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The Relationship between Local Residents and Media during the Recovery: Lessons from "Star Disaster-Affected Areas" in Taiwan

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ABSTRACT

When a disaster occurs, some affected areas attract more media attention than others, and obtain more resources as a result. The problem of such unequal distribution is considered to arise from unidirectional interaction between information senders (e.g., media) and receivers (e.g., local residents). To resolve this problem, we conducted interviews to examine the concept of "star disaster-affected areas" and the relationship between media and local residents of two disaster-affected areas in Taiwan: Shiaolin Village and Huashan Village. We found that increased interaction for improving the situation between stakeholders (residents, media, government, and supporters) benefits and accelerates the post-disaster recovery.

Keyword: disaster reconstruction, "star disaster-affected areas," disaster reporting, convergence

1. Introduction

1.1. The Problem of Disaster Reporting

There is a long-standing issue that during a natural disaster's impact and recovery phases, the media focuses its reporting on certain affected areas and can cause an imbalance of resources, such as an unequal distribution of donations and funds.

Some aspects of this problem have been studied, such as media packages, sensationalism, and media scrums (Anderson, 1997). Fritz and Mathewson (1957) discussed this problem and labeled the massive response to incidents as "convergence." They identified three types: personal, the physical movement of people by foot, automobile, or other vehicles; material, the physical movement of supplies and equipment; and informational, the transmission of messages. These phenomena constitute the "blank areas" problem.

Such theories have a common point in that they focus on media and local residents separately, and state that the problem arises from unidirectional interaction between information senders (e.g., media) and receivers (e.g., local residents) in a one-way schema. Perez-Lugo (2004) noted that, "According to this model, the media–audience relationship is strictly motivated by its content, in which the media transmit the official version of the situation, the audience passively receives it and then acts accordingly." These theories suggest that the media should strengthen the criteria for acting as a reporter during interviews, or alternatively, that residents should improve their level

of media literacy. Without enhanced communication between media and residents of affected areas, the problems of "convergence" and the shortcomings of sensationalism cannot be overcome. Therefore, breaking through the stagnation of the one-way schema is an important issue.

1.2. Cases in Taiwan

In this study, we focus on the "star disaster-affected areas" (*ming xing zai qu*) phenomenon in Taiwan, which achieved ubiquitous use and recognition among Taiwan's government, media, and residents after the Ji-ji earthquake of 1999. This term indicates the phenomenon by which an area severely affected by a disaster receives a disproportionately large amount of resources, after being focused on by the mass media. Such areas were relatively unknown before the disaster, but became famous suddenly afterwards. In contrast, the ignored areas were called "non-star disaster-affected areas" (*fei ming xing zai qu*). Little research has examined the reasons for and influences of this over-reporting by media (Hsu, 2013). For instance, Hsu (2013) explored the phenomenon of "star disaster-affected areas" created by the media in Taiwan and its consequences and found that factors associated with becoming a "star disaster-affected area" are the severity of the disaster's impact, the numbers of affected residents, casualty and death tolls, accessibility to the affected area, and most importantly, the human interest and visual impact for better media storytelling. She also noted that "because reporters not only produce homogeneous news, but also concentrate on similar disaster-affected areas, some affected areas become "stars" or "celebrities." This phenomenon is similar to the conventional "convergence" issue of over-reporting; however, "star disaster-affected areas" highlight the dynamic effect between local residents and media, government, and other sources of support. Moreover, although Hsu (2013) mentioned factors in becoming a "star disaster-affected area" and provided implications to facilitate disaster management, she placed greater emphasis on the media than on the people in the disaster-stricken areas.

This study aims to find the perspective of interaction and actions taken between people in disaster-stricken areas with media reporters. In the Taiwanese case, we see instances of local residents intentionally connecting with reporters, and the media responding to those people. We observed not only confusion in disaster-stricken areas, but also a smoother recovery progress in some areas. In contrast to previous research, our study views the residents as active players rather than following the conventional view of residents as mere receivers, and views the media as being concerned with the disaster rather than being mere external reporters. Using this framework, we examine two cases: Shiaolin Village in Kaohsiung County, which was affected by Typhoon Morakot in 2009; and Huashan Village in Yunlin County, which was affected by a series of landslides following the 1999 Ji-ji Earthquake. In particular, we discuss the problem of media convergence during the impact phase in Shiaolin Village and the way that the local community contributed to the relationship with media during the recovery phase in Huashan Village.

2. "Star Disaster-Affected Areas"

2.1. Disaster Reporting in Taiwan

Before understanding the phenomenon of "star disaster-affected areas," it is important to know the media background of Taiwan. After martial law was lifted in 1987 and democracy allowed to progress, there was a huge change in the Taiwanese media industry. Most notably, cable television became legal and widespread. In May 2011, there were 167 channels for a population of 23 million people. There were as many as seven 24-hour news channels, five networks, and four major newspapers. In this competitive situation, the media have to fight for ratings and revenue (Hsu, 2013). Clearly, disasters provide significant material for media to use in the competition for ratings. Nevertheless, media reporting has been in disarray as a consequence of overusing satellite news-gathering equipment, misinformation, and excessive citing of information from the Internet. The media have also been criticized for placing an over-emphasis on human misery after natural disasters and on the terrors of nature, and in the recovery phases, the progress of recovery has become intertwined with confrontation between the two dominant political parties.

In contrast, there are also cases where disaster-stricken residents and local governments use the features of media to solve problems after disasters. The media also has business and moral motivations to try to assist those people. In other words, the media phe-

nomenon in Taiwan has been playing a leading role—in ways both positive and negative—in the disaster impact and recovery phases. The term "star disaster-affected area" not only indicates these problems of unbalanced resources and reporting, but also carries the nuance that Taiwanese residents have the power to proactively influence the media according to their needs.

2.2. The Tetrahedron Model

To determine how the term "star disaster-affected areas" reflects the interaction between stakeholders, including local residents, media, government and those who affect the recovery process as experts and volunteers, we use the tetrahedron model of disaster mitigation theory (Okada & Ui, 1997) (**Fig. 1**). In the tetrahedron model, the main issue is obtaining support for the people from government, mass media, and scientists. Okada (2008) reportedly developed this model while working to predict the eruption of Mount Tokachi in 1988. Studying the 1974 eruption of Nevado del Ruiz in Colombia, Okada considered that even in cases where there was no good way to deliver correct information to the local residents, hazard maps are useless and it is important to help society understand scientific knowledge. He developed the model in 1997 and applied it to the eruption of Mount Usu.

The four actors in the tetrahedron model are "Government," "Mass media," "Scientists," and "People." The model shows the connections among the four actors and indicates that they should frequently work cooperatively rather than independently. Fundamentally, disaster reduction research should look at the function of each part in attempting to understand how the entire system operators. Okada & Ui (1997; translated from the Japanese by the authors) noted that "scientists perform research according to their own understanding without communicating with the public," "governments have money, organization, and action; however, they also face economic pressure because they have to deal with issues of emergency, and disaster reduction and disaster research are frequently forgotten," and "the media like to use their platform to show the conflicting dialogue between scientists, government, and residents, but this causes confusion." However, Okada & Ui also noted that the three actors should "support the main actor, the people on the ground, strongly." In this way, the tetrahedron model offers us a frame to discuss the relationship between the four disaster reduction stakeholders compactly. Additionally, the way in which all the stakeholders interact with each other closely is similar to the phenomena in both "star disaster-affected areas" and "non-star disaster-affected areas." This study will therefore use the tetrahedron model to discuss and analyze the relationship between stakeholders. However, especially after the 1995 Great Hanshin-Awaji Earthquake, many volunteers or NGO/NPOs have assumed an important role in response, recovery, preparedness and mitigation for disasters, although they were not so common when Okada & Ui developed the tetrahedron model. Those new actors should be taken into account to understand the process of "star disaster-affected areas." Therefore, in this study we modified the model by replacing "Scientists" with "Supporters" (**Fig. 2**). "Supporters" consist of re-

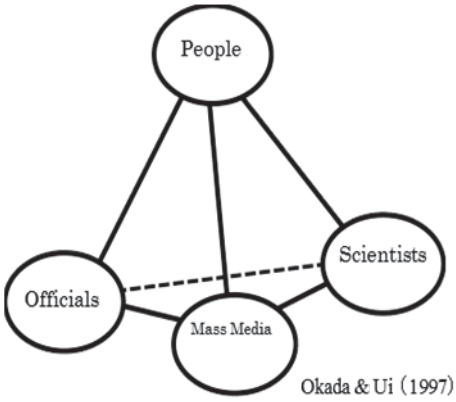

Fig 1. Tetrahedron model of disaster mitigation

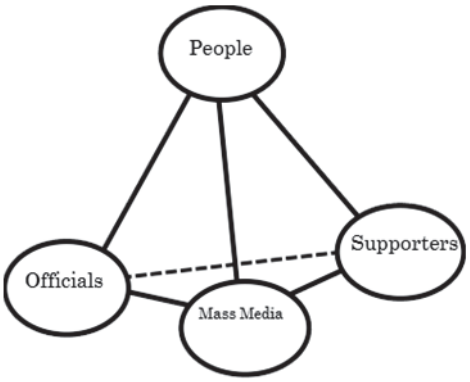

Fig 2. Modified tetrahedron model used in this study

searchers, experts, volunteers, and NPO/NGOs. As for the remaining three actors, we defined "People" as residents of disaster-affected areas. "Government" includes central government and local government who are in charge of disaster management. "Mass media" means national newspapers and national TV news channels here.

2.3. Method

We conducted two case studies of "star disaster-affected areas" (**Fig. 3**). The first study area is Shiaolin Village of Kaohsiung County, which was the area most damaged of all the areas by Typhoon Morakot in 2009. This village was destroyed by a deep-seated landslide, with a death toll of over 470. After the typhoon, Shiaolin Village attracted substantially more media attention and assistance than did other areas. The second case of Huashan Village in Yunlin County, which was affected by a series of landslides after the 1999 Ji-ji Earthquake, concerns the long-term recovery process of the residents, who successfully conducted post-earthquake town reconstruction and developed new industry. The village went on to win the "921 Community Industry Reconstruction" award in 2001 and was elected one of the "Top Ten Rural Villages" by the Taiwanese government in 2007.

Interview research by snowball sampling was used. Twelve in-depth interviews of local residents and media reporters were conducted in Chinese and translated into English by the first author. Each interview was between thirty minutes and two hours long. Table 1 shows the code, interview date, and basic information of interviewees (**see Table 1**).

Additionally, we investigated the content and number of news articles concerning the two cases to understand how the media reported on those two cases. Firstly, for television news, we used the TVBS-N internet news article database, which is a high-rating major cable news channel in Taiwan. The database includes the transcribed narration of news reports. We searched the text of all programs that aired from April 2002 to April 2014.

Secondly, to search for newspaper articles, we used the internet database of two of the four most popular Taiwanese newspapers, Apple Daily (from May 2003 to April 2014) and UDN (from September 1951 to April 2014).

Fig 3. Case study sites

3. Shiaolin Village

3.1. Damage from Typhoon Morakot

Typhoon Morakot caused catastrophic damage to southern Taiwan during August 7–9, 2009. The Taiwanese government reported an estimated agricultural loss in excess of 164 billion NTD (approximately 5.4 billion USD) and casualties numbered 699 dead or missing (Environmental Protection Administration R.O.C. [Taiwan], 2009). The most severely affected area was Shiaolin Village of Kaohsiung County, which was completely destroyed by floods, deep-seated landslides, and ground failures. Over 470 victims were from that village.

In the emergency period, the Taiwanese government and rescue organizations could not obtain information about remote affected areas due to outages of essential communications. Consequently, such organizations relied on information from television media, which played the most important role in transmitting disaster information during the impact phase. Many Taiwanese researchers criticized the government and rescue associations for relying on media reporters rather than the central government, which led to the disparity of aid (Hsu, 2013; Ma, 2009; Peng, 2010). This forced reporters to go to remote affected areas, speak with residents, and call in to news shows to de-

Table 1. Interviewees in 2012

		Affiliation	Meeting Place	Meeting Date	Kaohsiung Shiaolin Village	Yunlin Huashan Village
A	M	TV News Reporter	Taipei	7/19		○
B	F	TV News Reporter	Kaohsiung City	8/19	○	
C	F	TV News Reporter	Taipei	7/20	○	
D	M	Civil Servant	Japan Kyoto	5/12	○	○
E	M	Code	Gender	8/12	○	
F	F	Resident	Kaohsiung Shiaolin	2/28	○	
G	F	Resident	Yunlin Huashan	2/29	○	
H	M	Leader of Huashan Community Development Association (2000~2004)	Yunlin Huashan	7/21		○
I	M	Leader of Huashan Community Development Association (2012~present)	Yunlin Huashan	7/22		○
J	M	Leader of Huashan Community Development Association (2008~2012)	Yunlin Huashan	7/21		○
K	M	Resident	Yunlin Huashan	7/22		○
L	M	Resident	Yunlin Huashan	7/21		○

scribe the situation (Hsu, 2013).

Under these circumstances, Shiaolin Village became a typical "star disaster-affected area," as media reporters, officials, and aid organizations swarmed to this previously unknown village.

3.2. Typical "Star Disaster-Affected Areas"

Typical headlines of news articles about Shiaolin called it a destroyed village, with over 400 dead. Media continuously reported on the catastrophe there, despite a level of devastation similar to that in other nearby villages. As the rain continued, those communities became isolated and unable to obtain food, water, and medical resources. To understand the difference in media coverage between Shiaolin Village and its neighboring communities, we used the UDN and Apple databases to search for articles over the seven days from the onset of the typhoon (August 9–16, 2009) (**see Table 2**). There is a clear disparity in the number of news articles mentioning affected areas such as Liouguei Town, Tauyuan Town, and Namasia Town. This phenomenon resulted in aid and rescue teams and donations preferentially going to Shiaolin Village (Huang, 2012).

However, Shiaolin Village did not set out to become a "star disaster-affected area"; this was the result of a media scrum. Persons we interviewed indicated that residents criticized the media for reporting only sensational scenes in the affected areas. One survivor of Shiaolin Village, a woman we call "F," described her experience as a refugee as follows:

> On August 14 we were refugees at the Rong Feng temple. This place was a designated "reporters area." There were many resources, but the reporters came and interviewed us. Honestly, I was too sad to take part in interviews. Relating my experience only made me more depressed.

Another survivor, "G," described her dislike of the designation "star disaster-affected areas":

> It was unpleasant to be focused on not because our village is a famous resort… but because of

Table 2. News Articles and Disaster Circumstances of Each Affected Area

Town Village	Disaster Circumstances	UDN (items)	Apple Daily (items)	Total (items)
Jiaxian Shaiolin	Village destroyed by flood and landslide, 472 dead	54	33	87
Liouguei Baolai	Flood, isolation	27	16	43
Namasia Minzu	Village destroyed by landslide, 34 dead	26	7	33
Liouguei Xinkai	Flood, 32 dead	26	7	33
Liouguei Xinfa	Flood, 6 dead	23	7	30
Tauyuan Qinhe	Flood, 4 dead	9	9	18
Tauyuan Meishan	Isolation	13	3	16
Jiaxian Guanshan	Isolation	2	2	4

our misery due to tragedy. "Star disaster-affected area" means an area where many people died due to an accident or disaster. I do not like this term.

3.3. How Residents of Shiaolin Village Affected the Media

The survivors and families of victims in Shiaolin Village did not simply suffer from being in a "star disaster-affected area." They actively pressed media to assist officials and aid organizations with rescue and recovery efforts. For instance, residents seeking missing family members asked reporters to help; they knew it would be more efficient to utilize media in this search than to directly ask rescue teams. A television reporter, "B," described his experience as follows:

> A man came to me and asked, "My entire family is still in Shiaolin Village. Can you please ask the rescue team as a journalist if they are safe?" As a journalist covering a disaster, I felt an obligation to not just work, but also do what I could do to help the residents.

After the emergency period, the victims' families claimed the damage was due to shoddy construction work on the Zengwen Dam, conducted in 2004, and pressed the central government to take responsibility and make reparations. The leader of the Shaolin Reconstruction Self-help Organization, "E," described how he raised awareness of this issue with the Taiwanese government and society, from a suggestion by a China Times reporter:

> A reporter from the China Times told me, "If you really want to do something for your village, you should tell CNN about this. Then the Taiwanese government cannot ignore the situation." He then introduced me to the CNN team.

E expressed to CNN his anger and view of the government, his doubts regarding the dam work, and his suffering. As a result, CNN reported on the tragedy and interviewed E, who said he lost his entire family and asked whether the government would take responsibility. CNN focused on the slowness of rescue activities, criticizing the Taiwanese government. CNN also interviewed Taiwanese president Ma, who said, "We will take responsibility for this case." After this

report, the Taiwanese media emphasized CNN coverage of the Shiaolin issue. On August 17, TVBS-N mentioned this case, reporting that "President Ma promised to take responsibility; it was a shame that the Taiwanese government was criticized by the international media.

3.4. Efforts in "Non-Star Disaster-Affected Areas"

"Non-star disaster-affected areas" did not passively wait for the media, as they knew that media coverage would ease the way for recovery efforts to begin. For instance, residents in Xinkai Village, Liouguei Town, wrote "32 dead, SOS" on corrugated cartons and hung them from a bridge as an appeal for aid. This action became a media focal point, and directly contributed to obtaining aid. Residents in Meilan Village Tauyuan Town told the Apple Daily, "The situation here is worse than in Shaolin Village. Please help us as soon as possible" (August 13, 2009). As mentioned above, residents in Guanshan Village felt that the media in effect treated residents of Shiaolin Village as more human than themselves. Such villages issued critical messages to protest imbalances in news reporting and aid.

The residents of Guanshan Village were considered to have cited Shiaolin Village in an attempt to attract the attention of the Taiwanese media and society. Examples of this occurred during not only the impact period, but also the recovery period. For instance, victims connected with a media reporter to report trouble between residents and one volunteer association. In May 2010, victims were being moved into the Kaohsiung Da-Ai Permanent Housing Community, which was constructed by the Tzu Chi Foundation, a volunteer association. Residents found rules established by the Tzu Chi Foundation overly restrictive regarding their traditions and lifestyle. Residents related this to a television news reporter "B" as follows:

> The residents told me that Tzu Chi is a Buddhist group, but the residents are mostly Catholic. Tzu Chi did not allow Catholics to put up crosses. After I received this information, I asked Tzu Chi for their response. Concerned about residents and media influence, they changed the rules and allowed residents to put up crosses.

Such cases indicate that being a star or non-star disaster-affected area has both positive and negative aspects. We also found that both media and government acknowledged and relied on the subjectivity of residents rather than positioning them as helpless and passive.

In addition to the concept of "star disaster-affected areas" such as the case of Shiaolin Village in the post-disaster period, it is also important to understand media influences on long-term disaster recovery. This is addressed in the following section.

4. "Star Community" Huashan Village

4.1. Recovery from the 1999 Ji-ji Earthquake

Active media interaction is more important during the recovery period than during the impact period, because the public will otherwise quickly forget the affected areas. In Taiwan, some residents were afraid of the area being called "star disaster-affected areas," which they thought carried negative connotations and thus would stop people from visiting. Such images of calamity are thus a barrier to recovery. Those areas attempted to escape from the "star disaster-affected area" label by becoming "star communities," which instead would carry the connotation of a famous or superior community or village.

This chapter introduces one village that avoided the "star disaster-affected areas" term, instead becoming a "star community" in the recovery phase. The village is Huashan Village in Yunlin County, which was impacted by the 1999 Ji-ji earthquake. In 2002, this village started the Taiwan Coffee Project. As Taiwanese coffee gained popularity, this community became a famous tourist attraction as a poor agricultural community. On April 20, 2006, the UDN Newspaper ran an article headlined "The entire Huashan community smells like coffee," which praised the village as a "star community." This village also maintained a good relationship with the media and government, but they still faced problems with their coffee industry in the long-term recovery period. This section will examine how rural villages, like Huashan Village, convert their image from "star disaster-affected area" to "star community" and how they interact with other stakeholders.

4.2. Stricken in Huashan Village

The Ji-ji earthquake occurred in central Taiwan on

Sep 21, 1999. Erjian Mountain experienced slope failure in that earthquake, turning the upper part of the Huashan River and Kejiao River into sediment deposits and destroying Gukeng, a township in Yunlin County. Following that, the downstream Huashan Village suffered frequent landslides and debris flow disasters, for example during the 2001 typhoons Toraji and Nari. Huashan Village residents were thus faced with repeated hometown recoveries, resulting in frequent media coverage.

4.3. Avoiding the "Star Disaster-Affected Area" Label

Huashan Village was a typical poor rural village. It had a decreasing birthrate and an aging population due to population outflow. Before the earthquake, the main product of Huashan was betel nuts from areca palms. This is a low-cost crop, but the cultivation of areca palms been criticized for its adverse health effects and contribution to debris in disasters.

After the Ji-ji earthquake Huashan residents were urged to leave their hometown due to the risk of debris and landslide. Instead, they started developing a coffee industry with the assistance of the Huashan Community Development Association (a resident association). They also began a nature conservation project in conjunction with the Taiwanese Soil and Water Conservation Bureau. A former leader of the institution, "H," described the media strategy employed to avoid a negative image:

> We had to show the media that we were not just victims of disaster, that we had the confidence to overcome. We had to project a strong image in front of the cameras.

Having avoided becoming a "star disaster-affected area" through such projects, Huashan Village took the next step—town planning. For this, the resident association strategically increased interaction with the media and government officials. The former association leader H believed that their community became even better than before the Ji-ji earthquake thanks to good connections with the media. He described his experience as follows:

> We contacted the media to report what we were doing in the recovery phase. For example, we held cooking classes for mothers, to help them develop new skills. After being reported on by the TV news, the mothers became more confident and the government offered us more resources.

4.4. The Emergence of Star Communities

Coffee cultivation first began in Huashan Village in 1940 during the Japanese colonial period, but had been abandoned until after the Ji-ji earthquake. In the recovery period, residents and Gukeng Township officials rediscovered this history. The regional climate and topography is similar to that of Central and South America, and thus is suited to coffee trees. Huashan Village entered primary industrial sectors such as agricultural coffee production, and tertiary industrial sectors such as accommodation and food for tourists. They also created a unique coffee brand, called Gukeng Coffee. This coffee project was successful, and attracted young people back to their hometown. Media were also interested because domestically produced coffee was a novelty. In 2003, the Yunlin County government and Gukeng local governments held the "First Taiwan Coffee Festival," which was reported on by UDN Newspaper as follows:

> Huashan Village has incited a coffee boom, and over 10,000 tourists have come to see for themselves. This resulted in a two-hundred million NTD (approximately 5.9 million USD) economic effect, and revision of its image as an area devastated by debris flow. The chief of the Soil and Water Conservation Bureau praised Gukeng as "a model of recovery." (November 3, 2003; UDN Newspaper)

This success story, one of disaster recovery followed by unique product development, was frequently reported on television. A TV news reporter, "A," attributed Huashan's fame to "a convergence of media reporting on a small community." Those reporters also help Huashan avoid the stereotype of a "star disaster-affected area."

4.5. Preservation of Star Communities

The path to becoming a "star community" is not always smooth. Huashan Village experienced new problems as a result of its coffee boom, such as pollu-

tion from increased tourism. Attracted by potential economic benefits, external businesses brought competition for accommodation and food production. In 2004, there was a scandal in which coffee beans mixed with cheap, imported Gukeng 3-in-1 instant coffee products were discovered. This scandal was a serious blow to the image of Gukeng coffee.

In May 2007, after the accident, Gukeng coffee was also harmed by internal dissension, and media coverage turned largely critical. For instance, in an article titled "Gukeng coffee is going to sell their special coffee-making technique" (May 26, 2007; UDN), Gukeng institutions were described as engaging in dishonest practices. Furthermore, nearby communities started to develop their own local coffee. Gukeng coffee was no longer unique and now tarnished by a negative image, bringing an end to the Gukeng coffee boom. This shows the double-edged nature of media coverage: Although it was instrumental in instigating Gukeng coffee production, it was also a major factor in its downfall.

Due to such negative experiences, Huashan Village has recently tried to promote education regarding debris flow disasters, as well as ecotourism. Its relationship with the media is now less intense than during the recovery period. However, residents still need media help. For instance, "J," the leader of the Huashan Community Development Association from 2008 to 2012 stated that:

> We became well-known because of the earthquake and the coffee boom, so we do not have to connect with media as frequently as before to build our fame in society. Now, we need to have a long-term plan to develop our village, and to preserve nature. It would be unwise to put all our efforts into coffee production.

Another coffee shop owner, "L," had the same opinion. He said,

> Maybe the coffee boom was too fast for us. We became overly media-conscious, despite not knowing the mechanisms of media, and being ill-prepared for it. Our recent pace is a better balance.

Residents also took different measures to attract media, such as learning to use social networks such as Facebook. Residents did not passively publish tourism information; they connected with media reporters to request news coverage. They also mentioned that they learned not to accept media interviews without considering the potential effect. They learned that maintaining balance with the media was difficult, but important. "J" stated that:

> I send friend requests to reporters on Facebook, and post pictures and event information on my wall. When reporters read this information, they come to report on us. But I do not accept all requests. For example, I declined an interview about the 2008 Moracot Typhoon, because we did not suffer seriously from it. If I accepted the interview, tourists would think this village is dangerous and would not come here anymore.

5. Discussion

5.1. The Tetrahedron Model of "Star Disaster-Affected Areas" and Star Communities

Despite the differences between the Shiaolin and Huashan villages, we can find common features by using the tetrahedron model. As the cycle shows (**see Fig. 4**), when local residents need aid from the government or supporters, residents would first connect with the media. The media would then criticize the government or supporters who did not do their duty. This resulted in government and supporters responding to residents with problems. This cycle leads to increased awareness by local residents of how media can help them achieve their goals efficiently, such as

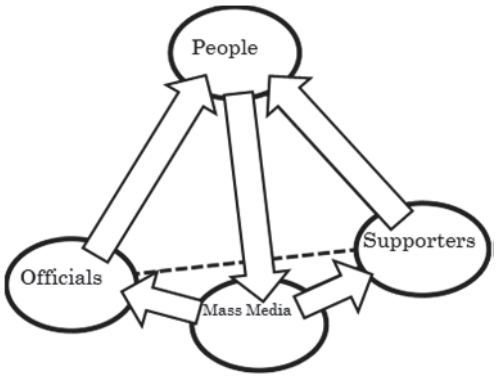

Fig 4. Cycle of star disaster-affected areas

fighting for resources from officials and supporters. As a result, local residents proactively approached the media.

For instance, Shiaolin victims' families followed this cycle to investigate the safety of family members. Residents also obtained financial aid from supporters and the government, due to the political interest of those two institutions. Neighbors of Shiaolin Village also obtained relief aid as a result of their complaints of unfair coverage. In Huashan Village, the negative image as a disaster area was successfully converted to a positive image as a coffee town through their positive relationship with media.

5.2. Three Problems with the "Star Disaster-Affected Area" Label

Although the cycle can be beneficial, it has its shortcomings. Three in particular are described below.

(1) As we have described, labeling as a star or non-star disaster-affected area results in aid disparity. Media tend to emphasize "impact," and this cycle does not resolve this disparity; indeed, it can exacerbate the problem. To resolve this, there needs to be a more interactive relationship and association, on equal terms, between stakeholders in the tetrahedron model.

(2) The media may publish erroneous information during the disorder of the impact period. When media receive information and are pressured by local residents, sufficient time for accurate fact-checking can be difficult to obtain. As a result, receiving information with a high probability of being a scoop can result in dissemination of misinformation. A civil servant "D," who was charged with aid work, was seriously bothered by this problem. He said:

> It is true that we have to handle the problem of media information priority. If we don't, the media will label us as "*mamubuzen*" [someone lacking sympathy]. This even happens in cases where we visited sites and found no emergency. This is very annoying, as we did not have sufficient staff.

(3) The sustainability of positive news coverage is an important issue. As the Huashan Village case showed, cooperation with media resulted in a coffee boom, but this also attracted dishonest businesses desiring to take advantage of the situation. This case demonstrates the importance of a long-term plan when dealing with the media. To become a "star community," residents need a sustainable relationship with other stakeholders who can improve the maintenance of basic industries and enhance disaster prevention.

5.3. Overcoming the Problems of "Star Disaster-Affected Areas"

The next step is trying to overcome these problems with the label of "star disaster-affected area." In this chapter, we examine this from the perspective of the introduced cases.

First, applying the view from the tetrahedron model to a disaster-affected society, we find that even stakeholders such as "government" and "supporters" play roles in a complex and dynamic situation. As when Shiaolin Village approached CNN, issues are not strictly local events. When CNN and the Taiwanese media become involved, practically anyone can be viewed as a stakeholder, rather than as an observer or reporter.

A second significant consideration is how to achieve cooperation for emergency response and recovery. Wu (2001) pointed out that a smooth recovery depends on the activities and solidarity of the community. As a stakeholder in the tetrahedron model, the media should not remain external to events, viewing them as only a rich source of news, but should also participate with parties to take responsibility. Doing so can significantly decrease misinformation in media reports. As Yamori (2009) described, the concept of "joint and share," means that all stakeholders should share disaster information and become jointly involved for the sake of disaster prevention and reduction or disaster education. As **Fig. 5** illustrates, there is a need for a new collaborative and bidirectional relationship in the interaction between local residents and the other stakeholders of the tetrahedron model. In this model, each player should decrease their mutual distance and improve communication. In sum, as the case of Huashan Village illustrates the concept of "star disaster-affected areas" and "star community" has changed dynamically; therefore, the stakeholders must consider and balance the negative and positive aspects of "star disaster-affected areas."

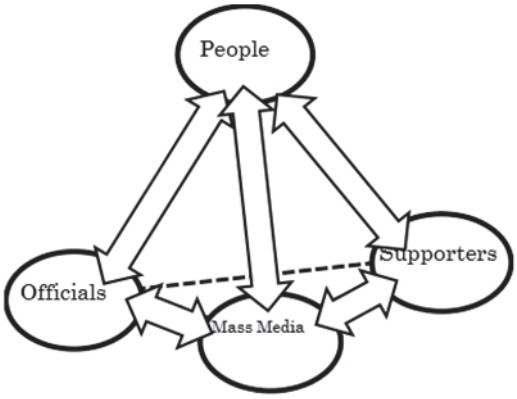

Fig 5. Revitalized tetrahedron model

6. Conclusion

To contribute to removing obstacles to disaster coverage, in place of the traditional sender/receiver dichotomy we used the lens of star versus non-star disaster-affected areas. We applied the tetrahedron model to illustrate how a positive interactive connection with media and other stakeholders might facilitate the recovery process. From the two case studies, we showed that the residents were active players rather than mere receivers, as is the conventional view, and that they view the media as being concerned with the disaster rather than being mere external reporters. Future research should explore ways in which residents, media, supporters, and government could better contribute to active interaction between Taiwan and other countries and should assess this model with quantitative data. A long-term view of the recovery process, such as the case of Huashan Village, shows dynamic changes rather than static activity. Hopefully, a transformation from a "star disaster-affected area" to a "star community" can help in the development of community during the impact and recovery periods after disasters.

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