

Report coursework assignment A - 2021

CS4125 Seminar Research Methodology for Data Science

Nikki Bouman (4597648), Anuj Singh (), Gwennan Smitskamp ()

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1 Part 1 - Design and set-up of true experiment

1.1 The motivation for the planned research

The recent outbreak of the COVID-19 pandemic has changed our daily lives significantly. People are obligated to stay at home, disrupting their usual social interactions in both work and private life. The situation compels people to meet online. Typically, in such digital interactions, interlocutors can see each other by means of webcam streaming. However, this may not always be the case. Some or all interlocutors may not be visible during online dialogue, which could affect the quality of the conversation and the mutual understanding.

An important effect of the shift from face-to-face to online interaction can be revealed by studying laughter, as it is extremely contagious social behavior (Provine, 1992). Humans are very prone to unintentionally or unconsciously laugh as a social signal in any form; from a minor smile to laughing out loud. Additionally, laughing is one of the most important social signals for lubricating the flow of social interaction (Griffin et al., 2015).

1.2 The theory underlying the research

The effect of visibility on the use of gestures as a communicative function has been studied broadly (Alibali, Heath, & Myers, 2001; J. B. Bavelas, Chovil, Lawrie, & Wade, 1992; Cohen & Harrison, 1973; Cohen, 1977; Emmorey & Casey, 2001; Krauss, Dushay, Chen, & Rauscher, 1995; Rim'e, 1982). J. Bavelas, Gerwing, Sutton, and Prevost (2008) provide a summary of previous experiments where rate and form of gestures were compared under two conditions: where the addressee could see the speaker and where the addressee could not see the speaker. These experiments show that speakers gestured at higher rate when they communicated with mutual visibility than without. J. Bavelas et al. (2008) extended these experiments by focusing on both visibility and dialogue as a variable, finding similar results. Furthermore, they found that speakers gestured at a significantly higher rate in a telephone dialogue than in a monologue to a tape recorder, confirming that visibility is not the only variable operating in telephone conversations. These experiments showed us that

visibility plays a major role in the rate of gesturing, but that people also gesture when they are not visible to each other. As laughter can be seen as a form of gesturing, these findings are relevant for this study.

Laughing together is found to be essentially collaborative (Mehu & Dunbar, 2008; Coates, 2007). Joint laughter therefore serves important means to achieve effective team meetings (Ponton, Osbourne, Greenwood, & Thompson, 2018), considering that people who laugh on video are perceived with a higher likeability than people who do not (Reysen, 2006). This social function of joint laughter emphasises the relevance of studying the occurrence, now that the majority of meetings take place online.

1.3 Research questions

We will aim to answer the following research question:

What is the effect of webcam visibility during online dialogue on the frequency and duration of joint laughter?

When recognizing laughter we do not focus on the reason why someone is laughing. We consider anything from an awkward laugh in a moment of silence to laughing out loud about a joke as a laughter episode regardless of the context. In order to guide the experiment to answering the research question, the following sub-questions are considered:

1. To what extent does webcam visibility affect the frequency of joint laughter?
2. To what extent does webcam visibility affect the duration of joint laughter?

1.4 The related conceptual model

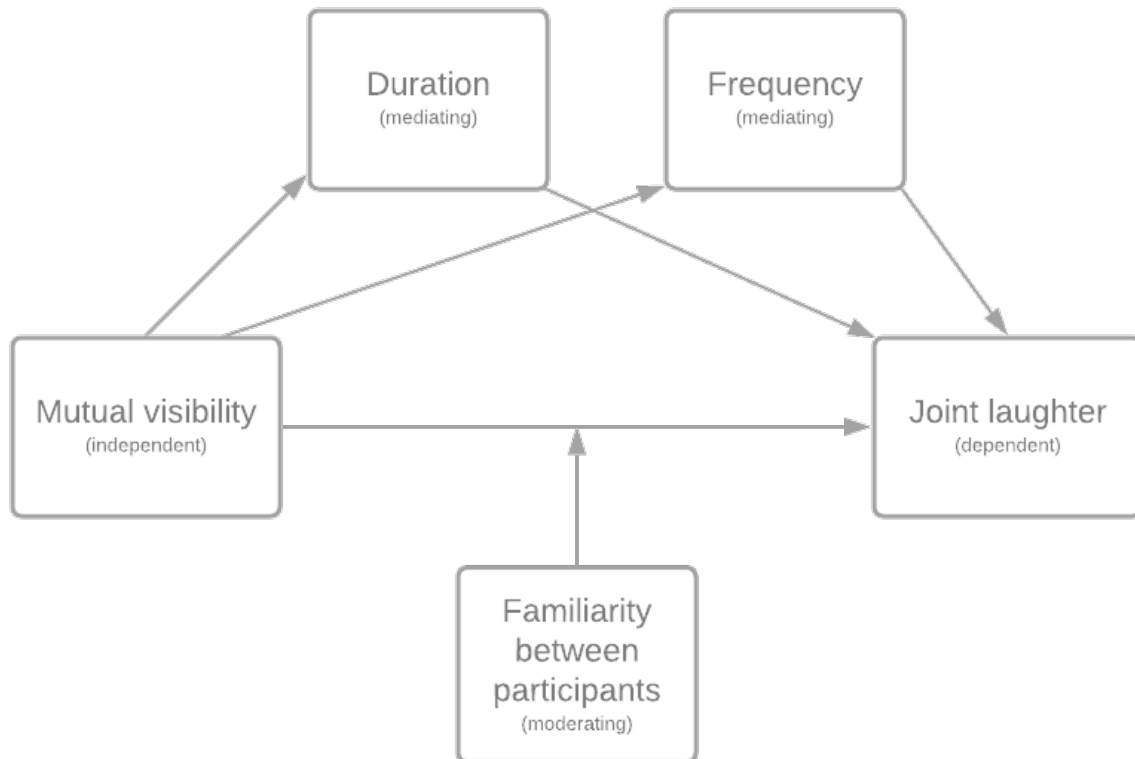


Figure 1: The conceptual model to test the effect of mutual webcam visibility on joint laughter

1.5 Experimental Design

Note that the study should have a true experimental design

1.6 Experimental procedure

Describe how the experiment will be executed step by step

1.7 Measures

Describe the measure that will be used

1.8 Participants

Describe which participants will recruit in the study and how they will be recruited

1.9 Suggested statistical analyses

Describe the statistical test you suggest to carry out on the collected data