RAPID: Minimizing the Spread of False Rumors in Social Media during a Disaster

US Researchers:

Yasuaki Sakamoto
Stevens Institute of Technology

Margaret Chen
Stevens Institute of Technology

Tina Li
Stevens Institute of Technology

Collaborators in Japan:

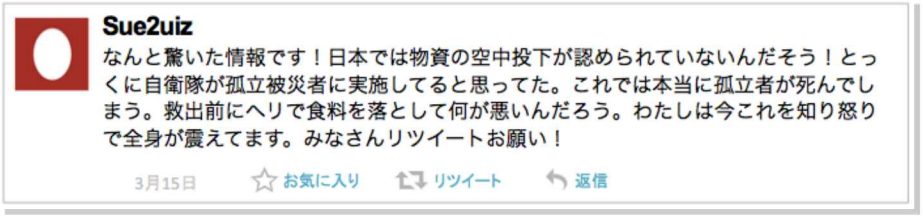
Yuko Tanaka
National Institute of Informatics

Hidehito Honda
National Institute of Informatics & Chiba University

Toshihiko Matsuka
Chiba University

Yasushi Michita
University of Ryukyus

[Rumor FR_8] … Japan does not allow air drop of supplies! …



Gov - PM (324,713)

352)

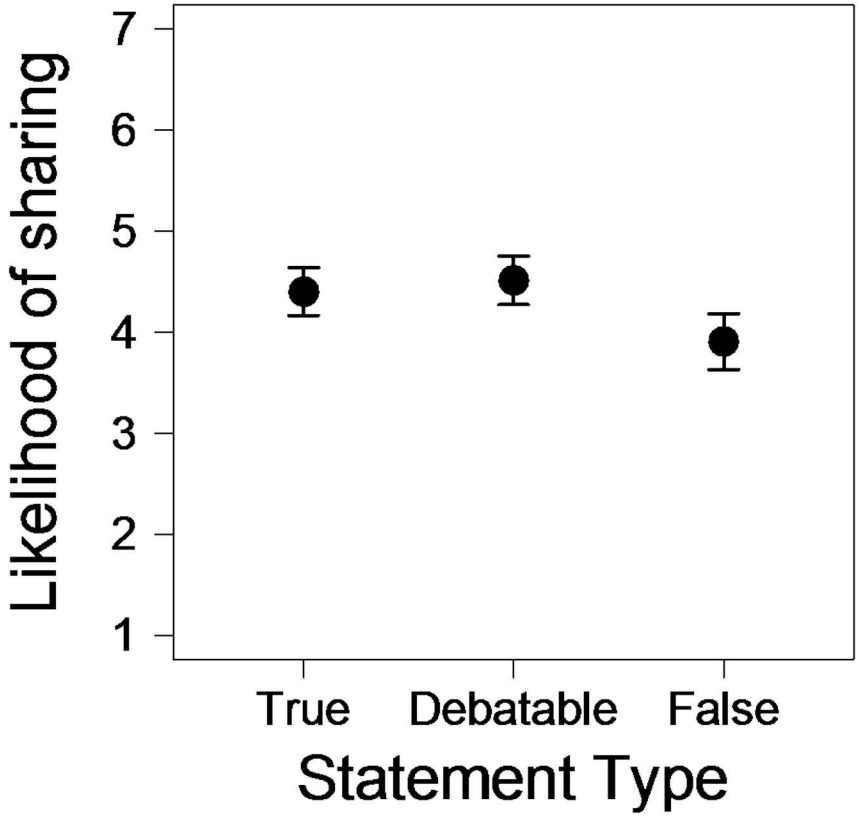
Goal: To find effective methods for minimizing the spread of false information in social media through better understanding information-sharing behavior

Example 1: People's sharing of true vs. debatable vs. false statements

-People are less likely to pass false statements.

-Good news, but people can't tell that false rumors are false.

-What if we tell people?



Method 1: Exposure to tweets that criticize false tweets

[Criticism] Air drop is not prohibited. Don't spread false information. …

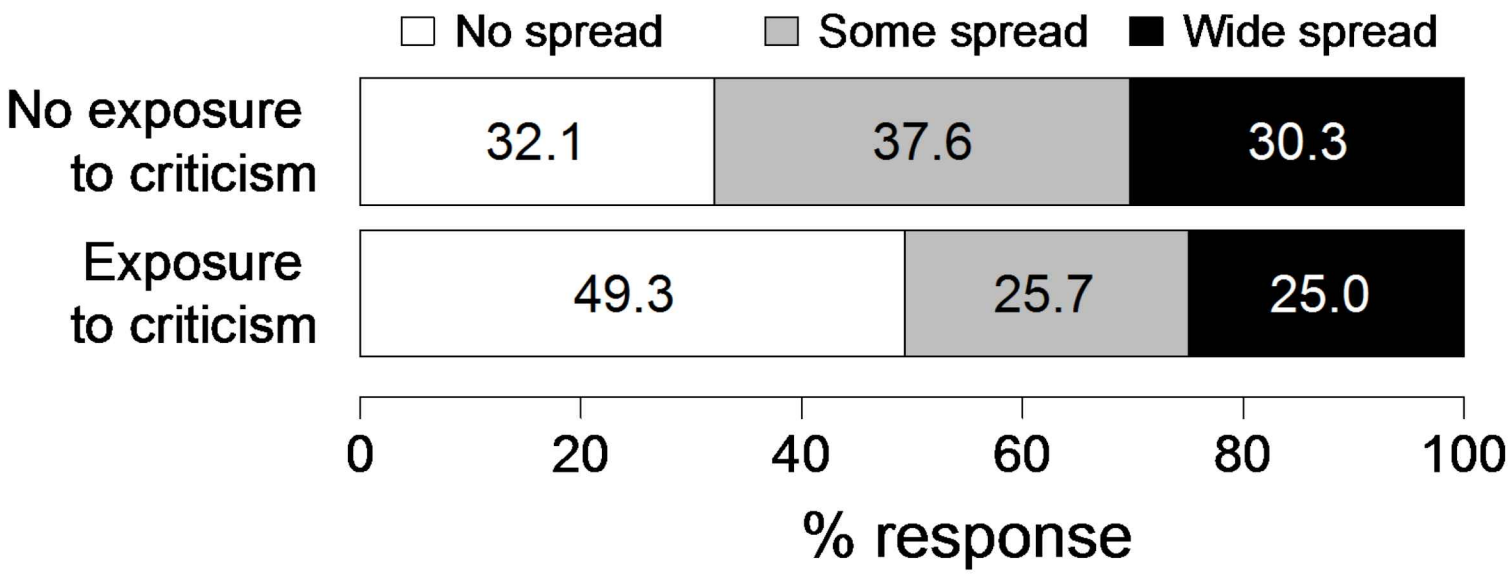
空からの物資の投下については法律では禁止されていません。噂レベルの話を拡散しないようにして下さい。4-(1)-丸4-エをご覧ください。RT@Sue2uiz なんと驚いた情報です！日本では物資の空中投下が認められていないんだそう！とっくに自衛隊が孤立被災者に実施してると思ってた。こ

3月16日 お気に入り リツイート 返信

[Rumor FR_8] … Japan does not allow air drop of supplies! …

なんと驚いた情報です！日本では物資の空中投下が認められていないんだそう！とっくに自衛隊が孤立被災者に実施してると思ってた。これでは本当に孤立者が死んでしまう。救出前にヘリで食料を落として何が悪いんだろう。わたしは今これを知り怒りで全身が震えてます。みなさんリツイートお願い！

3月15日 お気に入り リツイート 返信



Exposing people to tweets that criticize false tweets could slow down the spreading of the false tweets. The percentage of responses indicating no spreading of rumor tweets increased from 32% when there was no exposure to criticism to 49% when people read criticism before rumor.

Example 2: Relationship between perception and sharing

-Classic model in rumor psychology: spread of rumor varies as a function of ambiguity, importance, and anxiety

-Model 1: ambiguity and importance predicted rumor spread (Japan)

-Model 2: anxiety and fluency predicted rumor spread (USA)

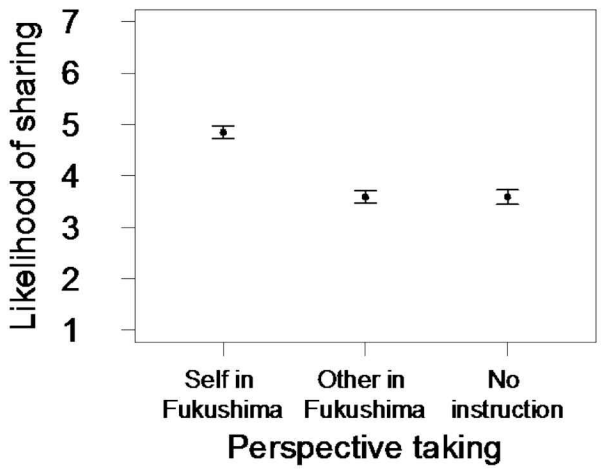
-Disaster-related tweets were less anxiety-provoking and important for people in the US than for people in Japan

-Can taking other's perspective reduce the spreading of rumor?

Comparison of mean self-accuracy, anxiety, and importance ratings between Japan and the US (ratings are from 1 to 7, where 1 indicates 'not at all')

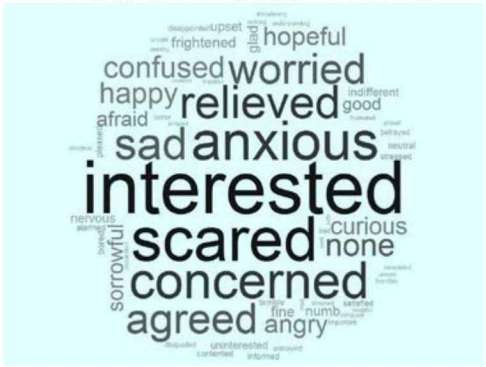
Population	Tweet type	Self-accuracy	Anxiety	Importance
Japan	Rumor	3.37	4.03	3.95
	Criticism	4.67	2.99	4.28
USA	General	4.73	2.76	3.06

Method 2: Taking another person's perspective

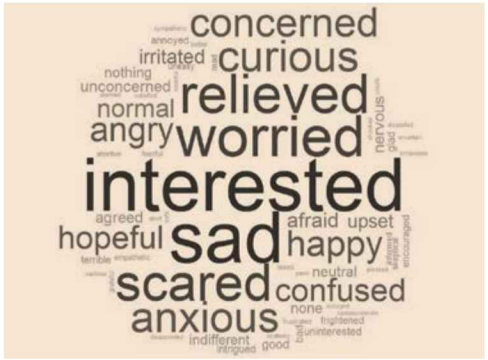


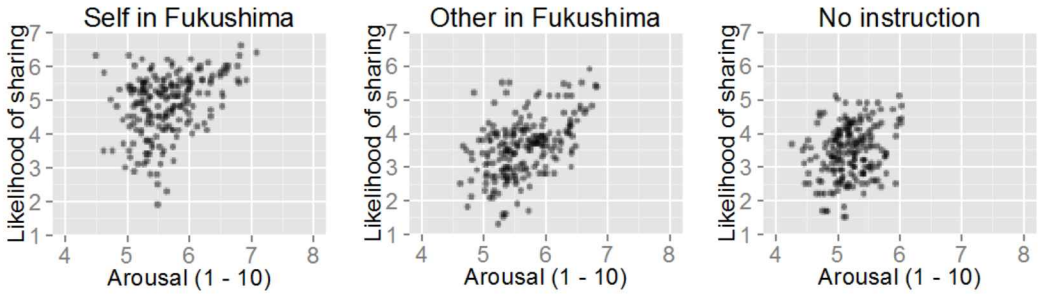
Instructing people to take other's perspective might help reduce the spread of rumor. People in USA were more likely to pass a disaster-related tweet when thinking about self in Fukushima than when thinking about another person in Fukushima.

Self in Fukushima



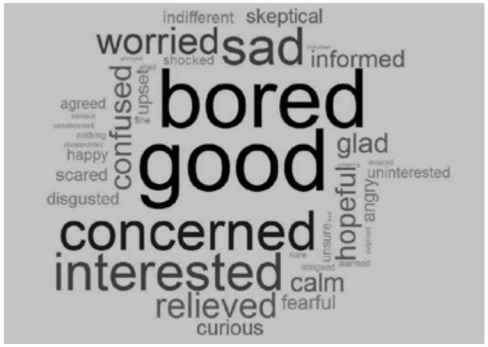
Other in Fukushima





Arousal, ranging from calm to excited, is a strong predictor of information-sharing decision. Perspective taking, which influenced likelihood of sharing, did not change people's arousal. Imagining a disaster center made people perceive the disaster-related tweets as more exciting.

No instruction



Contributions: (1) Better understanding of factors, such as the ones in the below table, that influence information-sharing decisions in social media environments (2) Recommendations on how to reduce the spread of false information in social media such as exposing people to information that criticizes the false information and letting people think about another person during responses to disasters

Variables of interest in this project		
Processing	**Perception**	**Sharing**
Type: Rumor vs. criticism **Location:** Near vs. far **Popularity:** Shared by a few vs. many people **Source:** Media vs. individuals **Perspective:** Self vs. other **Topic:** Crisis vs. everyday event **Distribution:** A few vs. many false messages	**Accuracy** **Anxiety** **Familiarity** **Fluency** **Importance** **Informativeness**	**Intention** Likelihood of sharing Number of people to share **Action** Actual re-tweeting Clicking of a "share" button

This project is a part of a research program that aims at developing a crowd-based system for improving the quality of information in social media.

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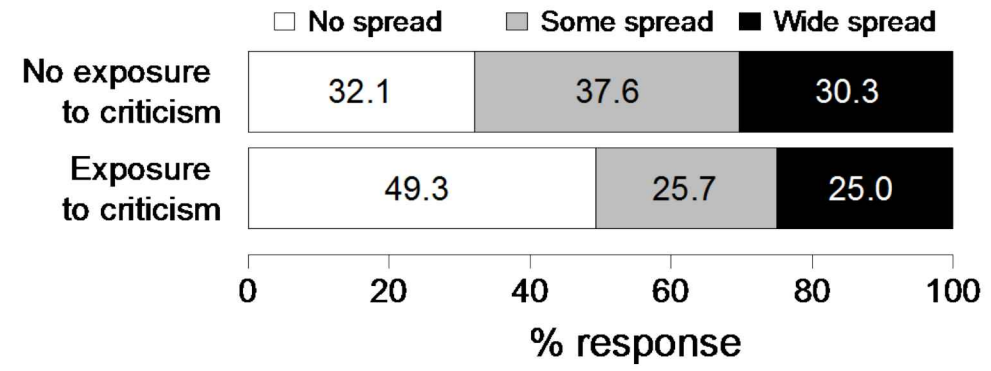
Overview/Purpose of the Project:

This project focuses on analyzing information-sharing behavior in social media environments to help develop and evaluate methods for minimizing the spread of false information in social media during responses to disasters.

Major Outcomes:

(1) Better understanding of factors that influence information-sharing decisions in social media environments (2) Recommendations on how to reduce the spread of false information in social media



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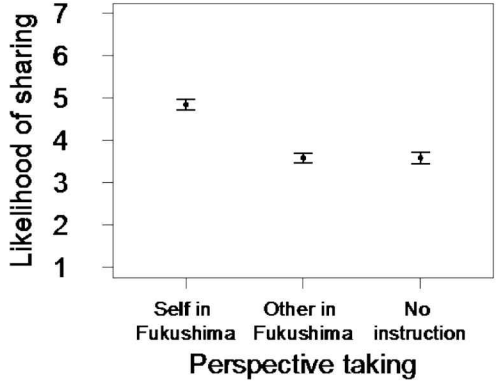

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