Our study aims to specify the role of mental models in interpreting the accident information. The analysis will be answering the three key questions: first, what is the role of information? Since accident information is not the same, different types or contents of information have different impacts on interpretation process. After presenting the respondents with diverse information related to accidents, we will check their interpretation and response in terms of considering moderating and content.

First, for checking the role of accident information, we divided the information attributes by persuasiveness, clarity, and accuracy. Second, to know the content effects, we divide respondents into two groups, negative group, in which respondents have negative attitude toward the nuclear power, and positive group in which people have the positive one toward it. We assumed that the negative/positive attitude takes place a anchoring context for information interpretation. Third, to check the moderating effects in information interpretation, we set up the knowledge and credibility of information as moderators.

### Question & Propose

1. **Question**
   - In mental model, information takes a crucial role in judging the risk. If information fits into existing mental models, it confirms them. If not, it is a new information there are higher possibility to change the basic mental model. Hence, it is significant to ask what is the role of information in the situation mental model? And what is the causal factor for the information affecting the mental model? Through checking the acceptance of information and the judgment of risk related with Fukushima nuclear accidents, we will test the role of mental model.

2. **Propose**
   - The first purpose of this paper is to analyze what different attributes of information have an effect on the information acceptance, and risk judgment. We assumed that people demonstrate different responses against the attributes of information, i.e., persuasiveness, clarity, and accuracy. Based on this assumption, we will test whether or not the three attributes of information contribute to explaining the acceptance and judgement related Fukushima nuclear accident.
   - Second, to know the content effects, we divide respondents into two groups, negative groups, and positive groups. We assumed that such two groups reveal different response about the same information. The negative group may amplify the risk information whereas positive group may reduce the degree of information embedded into risk information.
   - Third, we analyze the moderating effects of knowledge and information credibility between above-discussed information variables and dependent variables, the believed that knowledge and source credibility can affect the effect of the information on the information acceptance and judgement.

### Research Model & Data

1. **Research Question and Model**
   - What’s response to different attributes of information if provided different information in the mode of persuasiveness, clarity, and accuracy, respondents will reveal different response in acceptance and risk judgment. Here we, we neglected the information acceptance and risk judgment related with Fukushima accidents as dependent variables. The information acceptance means that the respondents easily accept the information related Fukushima without hesitation. The risk judgment means that the respondents evaluated the risk related Fukushima.
   - What’s context effect of positive/negative attitude in processing information. To know the contextual effect of anchoring effects, we compare the respondents into two groups with positive attitude toward nuclear power and negative one, then we analyze the response under different content.
   - What’s moderating effect of knowledge and source credibility? We set up the background knowledge and source credibility which respondents have and variable as moderators in the mode of risk judgment. Also, to know the role of information, we controlled the demographic variables, such as gender, age, and education.

2. **Method & Data**
   - We used the survey data which are collected in 2012 with samples of 564.
   - **Analysis 1: The information acceptance & risk judgment in positive group**
     - To test the power of independent variable in positive group, we include each variable’s effect on in judging the information acceptance and risk judgment about nuclear power. As show in Table 1, gender and persuasiveness of information showed the significance. In model 2, knowledge showed significant in judging the information acceptance about nuclear power. Last, in model 3, persuasiveness, credibility showed significance in judging the maximum of nuclear power. Lastly in model 3, source credibility did not showed statistical significant even if model 3 showed significant.
   - **Analysis 2: The acceptance & risk judgment in negative group**
     - To test the power of independent variable in negative group, we include each variable’s effect on in judging the information acceptance and risk judgment about nuclear power.
     - As appeared in Table 3, model 1, 2, amount of information, persuasiveness of information attributes and clarity of information demonstrated the significance. In model 2, knowledge displayed significance in judging the information acceptance in the negative group. Last, in model 1, amount of information, clarity, knowledge and credibility have the significance.
   - **Analysis 3: Interaction effect analysis**
     - To explore the moderating effects of knowledge and credibility, we checked interaction terms between information variables and knowledge (or credibility) variables. Then, we found the three interactions statistically significant and then made three interactions to show the moderating effects shown in figure 2, figure 3, and figure 4. In figure 2, shows the interaction effect between amount of information and knowledge (or credibility) when the interaction are significant. In figure 3, shows the interaction effect between persuasiveness and knowledge (or credibility) when the interaction are significant. And in figure 4, shows the interaction effect between accuracy and credibility when the interaction are significant.

### Reference