

Pressing Social Problems in Present Japan and Workable Solutions

July 7–20, 2006, 10:30–11:55 at Horizon, in Divani Caravel Hotel, Athens, Greece

- Division:** General
- Chair:** Tetsuo NAITO (Shinshu University, Japan)
Kazumi RENGE (Tezukayama University)
- Participants:** Osamu KURAMITSU (Tokyo University)
Bullying and Harassment in Japanese Schools
Yukiko KAKIMOTO (Jissen Women's University)
Was the Safety Myth in Japanese Public Transportation Rolling Away?
Tetsuo FUJIMORI (Yokohama National University)
Post Traumatic Stress Disorder Following the Hokkaido Nanseioki Earthquake
Kimiaki NISHIDA (University of Shizuoka)
The activities of cultic groups to seduce young people whose lives wander and the psychological background
- Discussants:** Yasuhiro NAGATSUKA (Niigata Chuoh Junior College)

Opening address by Prof. Tetsuo NAITO

Hello, it is time to start our invited symposium, "Pressing Social Problems in Present Japan and Workable Solutions," which has been planned by the Japan Association of Applied Psychology. I am Tetsuo Naito, one of the convenors, and a professor of social and clinical psychology at Shinshu University. Another convenor is Kazumi Renge, a professor of traffic psychology at Tezukayama University. We treat here four topics that are general problems worldwide, though we thought at first that they were peculiar to Japan.

- (1) Dr. Osamu Kuramitsu, a professor of clinical psychology at Tokyo University, takes up bullying (IJIME) and harassment in Japanese schools. Bullying in school, which was found first in Japan, was revealed to be a universal issue that permeates the world. Conversely, harassment was derived from the USA, but we found it universal in Japan.
- (2) Dr. Yukiko Kakimoto, a professor of traffic psychology at Jissen Women's University, explains recent accidents and incidents in railroad and airline transportation. Major accidents can

hardly be eliminated, no matter how complete the Japanese traffic system is. There are some reasons unique to Japan.

- (3) Tatsuo Fujimori, a professor of social and clinical psychology at Yokohama National University, describes his research on post traumatic disorder following natural disasters such as earthquakes. The social-support system for natural disasters is still insufficient, though Japan is most notorious for earthquakes.

- (4) Our fourth and final topic is the activities of cultic groups. Dr. Kimiaki Nishida, an associate professor of social psychology at the University of Shizuoka, takes up the famous cultic group, AUM Shinrikyo. They attacked indiscriminately with sarin gas, a biochemical weapon. Many highly educated people took part in astonishing terroristic attacks, even though Japan is one of the safest countries and has relatively low unemployment. Dr. Nishida interprets social phenomena in these problems that are unique to Japan.

The four presenters are representative researchers in each topic in Japan. They will

speak about the actual conditions, their analyses and some workable solutions.

The discussant is Yasuhiro Nagatsuka, an emeritus professor of applied psychology at Niigata University. He will stimulate attendants and help promote useful discussions from the standpoint of applied psychology.

Now we will move to the presentations.

(The four speakers made presentations in the following order.)

1. Osamu KURAMITSU (Tokyo University)
Bullying and Harassment in Japanese Schools
2. Yukiko KAKIMOTO (Jissen Women's University)
Was the Safety Myth in Japanese Public Transportation Rolling Away?
3. Tetsuo FUJIMORI (Yokohama National University)
Post Traumatic Stress Disorder Following the Hokkaido Nanseioki Earthquake
4. Kimiaki NISHIDA (University of Shizuoka)
The activities of cultic groups to seduce young people whose lives wander and the psychological background

Thank you very much. Now, it is time for the discussion session. First, we invite the discussant, Prof. Nagatsuka, to make some comments.

Comments by Prof. Yasuhiro Nagatsuka

I would like to offer some comments on the presentations of the four speakers.

Each speaker gave a systematic presentation and explanation of "Pressing Social Problems in Recent Japan and Workable Solutions." Your practical and detailed explanations enabled us to realize the historical facts and most horrible incidents in the last ten years or so and the problems that confront us today. News presentations on terrorism and war activities, and fatal and tragic accidents convey the message that violence and human error may be a common behavioral problem throughout the world.

Here we had discussions on "Pressing Social Problems in Recent Japan and Workable Solutions." I would now like to ask each speaker some questions from the standpoint of a psychologist majoring in applied psychology. Applied psychologists, by definition, aim at solving social problems.

To Prof. Kuramitsu: You proposed that one of the factors of bullying and harassment may be severe competition inside a community. What do you believe causes such competition?

To Prof. Kakimoto: You commented that the background of accidents and incidents may be "human errors" and that better communication among the persons concerned might be a solution. What methods do you suggest to enhance communications?

To Prof. Fujimori: You placed much emphasis on the necessity of long-term psychological and social support for victims of national disasters. What are the main problems that inhibit such support?

To Prof. Nishida: You stated that Japanese young people have lost sight of a value model in their lives. Would you please give us an effective method of encouraging young people?

Do you have any examples of psychological studies that proposed solutions to the problem?

(Additional explanations were provided by the four symposists, and the discussion was opened to the floor. The explanations and discussions were very interesting and suggestive. We are sorry we must omit them because of limited space.)

Closing address by Prof. Kazumi RENGE

Thank you very much. On behalf of the convenors, I would like to extend our hearty appreciation for the intense and fruitful discussions. As revealed in the symposium today, there have been more and more seri-

ous social problems in Japanese society that should be dealt with by applied psychologists. The problems, as well as the possible solutions, discussed here could be useful not only for people in Japan but also for people in all countries around the world. We hope the concepts presented in the symposium will be developed further.

Bullying and Harassment in Japanese Schools

Osamu KURAMITSU

1. Purpose

Recently bullying and harassment in schools and universities have received attention in Japan. Harassment here includes sexual harassment and the so-called Academic Harassment (Japanese term).

First I will present the outline of these phenomena and then I will describe the recent cultural changes in Japan that may have influenced them. I will also point out the need for prevention and care as a student counselor and supervisor of school-counselors.

2. Bullying

Definition

Bullying is called *Ijime* in Japan and is defined by the Ministry of Education, Culture, Sports, Science and Technology as "Stronger students continuously attacking the weaker ones physically and/or psychologically, and the attacks are only from the stronger to the weaker, so the victims suffer from severe pain. *Ijime* occurs inside and/or outside a school." (The ministry deleted the words "continuously" and "severe" and "only from the stronger to the weaker" from the definition of *Ijime* in 2007.)

Examples

The most common kinds of bullying is verbal. The bully says to the victim "Go to hell" "Kill yourself" "Oh, you stupid," "Go home," "Son of a bitch," "Worthless scum," "You stink," "Fat bastard", etc. Physical bul-

lying includes spitting, hitting, kicking, punching, choking and in some cases even stabbing. Ignoring, shaming and social exclusion also occur in peer groups. There have been incidents where bullying has escalated to such an extent that the bully may take the victim's clothes off, forcing sexual behavior, blackmail, tearing up their textbook, writing dirty words on the victim's notebook, stealing or ordering the victim to steal. In the most severe cases, bullying has lead to homicide or the victim's suicide (at least three suicides occurred in 2006).

A female student said to me that she was bullied when she was in junior high school. She was often told "Kill yourself. I get sick seeing you." One day when she ignored such words, the bully stabbed her hand many times with a mechanical pencil. Another day, she was kicked in the face and back, so she fell down on the floor. Her mother noticed the wounds and informed the teacher. The teacher scolded the boys but verbal bullying continued.

I personally met a boy who had a speech handicap and was bullied for years. He was told daily at his school by the bully, "Hey, Fool. Why are you here?" His sister also suffered from bullying and was absent from school for a while. When she dared to go to school she found that her desk had disappeared.

Incidence

Bullying occurs from infancy to adulthood, but it peaks during junior high school (age 12 to 14). Figure 1, generated by the Ministry of Education, Culture, Sports, Science and Technology (2006), shows the statistics.

According to the Tokyo Educational Center (1998), almost 10% of junior high school students in Japan suffered from bullying around that time.

3. Sexual harassment

Definition

The University of Tokyo defines sexual harassment as "actions and words of a sexual nature that cause discomfort to others."

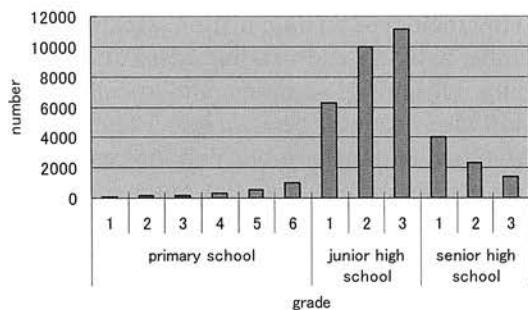


Figure 1 The number of children who suffered from bullying in the 2004 school year (April 2004 to March 2005)
(Every grade has almost 1,200,000 students.)
The Ministry of Education, Culture, Sports, Science and Technology of Japan (2006)

Examples

The four types of sexual harassment are presented below.

- 1) Verbal harassment
"Oh, you look sexy today, sugar!"
- 2) Sexual behaviors
Touching, kissing, embracing and seducing
- 3) Forced gender role
Ordering the female student to serve drinks
- 4) Forced companionship
"Only you are coming with me to the conference abroad."

Hypothetical case

A professor gets a female student to come to his hotel room after the conference party, saying that they should talk about the next presentation. There, he presses drinks upon her, then suddenly hugs and kisses the victim, whispering "let's make love." The student felt sick and cried but could not resist as she was concerned about receiving a bad evaluation on her degree.

Incidence

The Harassment Counseling Center of The University of Tokyo (2006) presented this chart (Fig. 2) indicating how often students suffer from sexual harassment.

The reduction of reported sexual harass-

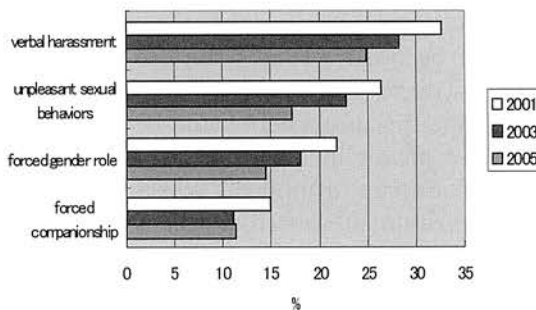


Figure 2 The percentage of students who have reported that they suffered from sexual harassment
(The University of Tokyo, 2006)

ment may be due to the prevention system, but still 40% of female student and 8% of male student reported that they had been sexually harassed.

4. Academic harassment

Definition

The University of Tokyo (2006) defines academic harassment as "inappropriate actions and words between university members, using the harasser's power in the field of education and research. Academic harassment causes disadvantages and damage to the victims as they study, educate or work."

In short, this means, "inappropriate use of power in the academic relationship."

Examples

- 1) Humiliation
A professor shouts to a student, "Go home. Stupid! You will never get your degree!"
- 2) Quitting supervision
A professor ignores the request for supervision for months.
- 3) Using the student like a slave
A professor forces a student to work from morning till night seven days a week for months.
A professor dictates everything in the research process, and there is no freedom for the student to pursue his/her own ideas.

4) Exploitation of the student's work

A professor does not allow a student to be named as main (first) author even when the research was done almost entirely by the student.

Incidence

The Student Counseling Center of The University of Tokyo (2006) found that 11.4% of graduate students who answered the questionnaire reported that they have suffered academic harassment.

5. Characteristics of bullies and harassers

Bullies and harassers are eager to control the victim and sometimes feel pleasure when the victim feels pain. Often they do not feel guilty and insist that they did not mean it. Some of them deny their actions until the evidence is presented.

6. Characteristics of bystanders

Many bystanders ignore the incident because they are afraid to be the next victim. Some also feel that the victims are just inferior or too weak. Some think bullying or harassment are not serious issues.

7. Characteristics of victims

Most of the victims feel severe pain and anger. Often it is very difficult for the victim to avoid or escape the situation. Most victims are afraid of revenge if they report the incident.

Many have symptoms like PTSD. They have flashbacks of the traumatic incidents and are afraid of recurrence. Strong fear occurs when the victim sees or imagines the face of the attacker, hears their voice or even reads the name of the attacker. They try to avoid the places of such incidents, like the laboratory or the campus, and many of them start to skip school for weeks or months. Some feel that others may accuse them of being truant.

Others get depressed and have trouble getting up in the morning and sleeping at night, thinking of the next meeting with the attacker. They may get up late and stay at

home and watch TV, listen to music or access the internet until late at night or early in the morning.

Some have body reactions like trembling, heart pain, headache, stomachache, sickness and vomiting. Some drink or eat too much, others too little.

8. Recent cultural change in Japan that may influence bullying and harassment

It is said that Japanese culture has changed from maternal to paternal, from harmonious to competitive, from local to global (in Japan, globalization is just Americanization).

Some say the Japanese have lost the Samurai spirit and have become just businessmen. In the old days it was shameful for a stronger person to attack a weaker person. Now, however, that spirit is lost and it looks natural for the stronger to attack the weaker.

The maternal principle has been dominant for a long time in Japan. This means that every child in a family should be cared for. Today, however, the paternal principle has become dominant and only children with "good qualities" deserve to survive. Similarly, in companies and schools, your friend today could be your enemy tomorrow, and only superior people are rewarded; inferior people run the risk of being thrown out.

Human relationships change from total to partial or fragmental, from life-long to temporal, and from solidarity to solitude.

The sense of community or family belonging has been weakened. People try to manipulate others rather than help them.

It could therefore be considered that these cultural changes have had an impact on bullying and harassment in Japan.

9. Need for prevention and care

- (1) Establish a board or committee inside a school that has the power to punish or restrain the attacker. For example, the board may decide to change the supervisor of the student and/or to stop the

- harasser from having direct contact with the victim for a while
- (2) Provide psycho-education to all staff members and students, explaining clearly the effect of bullying and harassment.
 - (3) Establish a counseling and support system.

10. My psychotherapeutic approach

- (1) Do not blame or criticize the victim any more.

Even encouragement may be interpreted by the victim as being blamed for not fighting back or enduring the situation.

- (2) Follow the stages of human development again.

Babies start to live, rest, play, learn and work as they grow up.

When you get severely hurt and become depressed, you follow this process again. First you live, so you resist the temptation to commit suicide. You then get rest: have a good sleep. Now you can play under whatever rules are suitable for you. When you start to learn and study, go little by little.

- (3) Follow the AKIRAME (Buddha's concept) process.

"Akirame" usually means "giving it up," but the original meaning in Buddha's concept is "making it clear." Through the experience of anger and sadness, you realize clearly what happened to you, and you calmly and deeply accept the fact that you cannot avoid pain throughout your life.

- (4) Search for "Individual Ought."

The pain continues but you can still choose something you feel you ought to do from possible options. I define this as "Individual Ought."

By listening to your inner voice, by appreciating your dreams or art, by having contact with nature, or by going to some spiritual places, you may find your "Individual Ought" and a psychotherapist stays with you throughout the

process.

This approach includes Freudian, Jungian, Rogerian, cognitive and even behavioral approaches. It also integrates the Buddhist concept of "Akirame." I feel that this integrative approach fits me and has been effective for many of my clients.

Is the Safety Myth in Japanese Public Transportation Rolling Away? —Based on Recent Accidents and/Incidents in Railroad and Airlines Transportation—

Yukiko KAKIMOTO, Ph. D.

1. Preface

When we simply compare the number of fatalities in public transportation based on the 2004 Traffic Safety Report by Japanese Government, 7358 persons were killed in automobile accidents, 317 in ship were killed, 299 in railroad accidents were killed, and 14 in aviation (these belonged to general aviation, helicopters, and ultra light plane). People generally believe that transportation in railroad is safer than aviation transportation since airlines in Japan have not recorded a fatal passengers accidents since the crash of a JAL aircraft into Mt. Osutaka on Aug. 12, 1985.

Iguchi (1975) calculated the risk of a railroad fatality, 6×10^{-8} (Iguchi, 1975) and concluded that railroad transportation is quite safety. Compared to the railroad rate, the aircraft accident rate is 1 case per 100 million departures, or 10^{-6} . People realize that airplanes are not completely safe, but are worthwhile utilizing nonetheless.

These safety trends have continued for 20 years in aviation and for 40 years in railroad transportation. However, the year 2005 became a special year both railroads and airlines. Accidents, incidents and troubles occurred frequently both in aviation and railways in the first half of the year (Tab. 1). Most serious was the JR Fukuchi-

Table 1 Recent Accidents/Incidents and Troubles in Public Transportation in Aviation and Railroad Cases in Japan (based on a report released by Aircraft & Railways Accident Investigation Commission and News Papers)

Railroad	Description of events
March 2, 2005	Derailment by Tosakuroshio Co. Fatality: 1 operator., Injuries: 9 passengers and 1 conductor A train failed to slow down, and ran over the buffer stop and derailed.
March 15, 2005	Railroad crossing accident at Takenozuka, Tobu Railroad Co. Two passers-by were killed, and two were injured. The flagman manually opened the crossing and the train struck passers-by.
April 25, 2005	Derailment and crash of Fukuchiyama Line Train, JR West Japan. 107 people were killed and 555 were injured. The first and second coaches crashed into an apartment building; the third, fourth and fifth coaches derailed.
Aviation	
Jan. 22, 2005	A JAL Japan plane began to taxi for take off without clearance from the air traffic controller at Shinchitose Airport.
March 11, 2005	A JAL International plane began to enter a runway without clearance from the air traffic controller. The pilot misunderstood the instructions of the Incheon Airport, Korea, controller.
March 16, 2005	A JAL International cabin attendant forgot to close the handle of an emergency door.
April 10, 2005	A co-pilot of JAL International failed to follow in-house landing procedures.
Jan. 21, 2005	An Air Nippon flight began to taxi for take off without clearance from the air traffic controller at Komatsu Airport.
April 29, 2005	An air traffic controller guided JAL A and JAL B into a closed runway 34L at Haneda airport. The controller in charge misunderstood and did not report the NOTAM to other controllers of his crew.
May 8, 2005	During flight, cabin pressure suddenly dropped in a JAL international plane, and the captain completed an emergency landing at Shinchitose Airport. There were no injuries.

yama railroad accident in which five coaches of a seven-coach train derailed and the first and second coaches crashed into an apartment building located on a curve in the track ($r=304$ m). One hundred and seven people (including a driver) were killed and 555 were injured.

In aviation, JAL experienced various troubles and incident between pilots and air traffic controllers (ATC). These involved the risk of colliding with other aircraft on the ground or in the sky. What disrupted the long-standing safety records in the railroad and airline industries?

This paper discusses the social back-

ground in Japan for direct and indirect unsafe acts, with emphasis on serious railroad derailments and inadequate communication between pilots and air traffic controllers that led to critical situation in aviation.

2. Methods

The backgrounds of accidents or incidents were analyzed based on the progress report by the Aircraft & Railroad Accident Investigation Commission, news papers and magazines. HFACS model (by Shappell, S. A. & Wiegmann, D. A., 2001) was used to analyze the events sequence. The HFACS model was revised the J.Reason's Swiss cheese model.



Figure 1 Derailment and crash on JR Fukuchiyama Line.

Near side is the third coach, far side is the second coach. From here, we cannot see the first coach, which was laid over the second coach.

(From the Gendai news paper April 25, 2005)

3. Results

(1) Railroad derailment and crash on JR Fukuchiyama Line (Fig. 1)

Here we analyze the conditions and situations behind the direct unsafe act. The sequence of events was as follows.

①Unsafe act

The driver braked late. (about 09:18:50) He passed through 116 km/h speed along the section limited to 70 km/h.

On a 304 m radius right curve, the first coach to fifth coaches of the train derailed and the first coach crashed into an apartment building located on a corner of the curve. The second coach broke in the middle and wrapped around a pillar of the apartment building. Why did the driver brake late?

②Preconditions of unsafe acts

It is suspected that the driver was distracted by something at the time of braking.

The Aircraft/Railroad Accident Investigation Commission revealed the time sequence of the communication between the conductor and the officer of the train control room and the summon (09:18:48 to 09:18:49) from the officer to the driver. It was re-

corded just before the 304 m radius right curve. Through radio communication, the officer of the train control room requested the conductor to explain the over run at the previous station, Itami.

It might be suspected the driver's attention would concentrate on these communication and the officer's requirement.

Why did he have difficulty listening to the communication between the conductor and the officer in the train control room?

③Over run at the previous station Itami

The driver mistakenly overran the platform by about 72 m at the previous station (Itami; about 09:17:43).

It is suspected that the driver was distracted by something at the time for braking. Emergency brake activation was recorded automatically. According to the conductor's testimony, the driver requested the conductor to report to the officer in the control room that he made an overrun of less than 72 m. The driver may have been anxious to hide his mistake, a large overrun, for fear of being punished and losing his job as driver as a result. He might have been highly anxious about how the conductor explained his overrun to the officer in the control room.

④Recording of two emergency brake activations at the previous station (Takarazuka)

When the driver tried to enter Takarazuka Station, he exceeded the speed limit, and the emergency brake activated automatically (08:54:38).

The driver should have reported the emergency brake activation to the officer in the control room immediately, but he did not. Before the emergency brake activated, the driver had a chance to respond to it, but he did not. Why?

⑤Management and Organizational factors

- In the face of severe competition with other companies, the JR West company has been reducing safety expenses. The new automatic train stop (ATS) system had not yet been installed on the Fukuchiyama line.

- The driver's first error might be identified by the emergency brake activating twice at Takarazuka station. Here he made a mis-

take and violated rules by not reporting emergency brake activation to the officer. Inattention due to a low level of alertness might also be suspected, but it is very difficult to confirm. The driver's real sleeping time and the quality of the previous day's rest were not determined. The driver had slept two consecutive nights in a temporary room at the station.

(2) Incident report of inadequate communication between pilots and air traffic controllers

As shown in Tab. 1, three incidents or troubles occurred concerned due to inadequate communication between pilots and air traffic controllers during a period of five months. Human errors caused by inadequate communication have been continued since notorious Tenerife Tragedy in 1977. As radio communication is the one of the characteristics in aviation, there will be human errors even though aviation facilities employ highly advanced technology.

On 29, April, 2005, an air traffic controller guided JAL aircraft A to closed runway 34L in Haneda airport. None of the crew noticed this error. The person responsible for reporting that the runway was not active due to construction failed to understand that the construction was not carried out during the allotted time period and did not issue a warning, but rather depended on his past experience.

The person did not report a warning to other crew members.

JAL aircraft A pilots were informed before taking off that the runway 34L would be closed. They wondered why the controller cleared them to land on the runway, but they did not ask the controller.

In two other cases concerned this inadequate communication, pilots began to take off without receiving take off clearance from the controller.

The unsafe acts of Air Traffic Controller A were as follows(incident of April 29, 2005);

①Unsafe act

Controller A did not inform the crew that runway 34L was closed on that day. He was the person responsible for issuing warning about airport facilities.

Why did he not notice about it?

②Precondition of unsafe act

Controller A did not believe that the construction would be carried out during this duty time. Why did he believe so? The construction period had changed from April, but he was unaware of it.

He never checked using the computer or other methods.

③Unsafe supervision

The chief of this crew did not notice the closed runway either.

They had the opportunity to check this because both JAL A and JAL B pilots asked the ground controllers if the pilots were really approved to land on runway 34 L.

None of the air traffic control crew noticed the closed runway.

④Organizational safety issues

The working procedures for issuing warnings were exactly determined.

4. Discussion

In the Fukuchiyama derailment and crash, the driver's sequence of mistakes was triggered by his first mistake at Takarazuka Station. Direct unsafe acts were the driver's violation of speed limit, but behind these mistakes, there was always a strong fear of his supervisors and his organization.

He seemed to fear being severely punished by his boss or officers. This fact was corroborated by his asking the conductor to conceal his overrun at Itami Station. The driver might have feared receiving special education involving a humiliating sermon and advice to change his job as driver to another job due to his mistake. These fears of punishment for making an error could produce a culture that promotes hiding the facts. The act of hiding the facts can be seen in various situations, for example, in nuclear power stations, the accident during repair of the famous Takamatsu-Ancient tomb, mainte-

nance mistakes in airline, disguised calculations for building, etc.

These phenomena could prevent identifying the real causes of accidents and be related to social problems in Japan. ICAO rules state that aircraft accident reports are used for only accident prevention, not for punishing someone.

However, in almost all cases, who made the error is usually of more interested than why the error occurred. Finally, someone is punished, and the case is closed. Pinning the blame on someone is generally a solution carried out everywhere.

However, hiding the facts and creating an atmosphere of fear over minor mistakes and making someone responsible for their errors seems to be social problems in Japan.

The inadequate communication between pilots and air traffic controllers are not special cases. However, why did the miscommunication occur on those terms?

Indifference to other people in their workplace might inhibit the development of safety consciousness and lead to unsafe acts and unsafe conditions.

Indifference to others has been seen in recent Japanese society and it is said that there is little chance to communicate with others daily life. This might result in the responsibility of safety awareness being continuously transferred from senior controllers to junior controllers.

5. Conclusion

The first half of the year of 2005 became special in public transportation. The railroads that had been proud of their 40-year accident-free records had a very serious derailment and crash on the JR Fukuchiyama Line. The aviation which has been no fatal passengers for 20 years had inadequate communication incidents between air traffic controllers and the pilots during flight. In case of the railroad accident, not only unsafe acts but also there existed possibly unique Japanese like phenomenon, that is, punishment for their errors, resulting in a culture that encouraged concealing facts. This type of

culture is considered to disturb the human factors approach to preventing accidents and incidents.

Indifference toward others, a trend seen in recent Japanese society, may explain the inadequate communication observed in the aviation industry. To prevent the accidents/incidents and troubles including the first and second cases, we should establish good communication from seniors to juniors and from bosses to coworkers in the working places. This prevention seems to be common, but is not always implemented. It is very difficult to determine why accidents, incidents, and troubles were concentrated in this period, but we suspect that some safety threshold was exceeded due to the occurrence of various minor events or small troubles.

References

- Aircraft·Railroad Accident Investigation Commission: The progress report of the facts in JR Fukuchiyama Line Derailment Accident for public hearing. Dec. 20, 2006 (in Japanese).
- Aircraft·Railroad Accident Investigation Commission: Incident Report A12006-1 (in Japanese).
- D. A. Wiegmann, D. A. Shappell, S. A. 1997 Human Factors Analysis of Postaccident Data: Applying Theoretical Taxonomies of Human Error. *The International J. of Aviation Psychology*, 7(1).
- Shappell, S. A & Wiegmann, D. A. 2001 Applying Reason: the human factors analysis and classification system (HFACS). *Human Factors and Aerospace Safety*, 1 (1), 59-86.

Post Traumatic Stress Disorder Following the Hokkaido Nanseioki Earthquake

Tatsuo FUJIMORI

1. Purpose

It is a well-known fact that natural disasters cause serious damage to ecological and social/psychological structures, and the

affected community often lacks the power and capacity to cope with the damage. Typical examples can be found in the Hokkaido Nanseioki (off the South Coast of Hokkaido) Earthquake that occurred in July 1993 and the Hanshin-Awaji Great Earthquake that occurred in January 1995.

In past studies of natural disasters in the fields of human and social sciences in Japan, the great concern and principal efforts have been directed towards preventing or minimizing casualties. Former studies have focused on disaster-control education, evacuation, dealing with panic, delivery of information, disaster culture, and so forth. It appears that most of these studies of disasters have concerned people's reactions or social behavior before and during disasters. These studies have never examined what kinds of hardships and distress survivors have experienced during the period of recovery, and what kinds of mental health problems they have suffered when they were unable or had limited ability to deal with disasters (Fujimori & Fujimori, 1996).

I am very pleased that our study was accomplished with the support of many survivors of the earthquake and tsunami that seriously damaged the Aonae and Yoneoka districts of Okushiri-cho. I would like to express my deep appreciation for their cooperation. The report of our psychological care for survivors and of our study was circulated by the Okushiro-cho Board of Education and the Aonae district town council.

Why have previous Japanese researchers not been concerned with survivors' mental health and why has this problem been ignored? At least two reasons can be pointed out.

First, there are our cultural and historical backgrounds in which the survivor's distress and grief were considered as individual issues to be solved by him/her, and this type of problem has been neglected (Yanagida, 1995).

Second, a large amount of research (for example, Tokyo University Institute of Jour-

nalism and Communication Studies, 1982, 1984) that studied survivors' mental health in Japan in the past have reported that survivors' experiences of disasters had little prolonged ill effect on their psychology. (Hereafter, these studies will be referred to as "the earlier studies.")

However, studies of survivors' mental health problems conducted in western countries (Raphael, 1986) have shown that the fearful experience of a major disaster may bring about strange feelings and behavior in survivors who have never previously experienced such trauma, and that such symptoms may cause psychological pain. The American Psychiatry Association (1994) defines such symptoms as Post Traumatic Stress Disorder (PTSD: stress disorder following traumatic injury) in the Diagnostic and Statistical Manual of Mental Disorders 4th ed. (DSM-IV). Such symptoms are classified into the following three major categories: Intrusion, Avoidance, and Hyper-arousal.

Influenced by such studies conducted in Western countries, Fujimori & Fujimori (1996) started research in disaster-stricken areas immediately after the Hokkaido Nanseioki Earthquake. We pointed out the necessity of lessening stress disorder over the entire affected areas, and urged both the Okushiri-cho Disaster Headquarters and the Hokkaido Nanseioki Earthquake Headquarters to provide psychological care for survivors.

Along with our above study, the studies by Fujimori & Fujimori (1996) ten months after the Hokkaido Nanseioki Earthquake and by Tanaka & Takagi (1997) one year after the Hanshin-Awaji Great Earthquake that occurred in January 1995, found that more than 60% of survivors have a tendency toward mental disorder. They indicated that even more than ten months after the disasters survivors are psychologically in threatened or precarious health situations. (Hereafter, these studies will be referred to as "the later studies.")

Thus, under the present circumstances, significantly different study results are un-

covered regarding the evaluations of survivors' mental health. This study points out the following three primary factors in which the later studies gave quite different results from the earlier ones.

- (1) Range of ways that natural disasters alter communities: In addition to the fact that disasters create a life-threatening experience for the individual as well as property losses, later studies consider whether or not the entire community suffers from physical and organizational damage.
- (2) Target of the study: Studies target either survivor who suffered serious trauma, i.e., loss of family members or loss of houses and property, or survivors who were chosen at random from people who lived in the community where this disaster occurred.
- (3) Rating scale of survivors' mental health: The earlier studies reported in Japan did not use a standard rating scale to measure survivors' mental health, but the later studies used a rating scale standardized for Japanese called the General Health Questionnaire (GHQ), and measured the degree of influence natural disasters had on survivors' mental health in comparison with the general public who were not affected by disasters.

Based upon the above illustrations, this study hypothesized that "natural disasters

that bring about serious loss such as destruction of the entire community, a life-threatening event, or death of family members exert a prolonged harmful influence upon the mental health of survivors and cause a high rate of psychological trauma for an extended period of time." Next, this study tested this hypothesis with survivors who have lost family members and houses or property in the Hokkaido Nanseioki Earthquake. It also sought to examine various factors that contributed to the restoration of survivors' mental health. The Impact of Event Scale-Revised (IES-R) was employed as a standardized rating scale to measure

whether or not survivors tended toward PTSD. The IES-R was translated into Japanese by Asukai of The Tokyo Institute of Psychiatry and his joint researchers with the permission of the original authors (Weiss & Marmar, 1997).

2. Method

(1) *Study period*: Our study was performed from August through September 1999, six years and two months after the Hokkaido Nanseioki Earthquake.

(2) *Target*: The Hokkaido Nanseioki Earthquake (7.8 on the Richter scale) occurred at 10:17 p.m. on July 12, 1993, and a great tsunami followed immediately thereafter, causing tremendous damage to Okushiri-cho. Two hundred and twenty-nine people were dead or missing, and 1,009 houses were totally or partially destroyed. We surveyed 847 survivors who were over 20 years old, who entered the resident registration as of August 1997, and who have resided in Aomae or Yoneoka area of Okushiri-cho, Okushiri-gun, Hokkaido, where casualties were the most serious.

(3) *Questionnaires*: The survey covered demographic factors such as sex, age, and degree of damage caused by disasters. The IES-R was employed as a rating scale of survivors' mental health.

Method of survey: The questionnaires were mailed to all survivors mentioned above and collected by either return mail or by door-to-door pick-up. The survey form stated that names of responders would not be revealed and that the data would be used only for psychological studies.

3. Results and Consideration

(1) *Survey responses*: The survey response rate was 40.9% (346 of 847).

(2) *Characteristics of survivors responding to the survey*: The survey responders were composed of 154 males (44.5%) and 192 females (55.5%). The average age of the responders was 56.92 ($SD=14.65$).

(4) *Occupations*: By occupation, the highest rate was jobless (19.2%) followed by house-

wives (15.7%). People involved in the fishing business were next with 15.2%, and salaried men or organizational staff accounted for 12.5%. The lowest rate was commercial/self-employed persons (12.7%). (4) *Mental status*: This study performed a principal component analysis based upon the IES-R data. The loading for the first component in each item was over 0.600, and the loading for the other components were below 0.400. The Cronbach reliability coefficient for all the items was 0.950. Thus, one dimension of the IES-R was confirmed in this study.

Next, criteria standardized for Japanese are necessary to assess the PTSD tendency among survivors. From September through December 1998, three years and eight months after the Hanshin-Awaji Great Earthquake, Kato and Iwai (2000) tested the reliability of the IES-R on 86 survivors who resided in temporary housing or in public housing for disaster rehabilitation in Kakogawa City, Hyogo Prefecture. Their study reported that sensitivity and specificity became greatest when the cut-off of the total score of the IES-R was set at 30/31 to diagnose PTSD symptoms. Sensitivity is an index that indicates whether or not the IES-R discriminates PTSD survivors correctly. Specificity is an index that indicates whether or not the IES-R distinguishes healthy people. This study found that a total IES-R score over 31 indicated PTSD by referring to this cut-off point. The result (Fig. 1) demonstrates that 22.5% of the survivors tend toward PTSD. Considering that the lifetime ratio of PTSD is 1 to 14% in the preceding study (DSM-IV, 1994), we think that this high ratio supports the hypothesis of this study.

We also examined the factors that characterize the disparity between PTSD cases and non-PTSD cases. First, when we performed the χ^2 test to examine differences in sex, we found the ratio of PTSD in females (26.6%) was significantly higher ($p < .05$) than that in males (17.5%). Significant differences were found ($p < .001$) in age; the ratio of PTSD in

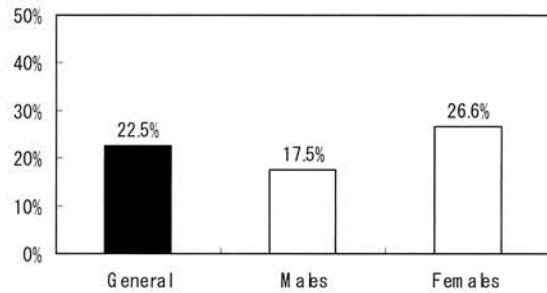


Figure 1 Proportion of survivors with PTSD

people over 50 years old (28.1%) was significantly higher than that of people under 50 (11.9%). The ratio of PTSD in people whose job or household had not been restored (47.2%) was significantly higher ($p < .001$) than that of those whose job or household had been restored (18.0%). The ratio of PTSD in people whose family finances worsened (28.9%) was significantly higher ($p < .01$) than that in those families whose financial situation remained the same or improved (14.4%). The ratio of PTSD in those who did not have a care-consultant (43.8%) was significantly higher ($p < .001$) than that of those who did (21.1%).

The second objective of this study is to specify various factors that affected the recovery of mental health of survivors of the Hokkaido Nanseioki Earthquake. We therefore conducted multivariate logistic analysis, a technique for analyzing the relative degree of risk factors (explanation variable) that contribute to certain events or phenomena (criterion variable).

Table 1 indicates the result of multivariate logistic analysis. For the criterion variable, survivors' assessments (whether suffering PTSD or not) were set up based on survivor IES-R scores. The following factors were established for the explanation variable: 1) sex, 2) age, 3) financial situation of household, 4) degree of casualties, 5) whether or not the survivor has a care consultant, and 6) recovery of job and/or household.

The analysis indicates that three major risk factors contributed to survivor PTSD, sex, age and recovery of job. This demon-

Table 1 PTSD Risk Factors

Factor	Category	Partial regression coefficient		Relative risk	
				95% confidence interval Lower	Upper
Sex	Female	0.841*	2.32	1.22	4.39
	Male				
Age	Over 50	0.901*	2.46	1.13	5.35
	Under 50				
Financial situations	Worsened	0.299	1.35	0.70	2.61
	Remained the same				
Degree of casualties	Severe	0.612	1.85	0.66	5.16
	Moderate				
Care consultants	Absent	0.476	1.61	0.71	3.64
	Present				
Job and/or household	No-recovery	0.940*	2.56	1.13	5.82
	Recovery				

* $p < .05$

strates that the highest relative risk degree among them is recovery of job and/or household. Those whose job and/or household were not recovered ran a 2.56 times higher risk than those whose job and/or household had been recovered. The age and sex factors cannot be ignored. People over 50 had a 2.46 times greater risk than those under 50; females had 2.32 times greater risk than males.

A prolonged serious influence upon the mental health of survivors was confirmed even six years and two months after the Hokkaido Nanseioki Earthquake. The study demonstrated that both social support to reconstruct survivors' jobs and lives and psychological support to give advice to suffering survivors and people of middle to advanced age for their problems are necessary.

References

- Fujimori, T. & Fujimori, K., 1996 Mental health of victims of 1993 Hokkaido Nanseioki Earthquake. *Archives of Psychiatric Diagnostics and Clinical Evaluation*, 7(1), 65-76.
- Yanagida, K. 1995 Why do we do mental care now? *Security*, 78, 18-19.
- Tokyo University Institute of Journalism and Communication Studies 1982 *Urakawa oki Earthquake and Responses of Victims*.
- Tokyo University Institute of Journalism and Communication Studies 1984 *Responses of victims in 1982 Nagasaki Great Flood*.
- Raphael, B. 1986 *When disaster strikes: How individuals and communities cope with catastrophe*, Basic Books, New York.
- American Psychiatric Association 1994 *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, Washington D.C.
- Fujimori, T. (1998) Prolonged mental health problems due to natural disaster, *Japanese Journal of Personality*, 7(1), 11-21.
- Tanaka, M. & Takagi, O. 1997 A Study of the victims in the temporary housing built outside of the stricken disaster area of The Great Hanshin-Awaji Earthquake I: The impact on physical and mental health of the people in the temporary housing a year after the earthquake. *The Japanese Journal of Experimental Social Psychology*, 37, 76-84.
- Weiss, D. S. & Marmar, C. R. 1997 The Impact of Event Scale-Revised, Wilson, J. & Keane, T. (ed.) *Assessing Psychological Trauma and PTSD*, The Guilford Press, New York, pp.

399-411.

Kato, H. & Iwai, K. 2000 Posttraumatic Stress Disorder after the Great Hanshin-Awaji Earthquake: assessment by the structured interview to the survivors, *Kobe Journal of Medical Sciences*, 60(2·3·4), 147-155.

The activities of pseudo religious cults aimed at seducing young people who wander in their lives, and their psychological background

Kimiaki NISHIDA

1. Introduction

From 1986 to 1995, Japanese society was indiscriminately attacked by the religious cult Aum Shinrikyo. The cult used prohibited biochemical weapons such as sarin and VX gases. The worst of the tragedies was the Tokyo subway attack on March 20, 1995, that killed twelve innocent people and injured 5,500 using only 5.5 kg of the sarin. Had they produced the planned eight tons of the gas, the number of deaths would have been unimaginable. All the attackers knew the danger because they included middle-class and highly educated persons, among whom were a popular surgeon, industrial experts, and scientific postgraduates of some famous universities. Therefore, the Japanese people were very shocked.

Aum's subway gas attacks might have been influenced by the new concepts of worldwide terrorist commanders or leaders, one of which is the concept of "the targets of attack that create the most casualties." Thus, terrorists extended their enemy targets to innocent people whom they considered not worthy of living. Another concept concerned "the means for the attack." There is no longer any concept of fair means or foul, simply the desire to create maximum damage in one attack. In fact, some terrorist attacks might be patterned after the attacks in New York on September 11, 2001, in Madrid on March 11, 2004, or in London on July 7, 2005.

In Japan, we have observed "cult" problems since the 1980's. Without doubt, the Aum cases were the most diabolic, but in the last two decades we have experienced several conflicts with destructive groups that tend to appear one after another. For example, we have experienced exploitation in which cult members worked for nothing, like slaves, whereas another cult seduced young people to carry out fraud. In another case, a cult leader ordered members, including children, to deny usual medical treatment when seriously ill or almost dying. In other cases, many young women were sexually abused and children were abused by cult leaders. Thus, we can consider all of these to be the result of strong "mind control" over people who are easily led astray.

However, newcomers to these cults were not kidnapped by the cult. Nishida (1993, 1998) clarified that newcomers were attracted to the cult's thought in a recruitment step, although the cults deceived these recruits by presenting beautiful illusions of personal life, family life, and a perfect society. What attractions do cultic groups have for Japanese people, and why do their followers become so obedient to their cult leaders?

2. The psychology of the Aum attackers

Even though the Tokyo subway attackers had been very highly educated in excellent graduate schools of universities, they nevertheless became terroristic killers without hesitation for they began believing in actualization of an illusory world that was realistically impossible. According to Nishida's (2001) questionnaire survey and interviews with several defendants in their prisons, their minds were firmly manipulated to change their original belief system for decision making into a new system in which their leaders' commands are absolutely good and true (Fig. 1). Before joining the group, they were somewhat interested in spiritual peace and Tantric Buddhism. However, upon joining they had to change their original values into something completely worth-

less, supposedly in order to gain truly meaningful lives for themselves and all people. I believe that it is very important for us to understand that they began to look upon their value in this life as a preparation period for their next lives, through reincarnation after their deaths with the help of the guru's mystic power. That is to say, they were acting on their unique belief system they had developed through Guru Asahara as the only functional device, consisting of their exotic beliefs of "self," "goal," "ideal," "causality," and "authority" for their decision making (Nishida, 2001). It can be helpful to look upon the metamorphosis of a belief system as the rearrangement of a furniture collection in a private room (Fig. 2).

The Guru forced them to use only the new system, in which he constructed his believers' life spaces in such a way that they could feel vivid realities by personal mystic experience or social proof. He also forced them to practice extremely rigorous yoga training for a long time and to labor without rest for years. As a result, they continuously thought about their duty and services and lost all opportunity and ability to reconsider the meaning of their anti-social activities. Furthermore, they could no longer remember their old values or appreciate the non-believers' perspective toward their behavior. It seems conclusive from the results that it was too strong a heuristic process in their decision making.

3. Background of cult attraction

I believe that Japanese people have lost sight of a value model in their lives. When the present young people were born in the 70's and 80's, Japanese life had already become rich economically. The elder generation, people born in the 60's and 70's, generally enjoy their lives by spending money because they believe that becoming affluent is the right way to make them happy. Therefore, they follow our social system without rebellion for the purpose of becoming affluent.

However, Japanese people may have lost

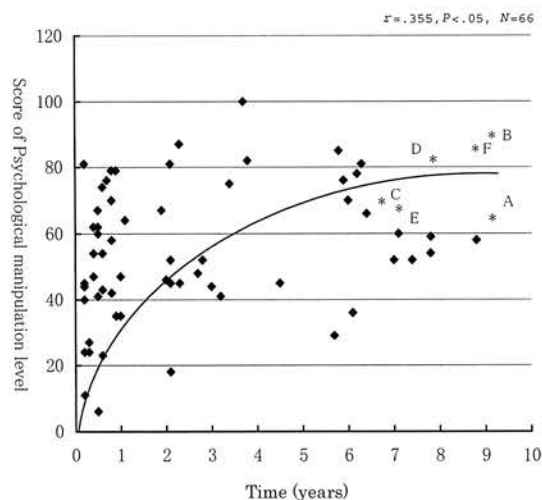


Figure 1 Psychological manipulation level and years of devotion to Aum Shin-rikyo

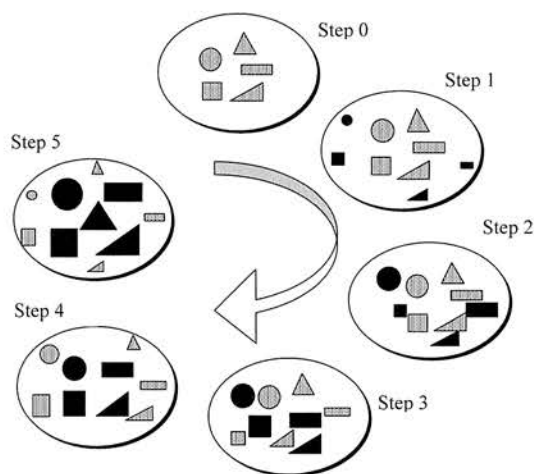


Figure 2 Metamorphosis of psychological manipulation to a belief system depicted as similar to furniture rearrangement in a private room.
○: SELF beliefs, □: GOAL beliefs, △: AUTHORITY beliefs, ▭: IDEAL beliefs, ▱: CAUSALITY beliefs
Note: Shapes colored black represent the newly inputted beliefs. Large shapes are developed beliefs and shapes in the middle represent beliefs that are highly valued by the individual.

their spiritual concept of a meaningful life by becoming too materialistic. They worked obediently to earn much money because

they wanted to buy everything as a form of mental satisfaction. However, the younger generation could not accept their life model. Some of them realized that their elders' frivolous attitudes towards life were intrinsically empty. The young dropouts in competitive society who could not fit into this lifestyle were losing the potentiality to succeed in their lives. Inconspicuous young people were also losing themselves as valuable members of society, although they wanted to realize their own self actualization, and were noticed by the more significant people around them. Some young elites may have even lost the usual concept of success in their lives that their parents had expected of them because they lacked adventure and ambition and had become spiritually vain.

When many young people began to search for the meaning of life or spiritual richness they found it difficult to obtain correct guidance. Unfortunately, our traditional religions have generally become materialistic and reduced to ceremonial roles for funerals or weddings in Japan. Thus, their elders, and even priests close to them, could not answer their serious questions about life.

However, there seems to have been no custom of consulting with clerics from the very early days of Japan. Most Japanese people do not hesitate to disclose that they are atheists because many people regard religious groups as simply for providing ceremonial services. However, I think that the elder generation had other people to consult and also held firm to their traditional beliefs. They could readily consult with their familiar peers or their school teachers about any unsolved problems in their lives. Moreover, many young people of the previous generation believed in ultra nationalism or Marxism, which became their value model.

4. Aum's seduction to illusory happiness

Aum Shinrikyo was very attractive for people with unsolved problems in their lives. The supreme Guru clearly demonstrated for them how to solve everything, such as find-

ing their purpose in life and a good future perspective for the world. The cult clearly appealed to them with confidence: leave the secular life, join the group, accept the dogmas, and practice asceticism according to him, and they will surely be able to cure any disease, heal their wounded minds, acquire supernatural powers, and achieve a heightened state of "Nirvana" of absolute freedom, absolute joy, and absolute happiness.

To enter a state of Nirvana, they believed that they had to leave their job or school, contribute all of their property to the group, forfeit personal autonomy, and leave every decision to the Guru. They also believed that they had to receive the Guru's spiritual empowerment to approach that state. Therefore, the believers were very obedient to Guru Asahara, even to the extent that they followed illegal commands (Nishida, 2001).

From a psychological viewpoint, this means that they were seduced into becoming obedient followers who came to believe in impossible ideals of people and society, to believe in goals as the paths to the ideals, and to believe in causal rules as the logical evidence of the actualization (Fig. 3). As a result, the people joining falsely believed that they would be free to be happy if they restructured their belief system to consist of ideal beliefs, goal beliefs, causal beliefs, self beliefs, and authority beliefs and applied the restructured belief system as the only true means of daily decision making through the psychological manipulation of their charismatic leader (Nishida, 2005). Contrary to their false beliefs, they actually lost all they sought to gain.

5. Present Japanese who wander in their lives

Even now, it appears that the situation in which cults surround our vulnerable young people continues unchanged in our society. The number of highly educated young people in economically favorable situations who wander spiritually throughout their lives is increasing today. This suggests that new victims are likely to be seduced into the

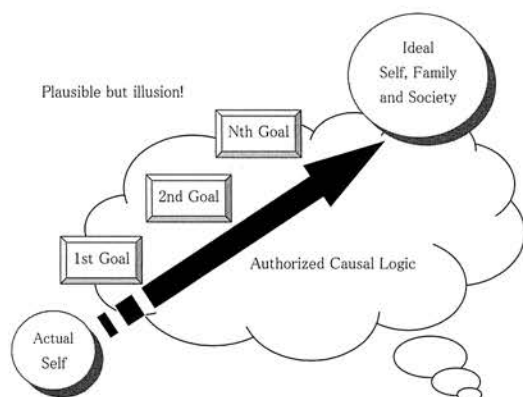


Figure 3 Illusory but plausible world for believers

cultist organizations like terrorists.

6. Pursuing the solution

It seems very difficult for us to solve the problem of destructive cults because the cults give young people what they need and what they want in their lives, things that are not being provided by our society today. However, we have begun to struggle against deceptive and seductive cult activities.

People interested in this problem from different points of views have established an organization called the Japan Society for Cult Prevention and Recovery (JSCPR) to engage in anti-cult activities. These people are researchers, counselors, lawyers, former members and cultist's families. The organization seeks to exchange information on cultic group activities and study how to face destructive groups, but the judgment of whether a group is dangerous or not depends on each member. It is not a consulting agency such as might help persuade members of the destructive groups to leave, but rather a group for studying counseling methods and practicing educational programs to effectively cope with the dangerous groups' activities.

In the organization, we psychologists have important roles in conducting research into a variety of problems regarding cult activities, like terroristic attacks, harsh "mind control" phenomena, and counseling former members who were psychologically abused in the groups.