Author: Jacob Fuehne

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<div align="center">Research Paper Summary</div>

<div align="center">Beyond the Emoticon: Are There Unintentional Cues of Emotion in Email?, *Personality and Social Psychology Bulletin*, 2020</div>

1. Problem definition and the main ideas of the research

Previously, there was little evidence of nonverbal behaviors in text-based communication, especially unintentional displays central to emotion perception that you would normally have in face-to-face conversation. This paper investigates whether there are unintentional emotion cues in text-based communication by proposing that communication errors can influence how emotion is perceived.

2. Significance of research study (Importance and Challenges of research problem)

This research is important in that it helps to provide evidence for an indicator of emotion found in text-based communication. Previously, it would be more difficult to identify connections in emotion as people communicate in text. It would be more related to what you say, rather than unintentional markers. Prior research had generally overlooked or dismissed the ideas that there would be unintentional cues, assuming that messengers would spot and filter out cues because of the medium's opportunity for review/correction.

3. Main research questions and assumptions

This research seeks to test three hypotheses related to the expression of unintentional emotional cues in text-based communication. The first hypothesis is that when observing a communication error in a message with emotion, readers will perceive that the sender is experiencing greater levels of the expressed emotion. The second hypothesis is that in a message

with emotion the relationship between communication errors and perceived emotion will be mediated by emotional interference. The third hypothesis is that in an emotional context, the impact of communication errors on negative trait association will be weaker.

4. Research Methodology

As this paper is related more to pure linguistics, there are no computational models used in the study. Instead, this study works with human participants and judges how they perceive emotion with different contexts and varying levels of communication errors. Data is gathered throughout 6 experiments.

5. Experiments

In these 6 experiments, participants go through various tasks related to proving/disproving the effect of communication errors as unintentional markers of emotion in text-based language. In the first two studies, 1A and 1B, the recipients make emotional inferences from typos. In study 2, evidence is provided that their model is consistent with the idea of emotional interference. In study 3, they replicate their findings from studies 1A to 2 to with different emotional valence to directly test the assumption that communication errors are perceived as unintentional. In study 4, they consider the downstream emotional interference effects of typos, and in study 5, they link their findings more deeply with attribution theory by considering whether communication mistakes reflect differently between emotional and nonemotional contexts. In the results of all of these experiments, they find that there is indeed an affect on how emotion is perceived due to communication errors in text-based communication. They go on to discuss how text-based communication may not be as deliberate as previously thought and that emotions will come through and will be perceived through unintentional cues

such as these. Thus, a greater attentiveness is necessary in these contexts if one wishes to not be perceived with more emotional intensity than they intend.

6. Discussion

6.1 Important aspects

- Provides evidence for a new marker of emotion in text based communication

With this research, researchers in multiple fields stand to benefit, but computational linguists in particular can note that communication errors can be used in detecting emotional intensity in text-based communication.

6.2 Limitations of the paper

- Not fully representative sample

As pointed out by the authors, the research is not fully representative of the population, as demographic, relational, and contextual elements may affect the findings.

6.3 Questions for presenter

- Do you think that this paper currently has relevance in Computational Linguistics? As in, should we be integrating checks for typos in algorithms that measure emotional intensity?