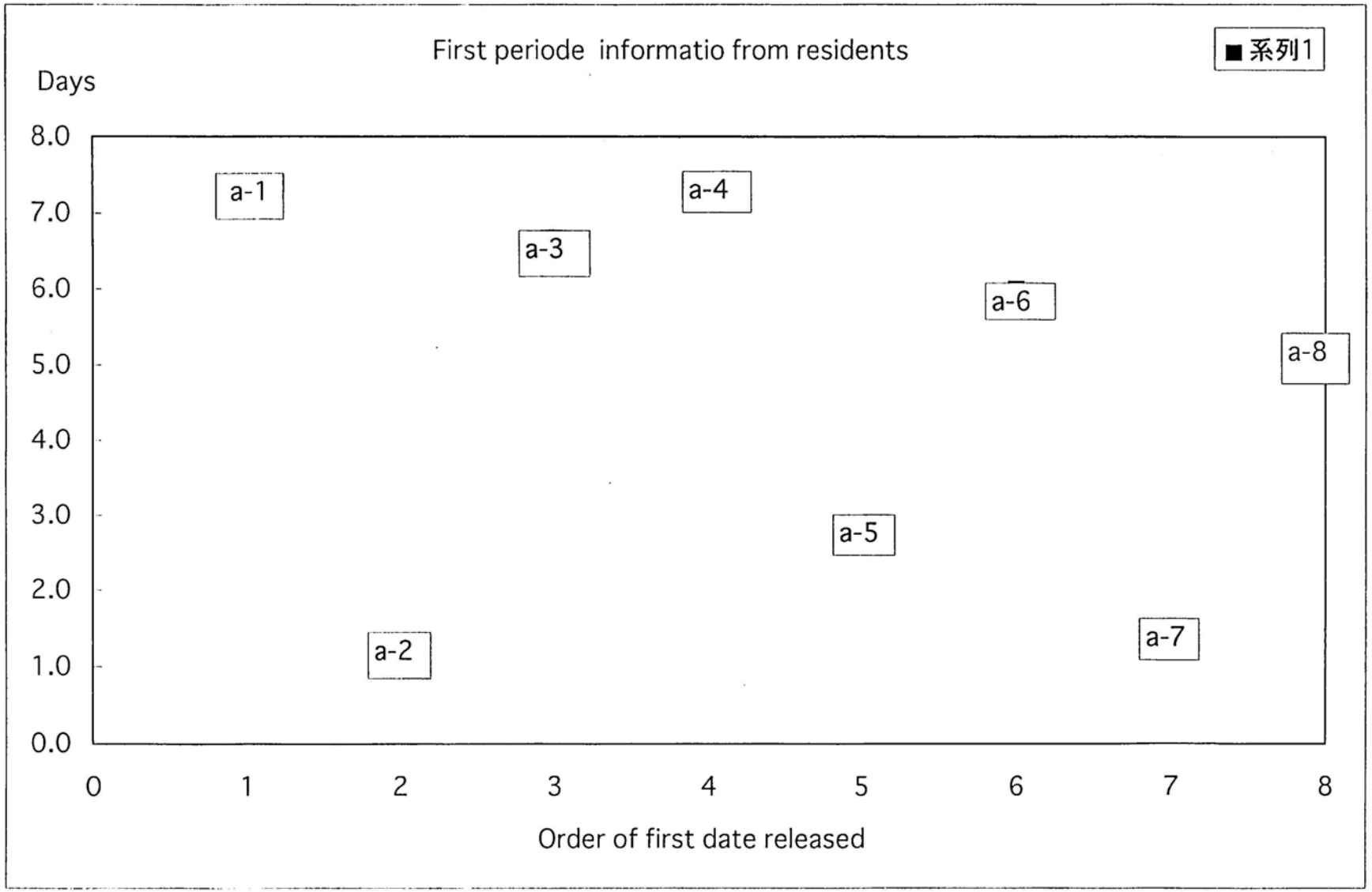
Results

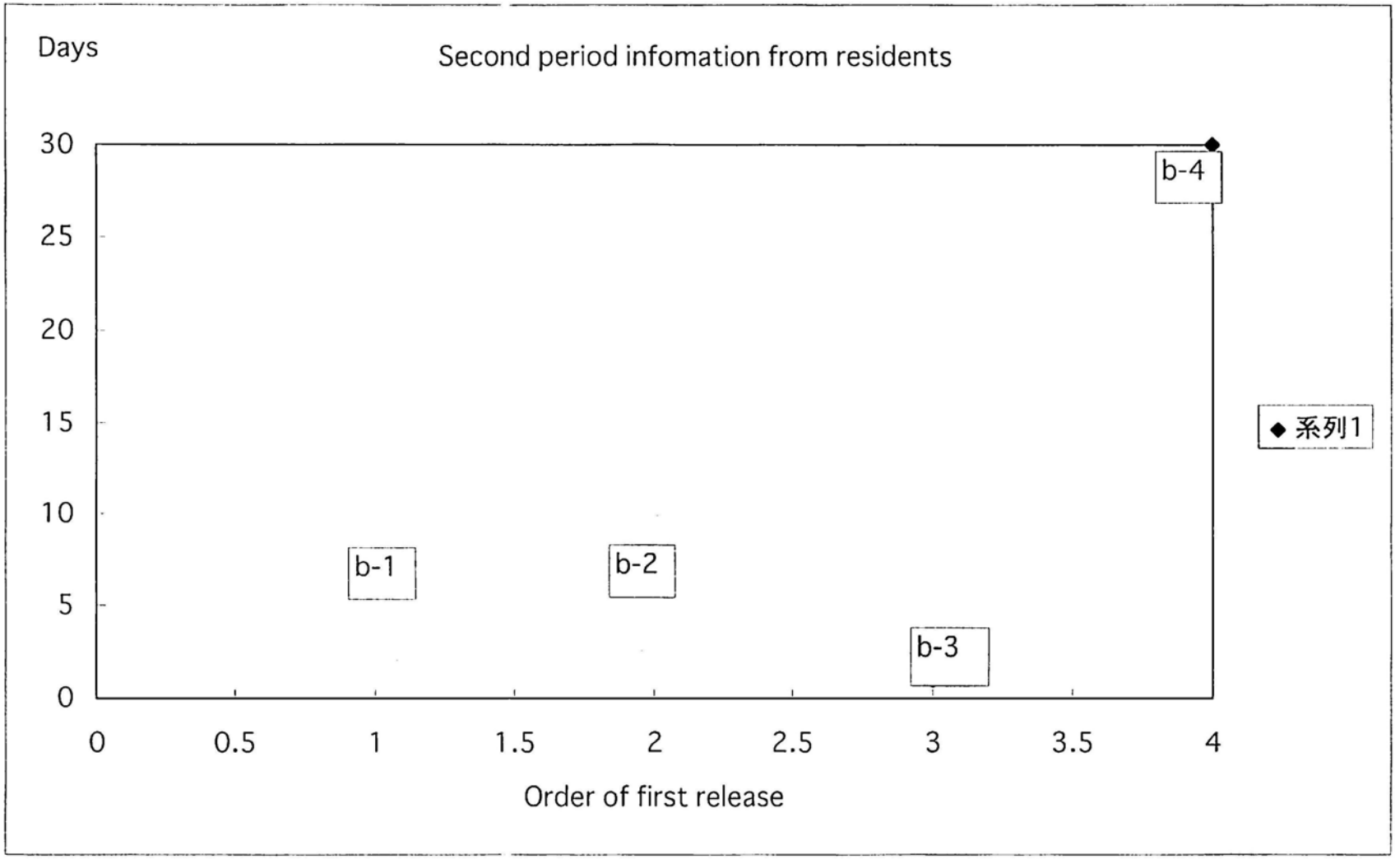
1. A model of information from residents at the first period
2. A model of information from residents at the second period
3. A model of information from residents at the third period
4. A model of three patterns of information from residents depending on period
5. Evolving form of News Source and Information

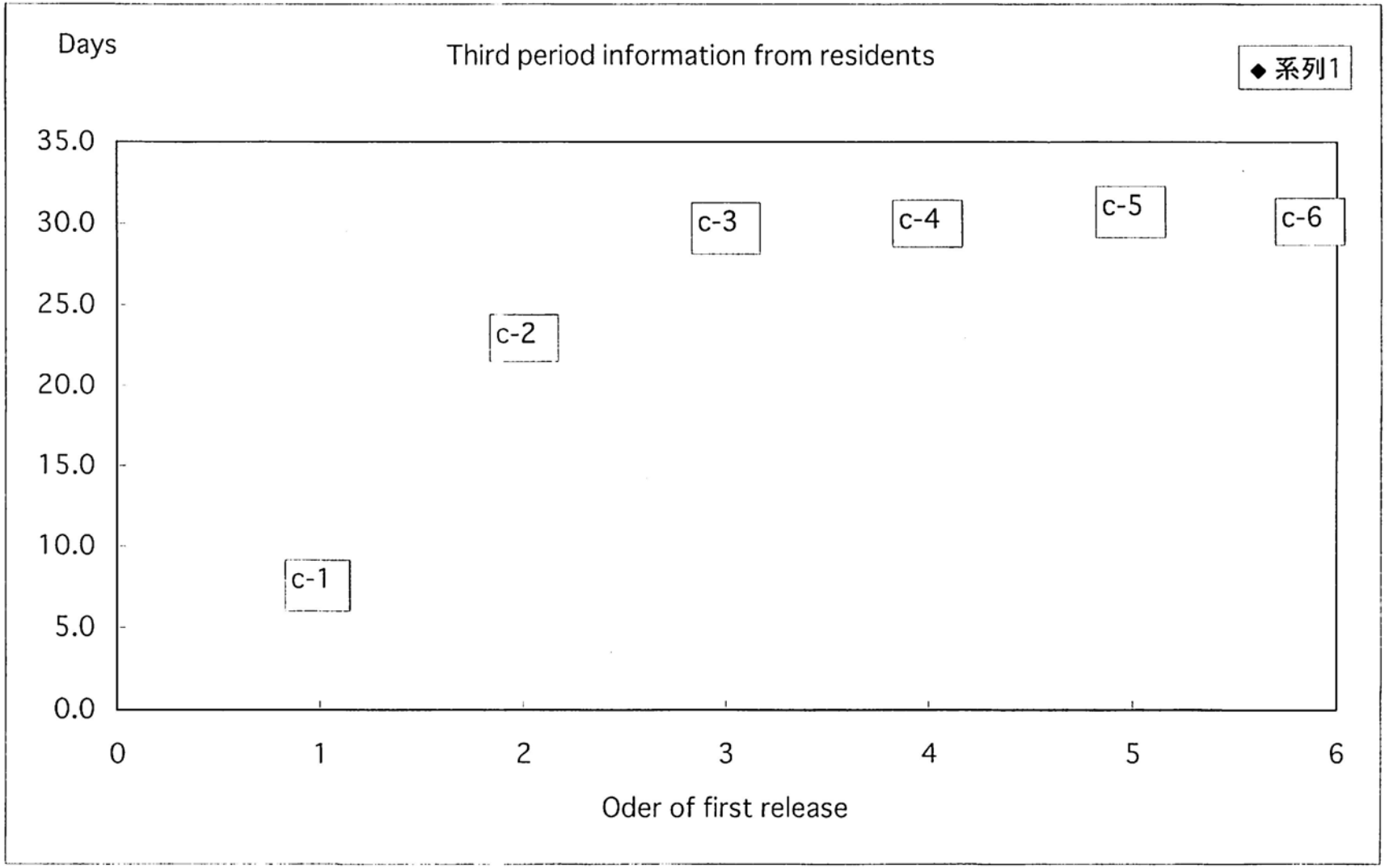
	First releas (M/D/Y)	Duration (Days)	Inteval (Days)	News Source	Categorie
a-1	1/25/95	37	7.4	Medical Association	Professional Organisation
a-2	1/25/95	44	1.1	Peace Boat	NGO, Volunteer
a-3	1/27/95	280(40)	6.7	Kobe Universty TaikukanHinanjo	Student Volunteer
a-4	1/27/95	52	7.4	SaKigake	Party Politic
a-5	2/3/95	85	2.8	Chyuo-ku Volunteer	NGO, Volunteer
a-6	2/7/95	43(30)	6.0	Kyoko Suzuki	Volunteer
a-7	2/8/95	30	1.2	Information Center	NGO, Volunteer
a-8	2/21/95	570(15)	5.0	Hisai kyuen group	NGO, Volunteer
a	average	41.6	4.7		
b-1	3/12/95		7	parents' association of kindergarten	NPO,Volunteer
b-2	3/12/95		7	Association for Future vision of Nagata ku	NPO,Volunteer
b-3	3/14/95	90	1	Asahi living Center	NPO,Volunteer
b-4	5/10/95	76	30	Victim Union	NPO,Volunteer
b	average		11.3		
c-1	8/8/95	365	7.2	Kobe Reconstruction Newspaper	NPO,Volunteer
c-2	8/15/95	67	22.3	Chyuo-ku Volunteer	NGO,Volunteer
c-3	8/16/95		30.5	Union for Reconstruction	Union,Volunteer
c-4	9/10/95	1030	30.3	Volunteer Center at Nagata-ku	NPO,Volunteer
c-5	9/11/97	880	30.5	Victim Union for Reconstruction	Union,Volunteer
c-6	9/12/99		30.5	New Kobe Reconstruction Newspaper	NPO,Volunteer
c	average		25.2		

Table Definition of three period information form residents

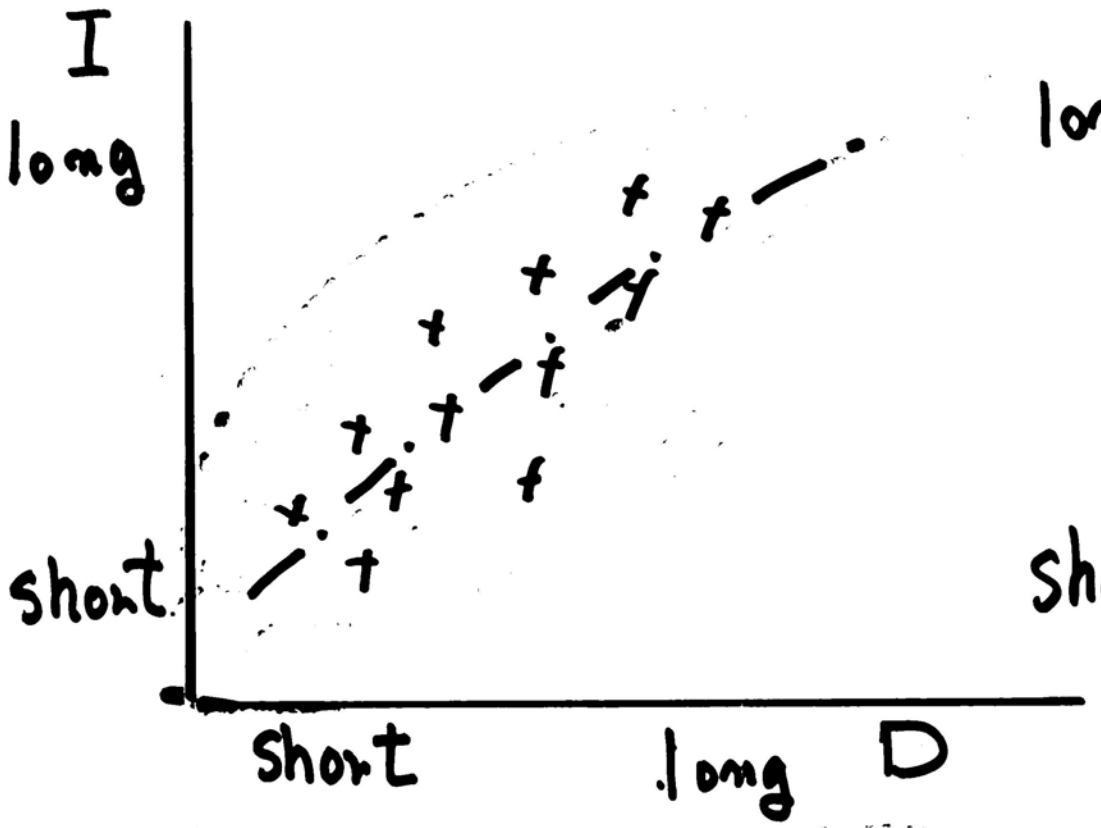
	First period	Second period	Third period
Role of information	Information to survive	Restoration of life space	Revival program
Date of first release	Until 2 or 3 months	3 month to 6 months	6 months later
News source	Exterior NGO、Volunteer	Local area NGO、 Volunteer	NPO、Local area Volunteer
Interval	1 to 3 days	7 to 30 days	from 7 to 30 days
Duration	9 to 85 days after disaster	3 months days to 1 year	more than 1 year

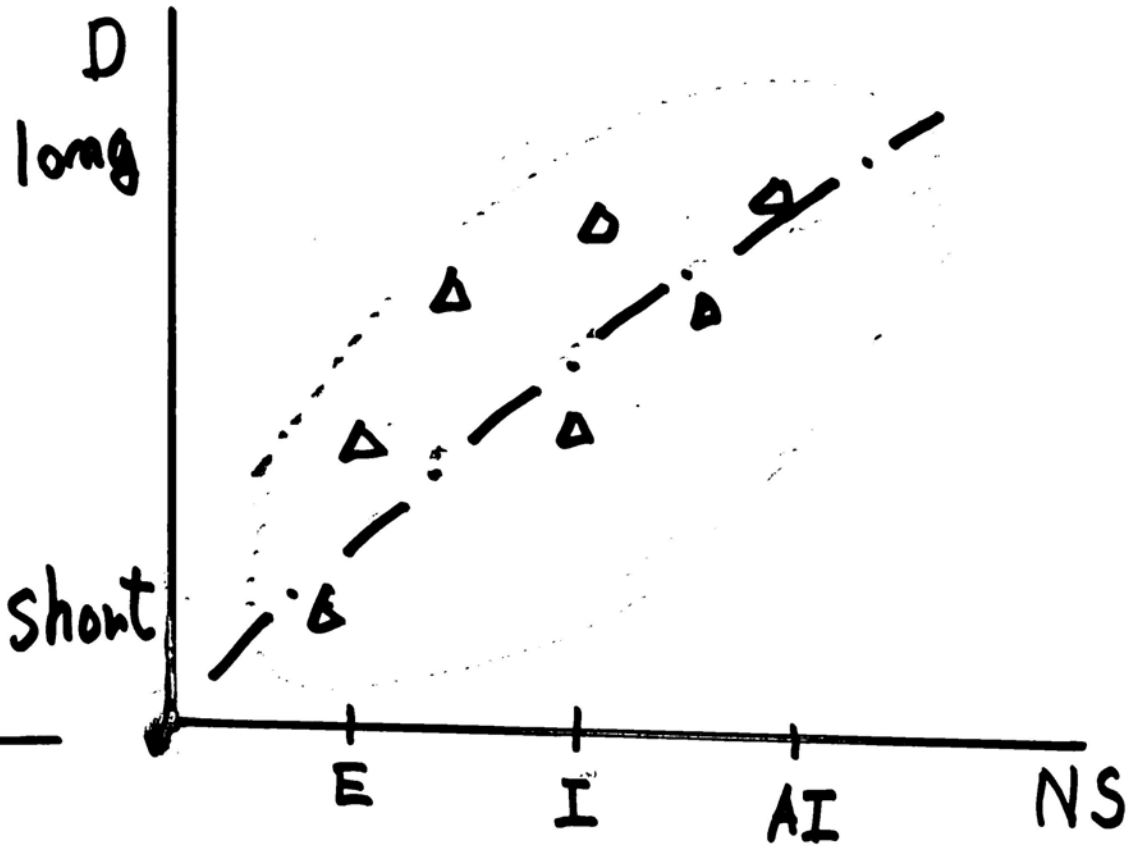

First periode informatio from residents
■系列1
Days
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
a-1
a-2
a-3
a-4
a-5
a-6
a-7
a-8
0
1
2
3
4
5
6
7
8
Order of first date released

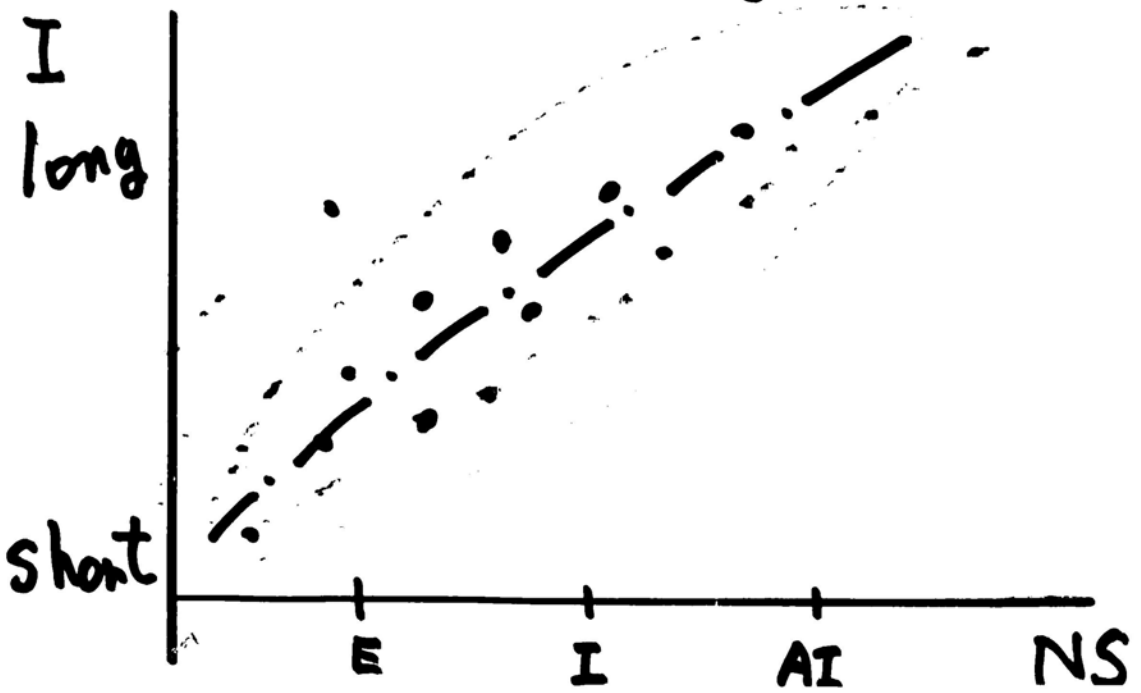

Days
Second period infomation from residents
30
25
20
15
10
5
0
0
0.5
1
1.5
2
2.5
3
3.5
4
b-1
b-2
b-3
b-4
◆ 系列1
Order of first release


Days
Third period information from residents
◆ 系列1
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
c-1
c-2
c-3
c-4
c-5
c-6
0
1
2
3
4
5
6
Oder of first release

Date of the frist information release from residents	Interval of news release	short	frist period
			Second period
		long	third period
	Duration of news	short	first period
			Second period
		long	third period
	News source	Exterior Volunteer	first period
		Interion Volunteer	Second period
		Association Inhabitant	third period


I
long
short
Short
long
D


D
long
short
E
I
AI
NS


I
long
short
E
I
AI
NS

Table、Evolution of news source and information

	First period	Second period	Third period
Name of News	Daily need	Weekly need	Weekly need
Organization	National area NGO	Regional area NGO	Regional area NGO
Name of News	Chuo nandemo kawaraban	Chuo nandemo Kawaraban	Shin Chuo nandemo Kawaraban
Organization	Exterior Volunteer	Regional area NPO	Regional area NPO
Name of News	News for a refuge	Magazine of Information Center	Kobe Revival Newspaper
Organization	Exterior Volunteer	Interior Volunteer	Regional area NPO
Name of News		Meeting News	Association News
Organization		Regional Volunteer	Inhabitants Organization

Conclusion

1. The first period information demonstrates a very spontaneous form due to its contribution by Non-Governmental Organizations (N.G.O) and volunteer groups
2. The network system is necessary to establish the risk management with neighbor area
3. The activity of information volunteer is important to build up a efficient risk management

KEYWORDS

Aftermath of the Kobe Earthquake,
Risk management of daily living information,
First release of information,
News source,
Interval of news release,
News duration,
First period of information from residents,
Second period of information from residents,
Third period of information from residents.
Evolving form of information from residents
Role of a information volunteer for the risk management

Presentation on the conference in Hazards 2000 5/23/20000 Tokushima, Japan

Subject

Thank for your participation. I want to take about the evlving form of the informatio from residents at site of catastrophe and, using this model, the idea of the risk manegement of daily living infomatio in the crisis situation.

Objecttive

So, this is the objective of this study.

Because, as a result of the great catastrophe of Kobe Earthquake, it is urged to establish the theory and methodology for the risk management of daily living information in a crisis situation.

In this objective, we tray to analysis of newsletters from residents published during the great catastrophe of Kobe Earthquake. When considering the daily living information at the time of a catastrophe, the necessity for information increases according to the degree of the damages. However, depending on the proportions of the damages, the ability to release information decreases tremendously.

Furthermore, due to the difficulties in distributing proper daily living information at the site of the catastrophe immediately following it, to insure an efficient damage control, it is very crucial to understand the character of the information released in the event of a catastrophe. In these situations, clearly, a special manual must be followed to release news in the disaster area in a rapid and adequate fashion. In order to create a practical and reasonable risk management manual, it is very important to understand the character of the information released in the event of a catastrophe.

Method of this development

Analysis of 38 database concerning the resident-generated newsletter

We used a database of 38 newsletters, which were released by residents at the aftermath of the Kobe Earthquake, and this database is recorded in Library for Kobe Earthquake at the Kobe University. The following factors which we analyzed are the name of the newsletters and organizations, address, the published date, the content of the articles and the number of characters.

Four elements observed in those databases

Based on those datas, we found four elements that decide the nature of the information from residents. The date of the first release of information ("resident-generated newsletter"), the news source, the frequency of news release (the interval of news release) and the duration of the news are these four elements.

1. Date of the first release of resident-generated newsletter
2. Duration of news
3. Interval of news release
4. Organization of newsletter: News source

Results for analysis of database

A characteristic about three types of information form residents

From the analysis of the interactions between the date of the first information release and three other factorsm the information contained in these "newsletters" can be grouped into three periods which we will call, the first, second and third period information from residents.

First period information from residents

Table First period information from residents

	First release (M/D/Y)	Duration (Days)	Interval (Days)	News Source	Category
a-1	1/25/95	37	7.4	Medical Association	Professional Organization
a-2	1/25/95	44	1.1	Peace Boat	NGO, Volunteer
a-3	1/27/95	280(40)	1.5	Kobe University TaikukanHinanjo	Student Volunteer
a-4	1/27/95	52	7.4	SaKigake	Party Politic
a-5	2/3/95	85	2.8	Chyuo-ku Volunteer	NGO, Volunteer
a-6	2/7/95	43(30)	6.0	Kyoko Suzuki	Volunteer
a-7	2/8/95	30	1.2	Information Center	NGO, Volunteer
a-8	2/21/95	570(15)	5.0	Hisai kyuen group	NGO, Volunteer
a	average	41.6	4.1		

We select these newsletters by residents, which were pullished from affremath before 60 days, as the first infrmation form residents

This informatio n shows some charactaristics, for exemple, the interval of news

have the days of release until 50 days after desister, as the first period information form residents. This information

Because of the needs to information for survive in first period, the most of contents of this information is about survive, for example, information about family being safety, drinking water, food, a bath, a refuge, a medical care consultation, a support money by volunteer group or government, etc.

And, it isn't possible get these important information on daily living by newsletter or magazine published by the city or the neighborhood association, newspaper delivery, a telephone and television. we should get necessary information with paper put at a shelter and oral communication.

In this case, a volunteer activity is needed by emergency, because of not only a system of life line , electricity, gas, a water service, a telephone and a transportation, but also a function of communication of information can't restore immediately. Naturally a volunteer group rushes to relief from the outside. The daily living information at first period is sponsored by the volunteer coming from the outside.

A volunteer should examine a necessary information for a victim and will be able to mention it. At the first period, a urgent daily living information is mentioned, and the news is printed very frequently because the victims need information every day, for example Peace Boat published "Daily needs" every day during 44 days. Therefor, this activity therefor is limited in a narrow area.

Second period information from residents

Table Second period information from residents

	First release (M/D/Y)	Duration (Days)	Interval (Days)	News Source	Category
b-1	3/12/95		7	parents' association of kindergarten	NPO, Volunteer

b-2	3/12/95		7	Association for Future vision of Nagata ku	NPO, Volunteer
b-3	3/14/95	90	1	Asahi living Center	NPO, Volunteer
b-4	5/10/95	76	30	Victim Union	NPO, Volunteer
b	average		11.3		

The restoration of electricity became possible quickly, 7 days after disaster, but therefore it occurred a fire by a short circuit. The restoration of a telephone is January 31, the water service is completely restored at April 17 and all of a victim in Hypo can get to use gas on April 11.

As life environment restores, urgent living information is needless. A victim in a refuge moves to "temporary revival house" and to them home and their life begins there in order to restore it; a rebuilding of a house broken, the regional area council and the administration function, etc. The people of a disaster area gets possible to take by themselves their activity that an outside volunteer supported. The outside volunteer too can not be there so long time and wand finish a long activity. A local volunteer becomes a leading figure in an activity of life restoration, and publish their information from residents.

This activity, a restoration from a disaster, becomes an important subject of daily living information deciding contents of news, for example a restoration plan of a town, repair of a house, compensation money for a disaster, disaster insurance, etc. Of course there are the daily living information. Those information in second period is printed regularly because of those character information. For example, Association for Future vision of Nagata ku, that is developed from Peace Boat by regional area volunteer group, publish "Weekly needs" every week.

Third period information from residents

Table Third period information from residents

	First release (M/D/Y)	Duration (Days)	Interval (Days)	News Source	Category
c-1	8/8/95	365	7.2	Kobe Reconstruction Newspaper	NPO, Volunteer
c-2	8/15/95	67	22.3	Chyuo-ku Volunteer	NGO, Volunteer
c-3	8/16/95		30.5	Union for Reconstruction	Union, Volunteer
c-4	9/10/95	1030	30.3	Volunteer Center at Nagata-ku	NPO, volunteer
c-5	9/11/97	880	30.5	Victim Union for Reconstruction	Union, Volunteer
c-6	9/12/99		30.5	New Kobe Reconstruction Newspaper	NPO, volunteer
c	average		25.2		

An administration developed the revival work according with city planning, after a victim completely moves and live in the temporarily house. A city and a prefecture make a project for revival plan in order to get a social economical activity as soon as possible.

But, according to some case, there are some person who will lost soil by this revival plan. A communication with administration will be necessary because administration doesn't encourage revival plan freely. And inhabitants have it take their idea and participate positively in administrative revival plan.

They organize a victim union for reconstruction and new regional council " chionaika "in order to make a communication with administration. The most information from residents in third period play that purpose and mentions those news. Those information in second period is printed regularly, for example ,Volunteer Center at Nagata-ku sends a information magazine regularly once every month.

Model of classification for three period

The information contained in these "newsletters" can be grouped into three periods which we can give those typical characters that we will call the model of the first, second and third period information from residents.

But, this model is led from an example of Kobe Earthquake, and it was made. showed a characteristic of pattern of the three information. Accordingly it is nothing to generalize this model. For example, the interval day of printing and the duration of publication must be different by a country because of their social economical condition.

Table 、 Definition of three period information form residents

	First period	Second period	Third period
Role of information	Information to survive	Restoration of life space	Revival program
Date of first release	Until 2 or 3 months	3 month to 6 months	6 months later
News source	Exterior NGO、Volunteer	Local area NGO、 Volunteer	NPO、Local area Volunteer
Interval	1 to 3 days	7 to 30 days	from 7 to 30 days
Duration	9 to 85 days after disaster	3 months days to 1 year	more than 1 year

Evolving form of News Source and Information

Based on this analysis, we observed evolving characteristics in the newsletters; birth, growth and extinction. This phenomenon is defined by four factors: the date of the first release of information ("resident-generated newsletter"), the news source, the frequency of news release (the interval of news release) and the duration of the news.

We find that information from residents classed by three periods includes genetic form , evolution and extinction. This process is the unique genetic phenomenon of the newsletters by residents. We show a evolving form of news score and information.

For example, a outside volunteer publish Daily need in first period, and after an activity for 44 days, this outside NGO hands a local volunteer activity of publication. A local volunteer hands down the know-how got by publication activity of Daily need. Regional NGO holds the activity to continue carrying information needed by victim and develops new form : Weekly need after exterior NGO passed.

A information from residents at Chuoku calling "chuo nandemo kawarabu" was published by combination of a local volunteer with outside NGO at the start. As the publication days passed, a local volunteer take mainly a publication. There is a gradual change of News Source, and it is maintained as publication of daily living information expecting from first period state to its second period. After long days passed from a disaster, a habitants don't anticipate daily living information in "chuo nandemo kawarabu" because of the restoration of life line being over. The role of newsletter is over, and in order to continue an activity of an expecting information, the information volunteer publishes the third period information named by "New chuo nandemo kawarabu" which mentions the revival plan.

Table 、Evolution of news source and information

	First period	Second period	Third period
Name of News	Daily need	Weekly need	Weekly need
Organization	National area NGO	Regional area NGO	Regional area NGO
Name of News	Chuo nandemo kawaraban	Chuo nandemo Kawaraban	Shin Chuo nandemo Kawaraban
Organization	Exterior Volunteer	Regional area NPO	Regional area NPO
Name of News	News for a refuge	Magazine of Information Center	Kobe Revival Newspaper

Organization	Exterior Volunteer	Interior Volunteer	Regional area NPO
Name of News Organization		Meeting News Regional Volunteer	Association News Inhabitants Organization

The information form residents develops in order to adequate with a demand of situation and the last becomes extinct. This activity begin form volunteerism or non professional work, and do not interest a demand of a market. The volunteer activity have not fundamentally the purpose of continuing information activity applying it to a market. The situation which need the information selects the news source and the form of this activity. Three patterns information from residents after disaster begin to be made by the situation of damage, the need of daily living information of inhabitants is happened by the condition of life. Therefor, a necessity of information is changed according with the situation of life.

Conclusion

In order to efficiently control the damages, it is mandatory to analyze the nature of the first period information from residents.

The first period information takes a very spontaneously form due to its contribution by Non-Governmental Organizations (N.G.O), volunteer groups and civil activism. Designing a regionally specific manual pertaining to daily living information in the event of an earthquake is insufficient because of the impairment of the situation at hand.

In conclusion, there should be understood different concepts for security system and risk management. It is necessary to organize risk management in response to the damage with a network system composed of volunteer groups and the administration of the peripheral area in order to establish a rescue system. This idea will be an effective and adequate social system in the event of a catastrophe. In order to make this idea real (the proper risk management of daily living

information), we need to introduce an new cultural thought system. It would be important to encourage the activity of N.G.O., volunteer groups and civil activism, and to build a culture revolving around people-based leadership.

Reference

KEYWORDS

Aftermath of the Kobe Earthquake, The risk management of daily living information, The first release of information, The news source, The interval of news release, The news duration, The first period of information from residents, The second period of information from residents, The third period of information from residents. the evolving form of information from residents. the information volunteer.

As a result of the great catastrophe of the Hanshin-Awaji (Kobe) Earthquake, in our country, it is urged to establish the theory and methodology for the risk management of daily living information in a crisis situation. In reality, the necessity for the information increases according to the degree of the damages. However, depending on the proportions of the damages, the ability to release information decreases tremendously. In these situations, clearly, a special manual must be

followed to release news in the disaster area in a rapid and adequate fashion. In order to create a practical and reasonable risk management manual, it is very important to understand the character of the information released in the event of a catastrophe. Based on the statistical analysis of the data obtained during the Hanshin-Awaji (Kobe) Earthquake, interactions between the release date of the first release of information ("resident-generated newsletter") and three factors (1. news source, 2. frequency of news release and 3. news duration) were investigated. The information contained in these "newsletters" can be grouped into three periods based on the analyzed data. The first, second and the third period information from residents can be characteristized according to these parameters. In this paper, I would like to propose a model for the news release and emphasize the importance of the efficient coordination with the peripheral social assitance around the disaster area.