

The impact of social influence on pre-evacuation behavior

- An eye tracking analysis on information gathering during pre-evacuation behavior, comparing normative and informational social influence

When surrounded by others, people tend to act differently than when being alone. This is due to social influence. Social influence can affect people not to act, which in a fire can delay the evacuation and increase the risk. The authors have investigated if there is a difference between how people surrounded by others and people being alone use their eyes before evacuating, and if this increases the impact from social influence.

When analyzing the results from unannounced evacuation experiments with an eye tracker device, it is shown that social influence makes people hesitate, which results in less people evacuating. The eye tracker device is glasses that the participants wear, from which it is shown where the participants fixate their gaze. People surrounded by others use their eyes' similarly as people who are alone. Therefore, the impact from social influence does not affect how people use their eyes before evacuating. However, the results show a difference between how participants who evacuated and participants who did not evacuate used their eyes. Participants who evacuated looked around in the room for a larger proportion of time than participants who did not evacuate. This implies that how people use their eyes is crucial for the decision to evacuate.

For the experiments, half of the participants did a bogus task alone and half of them did the bogus task with two confederates that acted passively. As mentioned earlier, the real purpose of the experiments was to investigate the participants' behavior and actions after an unannounced fire alarm started.

A difference occurred when the initial gathering of information was compared between the participants with confederates and the control group. Of the participants that looked around in the experimental room within the first 10 seconds of the fire alarm, more of the participants with confederates looked at five items or more within five seconds, than participants who were alone.

From a post-experimental questionnaire, the authors investigated if either of the two types of social influence, normative and informational was used more than the other. Normative social influence appears when a person act according to norms. Informational social influence occurs when a person collects information from others' behavior and reason; "*The alarm is probably not anything serious since he/she is calm and does not evacuate*". From the unannounced evacuation experiments the authors also analyzed the extent of normative and informational social influence. The participants with confederates were probably affected by both normative and informational social influence, and no conclusion could be drawn whether more participants were affected more by normative or informational social influence.