

## PUBLIC CONFIDENCE IN LOCAL MANAGEMENT OFFICIALS:

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## ORGANIZATIONAL CREDIBILITY AND EMERGENCY BEHAVIOR

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Confidence issues create potential risks for the public in any emergency situation. They do so because credibility and associated perceptions of legitimacy and competency of organizations are determinants of human behavior in disasters. Credibility, however, is only one of numerous factors that shape response of people or organizations to a threatening event. The purposes of this paper are to review what is known about the way in which credibility and related constructs influence emergency response, discuss how this knowledge applies to radiological emergency planning, and suggest how credibility-induced risk can be minimized in emergency planning and response. In doing so, the paper seeks to dispel some common myths and allegations about the credibility issues that run counter to dominant findings of disaster research.

Credibility risks in emergencies are created in at least three major ways:

- 1) Credibility affects beliefs about information;
- 2) Credibility affects the way in which instructions are followed;
- 3) Credibility affects personal and group interactions.

More specific illustrations of such general relationships in the extreme are provided by seven intervenor contentions on credibility raised before the Atomic Safety Licensing Board on the Shoreham Nuclear Power Station.<sup>2</sup> First, it was contended that credibility problems will prevent emergency workers from performing their jobs because workers from a credible organization will not assist those in another organization with low credibility. Second, it was contended that the general public will not follow a recommendation to shelter when issued from an organization with low credibility. Third, it was contended that school officials will not follow recommendations from an organization with low credibility because they are like members of the public. Fourth, it was contended that evacuees will not follow the instructions of a traffic guide if that person is employed by an organization with low credibility. Fifth, it was contended that people will disregard any warning information provided by an organization with low credibility and will disobey any emergency instructions given. Sixth, it was contended that the staffing of a rumor-control center by employees of an organization with low credibility will be ineffective because they lack authoritativeness. Finally, it was contended that educational materials coming from an organization with low credibility would not be believed or would be discounted or ignored by the public.

While these contentions were directed at a utility — Long Island Lighting Company — the manner of their wording would suggest that they would apply to any organization involved in emergency planning and response. In the next section, we will examine research on human response to emergencies and on human communication processes to determine the validity of the many assumptions and causal inferences raised by these contentions.

## CREDIBILITY AS A DETERMINANT OF HUMAN BEHAVIOR

The contentions suggest a model of human behavior that postulates that information from an organization with low credibility will cause people to not

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believe the facts within a warning, that will lead them to believe the opposite of the facts and, hence, will result in behavior opposite to that which a warning is trying to promote. A review of existing research shows, however, little validity in this model of human behavior. This review is divided into studies of credibility and attitude change and studies of warning response.

### Credibility as a Determinant of Attitude Change

Numerous studies have been conducted on the effects of communications on attitude formation and change, and on the relationship between attitudes and behavior. Some of this work investigated the role of credibility of an information source in changing attitudes. In general, studies have found that as the credibility of the source of communications increases, the extent of attitude change also increases.<sup>3 4 5 6 7</sup> Studies have also demonstrated that, over time, repeated communications from an "untrustworthy source" became more acceptable and were viewed with less skepticism.<sup>8</sup>

If interpreted in a simplistic fashion, such findings would suggest that if an organization with low credibility issued a warning, people who hold attitudes about emergency response that are different from that of the organization would be less likely to obey the instructions in the warning. This logic, however, ignores the role attitudes play in determining behavior.

Attitudes and opinions are a collection of beliefs and feelings people have about something. Considerable research has investigated the relationship between opinions and attitudes and behavior. The bulk of this research concludes that there is only a weak, if any, relationship between attitudes and behavior.<sup>10 11 12</sup> While it makes some theoretical sense to believe the two are related, very little evidence suggests that attitudes affect behavior. In fact, the opposite causal relation is probably a better explanation of behaviors which are correlated with attitudes. Thus, when a person engages in a pattern of behavior, it changes their attitudes about that behavior. This leads to the notion that as experience with a particular behavior increases, the relationship between attitudes and behavior may strengthen.

With respect to an emergency, it can be expected that people's attitudes toward any behaviors in an emergency will play little, if any, role in determining how they respond. Even if credibility played a role in how people came to have an attitude different than that reflected by an emergency organization, a difference in attitudes will not be a major influence on behavior. Behavior in an emergency is predominantly influenced by situational factors such as information, location and the nature of the threat. Furthermore, as information is repeated, as is done in an emergency, people come to believe it even if the source is initially of low credibility.

### Credibility as a Determinant of Human Response to Emergency Warnings

People respond to a warning of an impending emergency in a rather predictable way. The decision process people use to choose a course of behavior appears to be characterized by a six-step process:<sup>13</sup>

- (1) Hear;
- (2) Understand;
- (3) Believe;
- (4) Personalize;
- (5) Decide; and
- (6) Respond.

Previous research suggests that credibility is one of the factors which may affect the belief and personalization stages of warning response. In general, it has been found that as perceptions of a source as being credible increase, belief in a warning also increases.<sup>14-15</sup> Warnings from an official source are more credible than from unofficial sources.<sup>16-17</sup> People who attribute a warning as coming from the mass media are less likely to believe it than if it comes from friends or relatives, or from an emergency official.<sup>18-19</sup>

As perception of the credibility of a warning source increases, people perceive greater levels of risk from the impending disaster agent.<sup>20</sup> When people do not expect the disaster to occur, however, credibility of an information source does not influence belief.<sup>21</sup> As beliefs increase and as perception of risk rises, people are more likely to take active precautions against loss.<sup>22-23-24-25</sup>

The major implication of these studies is that when a warning is received from a source judged to have low credibility, people tend not to take immediate action. Instead, they are more likely to go about their routine activity or to seek additional information. Thus, credibility gaps can be a cause of people not immediately responding to a warning, rather than actively doing something contrary to what they are told to do.

If we apply this finding to an emergency situation at a nuclear power plant, we would expect people who have perceptions of low credibility for every warning/evacuation-notification source to do nothing out of the ordinary except listen for more information. This applies to people who are advised to evacuate, to shelter, or to go about their normal activities. If further creates a believable warning, people will likely respond regardless of credibility. If people perceive one of the sources of the warning to be credible, inaction is less likely. The assumption behind the contention that low credibility will lead to intentionally different response is simply not based on any previous research findings or evidence. Delays in a rapidly moving situation can be disastrous; the warning, however, can be designed such that urgency overshadows credibility-induced indecision.

Although it is true that in some disasters people act differently from what is recommended in an official announcement, most evidence of this type of behavior is anecdotal and does not come from systematic observation. More importantly, it is possible to understand why it occurs. Probably the chief reason is that evacuation or other recommendations are usually not issued as strict and precise orders. Frequently they allow some type of decisionmaking by members of the public. In other words, they are issued as guidelines that require individual judgments. When this type of recommendation is given, it is difficult and perhaps erroneous to decide after the emergency that members of the public acted contrary to a recommendation. Second, they may not have understood it. Third, they may not have believed it. Fourth, people may have failed to perceive they were personally affected. Thus, contrary behavior results from problems in the warning effort, and not solely from a lack of credibility in emergency organizations. Credibility is only one of many factors that effects response and it explains a small percentage of poor response when it occurs. Other factors which effect warning belief include the consistency of information, accuracy of the information, clarity of the message, certainty of the warning, and frequency of information.

#### WHO IS CREDIBLE?

Some evidence has been collected on who the public has confidence in or views as being credible sources of information on nuclear power and nuclear

power plant emergencies. Tables 1 and 2 summarize data relevant to assessing credibility levels of various organizations involved with emergency planning for the Shoreham Nuclear Power Station.

A review of the data presented in the Suffolk County survey and the Yankelevich survey suggests that no one group, organization, or person asked about was credible for everyone in the studies. The numbers obtained in both polls, however, would likely change over time as the people and organizations asked about became more or less credible with citizens.

One poll shows that LILCO and the Suffolk County Executive are "tied" on perceived trust (both show 23%), while the Suffolk County survey shows the County Executive ahead of LILCO. Regardless of which poll is used, they illustrate (assuming the polls did a good job of measuring "credibility") that large numbers of people do not perceive LILCO or the County Executive as credible.

On one hand, we can explain this by concluding that people tend to distrust both government officials and large utilities. On the other hand, this would be misleading, because organizations are not seen as equivalent to specific people within an organization. We would expect that specific individuals within any organization would occupy a range in their perceived credibility, even as differences in credibility among organizations exist. Overall, the inconsistency within the polls over individuals' roles versus organizations and the failure of the polls to include all relevant sources of information preclude our learning very much from the questions asked. There is no sound basis for concluding that organizations cannot do emergency planning from these data. We can conclude from these data, however, that to increase the credibility of a warning, the message should convey that the information is being scrutinized and validated by different sources and originates from emergency planning experts and other experts and not from political officials or from a large organization.

Further evidence suggests that people tend to distinguish the levels of credibility among various categories of people involved with a nuclear power emergency. People will evaluate some members of an organization as having little reliability or believability and others within that same organization as being much more reliable and believable.

Returning to the contentions discussed in the introduction, their erroneous assumptions can be utilized to determine how credibility problems can be overcome. First, the presumed sequence of cause and effect made in the contentions (low credibility causes disbelief and then disbelief causes nonresponse or wrong response) is not as simple as the contention implies. Other factors affect belief, and other factors affect response as well.

Second, the presumed sequence of cause and effect postulated by the contentions (credibility to belief to response) can be managed in emergency planning. It is not a rigid set of scientific laws with which we must live; good plans can foster both belief and a good response when implemented even if one or some of the providers of emergency information enter the emergency with low credibility. Low credibility, therefore, does not make planning for a good emergency response or implementing a plan that yields a good emergency response impossible; rather, it just requires that planning address more things than would be the case if high credibility were presumed.

Belief can be elicited if the full range of emergency information -- emergency broadcast system messages, the information from other channels and so on -- is taken into account. Belief in the information disseminated during an emergency -- even if it comes from a group with low levels of pre-emergency

credibility — can occur if the information being disseminated during the emergency, in general, conforms to the following characteristics, which all work to foster belief in some way:

- (1) The emergency information should be internally consistent, such that it does not raise questions in the minds of those who hear it and "disconfirm" itself;
- (2) The emergency information should be accurate, such that people do not perceive that something is being falsified;
- (3) The emergency information should be clear, such that it is understood and not discounted because of a lack of understanding;
- (4) The emergency information, even if uncertain, should convey certainty about what is being said;
- (5) The emergency information should be issued frequently enough to reduce the believability of rumors and misinformation and to enhance "confirmation" for people;
- (6) The emergency information should come from a mix of sources, e.g., officials, scientists, and so forth, because no one source is credible for all people;
- (7) The emergency information should come from multiple channels rather than a single one so that it enhances the "confirmation" process for people.

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Table 1. Trust in Emergency Information Regarding Shoreham

Would you trust the following official?	A great deal	Somewhat	Not at all	Don't know
New York Governor	9%	44%	43%	3%
LILCO	8%	28%	62%	2%
NRC	14%	47%	30%	4%
Suffolk County Executive	16%	46%	31%	6%

Source: Social Data Analysts, Inc., Attitudes Towards Evacuation: Reactions of Long Island Residents to a Possible Accident at the Shoreham Nuclear Power Plant, Table 1 (June 1982).

Table 2. Percentage Who Would Rate as Highly Believable Statements about Nuclear Power Issues

Civil Defense	51
State health officials	51
The Nuclear Regulatory Commission	44
The Police	41
The Governor	32
TV and radio reporters	30
The Suffolk County Executive	23
LILCO	23

Source: Yankelovich, Skelly and White, Inc., Status Report on Public Response to Emergency Planning Efforts, Table 32, p. 63 (July 1983).

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