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A method to improve trust in disaster risk managers: Voluntary action to share a common fate

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ABSTRACT

In this study, the effect of voluntary action to share a common fate on trust was empirically examined. Voluntary actions to share a common fate involve decisions by risk managers that place them at an equal risk as the public during times of disaster. Participants included 118 housewives who were randomly assigned to one of the three conditions: voluntary sharing of a common fate, passive sharing of a common fate, and non-sharing of a common fate. The results of the analysis indicated that trust ratings of risk managers in the voluntary condition were greater than were the ratings in the other two conditions; moreover, the trust ratings in the passive and non-sharing conditions were at equally low levels. Furthermore, the results indicated that perceived value similarity for trust had a high explanatory power in both the passive and non-sharing conditions. These results suggested that risk managers can improve their trust by voluntarily sharing the fate of the general public. The results also indicated that when trust level is low, individual differences in trust are explained by the perception that the values are shared between risk managers and the public. Finally, the relationship between trust in risk managers and the forecast of risk reduction was discussed.

1. Introduction[1]

1.1. Action to share a common fate

The public's trust in people who manage risk plays a significant role in controlling damage caused by disasters [1–3]. If risk managers are not trusted, residents may be hesitant about evacuating an area, even if they are informed that a major disaster is imminent; this would likely result in greater damages. Furthermore, if a lack of trust exists between risk managers and the public, the public may demand unnecessary disaster countermeasures even when risk managers assert that a risk of a disaster is small. In turn, this may result in government agencies expending an excessive amount of resources (i.e., budget and personnel) unnecessarily; moreover, this may make societies more vulnerable to future disasters since governments have limited resources they can invest in disasters.

Therefore, the trust of the public is important for appropriate risk reduction. Indeed, trust in risk managers has been examined in studies of risk perception [4–6]. These studies indicated that there is an asymmetry inherent in trust [7–9]; in other words, trust is difficult to establish and can be easily destroyed. Once it is destroyed, it is difficult to rebuild. Difficulty in gaining and re-gaining trust is the very reason why researchers have paid much

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[1] INES = International Nuclear Event Scale; SVS = Salient Value Similarity.

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attention to trust as a research topic. However, most studies have focused on the composition and prerequisites of trust; few studies, in fact, have provided an achievable prescription to improve trust [10].

In the present study, we propose that the voluntary action to share a common fate is a prescription for trust, and we empirically examine its effect herein. We define an action to share a common fate as an act where the risk manager (trustee) places him/herself in a position where he/she will experience similar damage as the public (truster) during a disaster. Moreover, we define this action as voluntary when it is decided upon by the risk manager's own volition. For example, if a chemical plant accident affected a certain region, a voluntary action to share a common fate would entail a risk manager moving into that region according to his/her own volition; thus, the risk manager would inhale the same air, drink the same water, and live the same life as the residents of the affected area.

In the sections below, we will provide a rationale for why a voluntary action to share a common fate would predict heightened trust.

1.2. Rationale of the present study

When sharing a common fate, the risk managers themselves would be damaged if they could not minimize the risk. Consequently, risk managers are expected to do their best to avoid the damage. In this way, sharing a common fate produces an incentive for risk managers to work hard to reduce risk. Correspondingly, we predict that members of the public who observe risk managers' action to share a common fate will show greater trust toward these managers.

Our research shows that there is another reason why an act to share a common fate increases trust, other than a change in the incentive structures. Acting to share a common fate means the actors (risk managers) themselves are creating a situation where they have little incentive to go slow. Therefore, acting to share a common fate not only changes incentive structures but also implies that the actors are willing to risk themselves in order to become in-group members and that they seriously wish for risk reduction. This function of the action can be interpreted as a signaling effect, suggesting it works only when the risk managers voluntarily share a common fate. In other words, perceived trustworthiness of the trustees would not be affected by the passive acceptance of sharing a common fate.

Another psychological model, the Salient Value Similarity (SVS) approach, also explains how trust is derived from an action to share a common fate [4]. In this approach, trust toward risk managers is conceived when the truster (i.e., the general public, residents, or consumers) feels that a value in the problem is salient to them and the trustee (risk manager). Specifically, if the truster perceives that the trustee shares the same salient values, the truster will trust the trustee. The SVS approach has been used as a framework in studies of risk perception. Many of the studies in this field have shown that risk managers tend to be trusted when they are perceived as having shared values with the truster [11–17].

Indeed, the most significant values during times of disaster for citizens are those related to protecting their own lives and their own health, as well as that of their families. A risk manager's decision to share a common fate regarding exposure to disaster risk means that they risk the same values as the citizens do. When the citizens see such actions, they will realize that the risk manager shares the same values in the same situation with them, leading them to evaluate him/her as trustworthy. Furthermore, voluntariness in risk managers' actions will function as a signal of high trustworthiness. According to the discussion above, the first hypothesis regarding the effects of voluntarily sharing a common fate is as follows.

Hypothesis 1. The public's trust toward the risk managers, who voluntarily share their fate with the trusters will be higher than will the general public's trust toward risk managers who do not share their fate or those who share their fate passively.

1.3. Comparison of the three determinants of trust

Risk perception studies have examined various determinant factors of trust. As aforementioned, the perceived value similarity appears to be an important factor to consider. This is a context dependent variable where the extent of similarity is determined by combining the values of the truster and the trustee. In addition, other determinant factors have been documented in the literature. These include the truster's evaluation of the characteristics of the trustee. For example, the perceived competency, integrity, fairness, transparency, objectivity, and honesty of the trustee have been examined as potential determinants of trust [18–25]. In these studies, perceived competency is frequently treated as an independent factor; however, there is a conceptual overlap in the other traits, and it is argued that they can be integrated into a single factor of motivation [26,27], affect [28], or care [25]. In sum, there are typically three factors that determine trust of risk managers: perceived salient value similarity, competency, and motivation.

Thus, it seems prudent to examine how these determinants of trust change their explanatory power depending on the context. A better understanding of which trait best predicts trust depending on the situation will provide valuable information for how risk managers can improve their own trustworthiness. In fact, previous studies have shown that the explanatory power of perceived value similarity toward trustworthiness increases when individuals are concerned about the issues facing them [29] or when social opinions about the issue are divided [30]. In addition, one recent study has revealed that the explanatory power of perceived value similarity becomes higher when the overall trust level of the trustee is low [31]. In the study, researchers examined the trust level of the public toward the eight organizations involved in risk management after the 2011 Tohoku Earthquake. The results of the study revealed that perceived value similarity best explained the trustworthiness rating of risk management organizations among those organizations that the general public trusted less. On the other hand,