

Designing Emotive Translation Bubbles to Improve the Live Stream User Experience for Global K-Pop Fans

Zayn J. Abbas, Pham Sky Truong, Leila Homaeian, Stacey D. Scott
School of Computer Science, University of Guelph

Introduction

Background:

- Online fandoms promote inclusivity by connecting geographically dispersed people of different abilities, cultures, and languages [1][2]
- Parasocial relationships can be formed from interactions between the fans and their idols [3]
- Language barriers and limitations in translation technologies can impact the fans overall experience while watching live streams

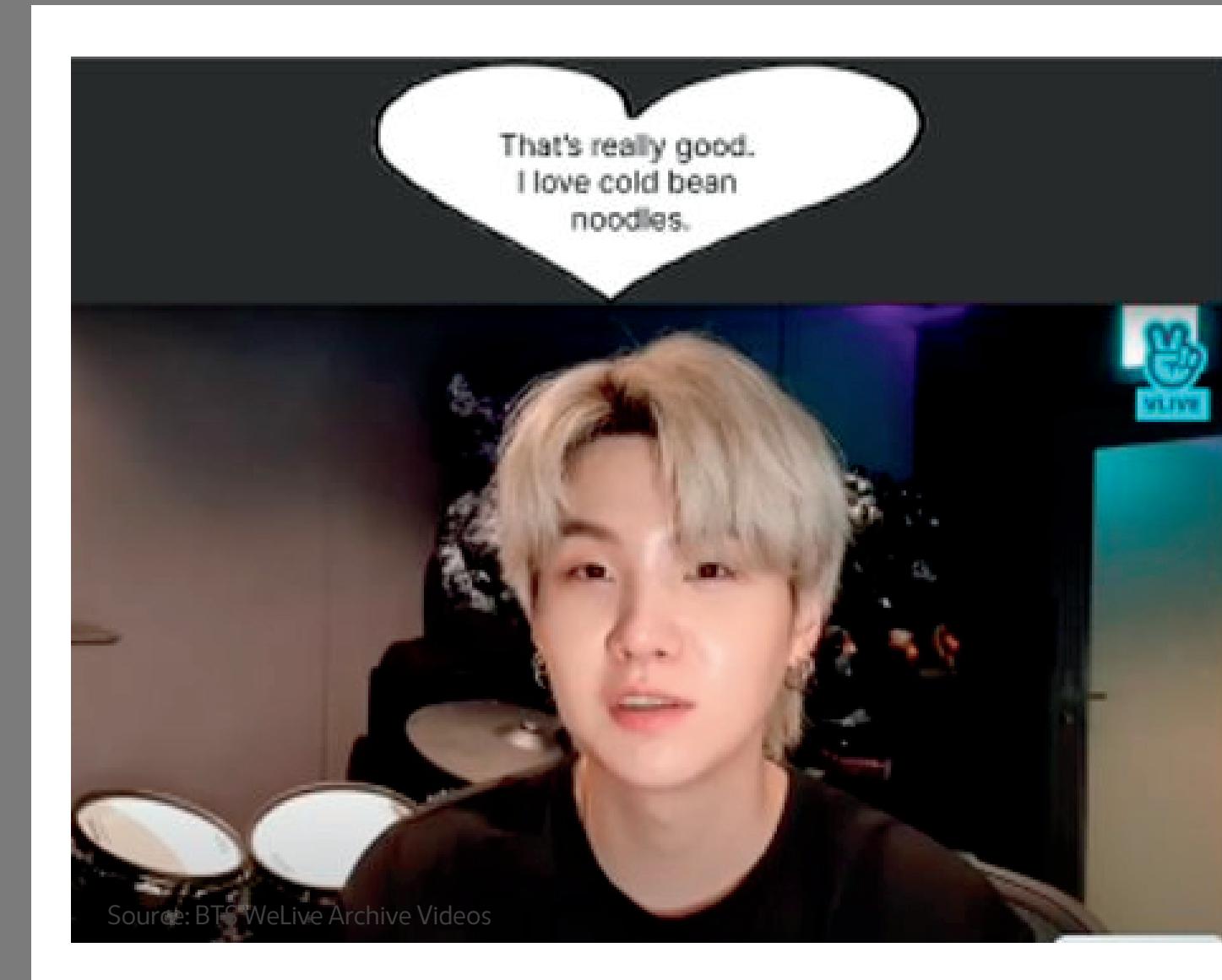
Objectives:

- To improve content understanding of machine translation output through interface design
- Using K-Pop live streams as a usage context, to discover the impact that emotive translation bubbles have on fans' overall experience

Informal Feedback

Informal feedback sessions

- Gathered feedback from 4 K-pop fans
- Participants watched a sequence of images from archived "lives" from two K-pop stars
- Translated speech was shown with and without emotive translation bubbles
- Asked questions related to their experience

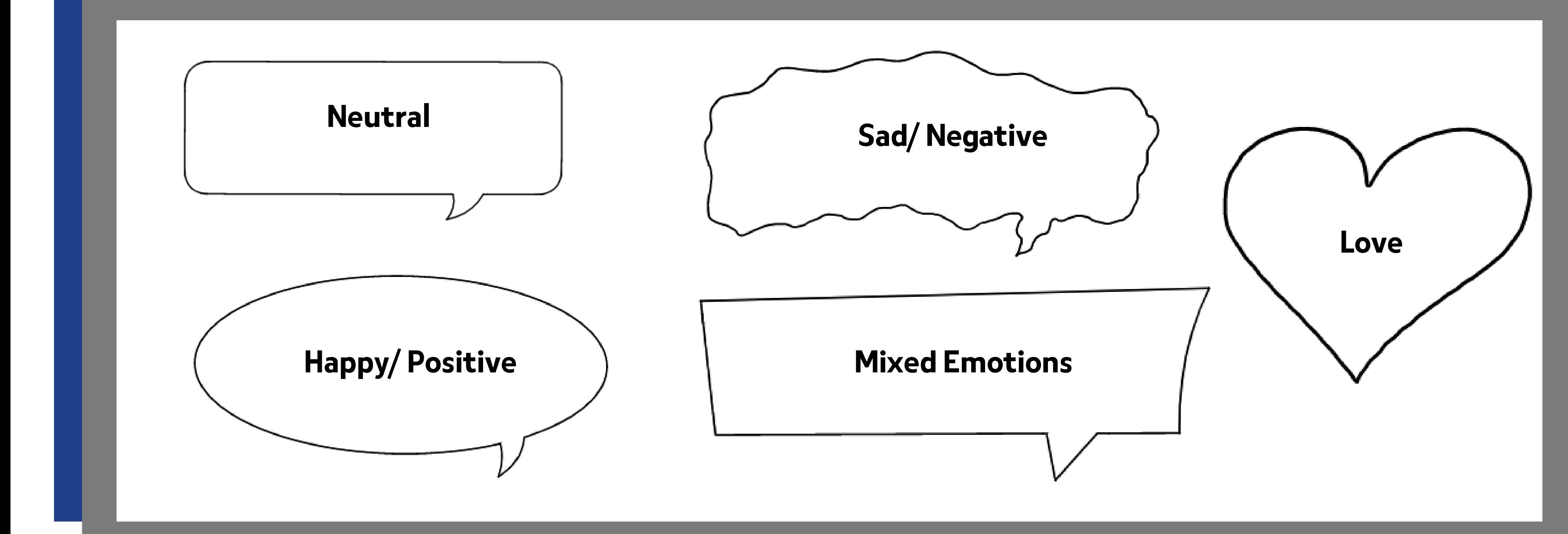


Findings from Informal Feedback Sessions:

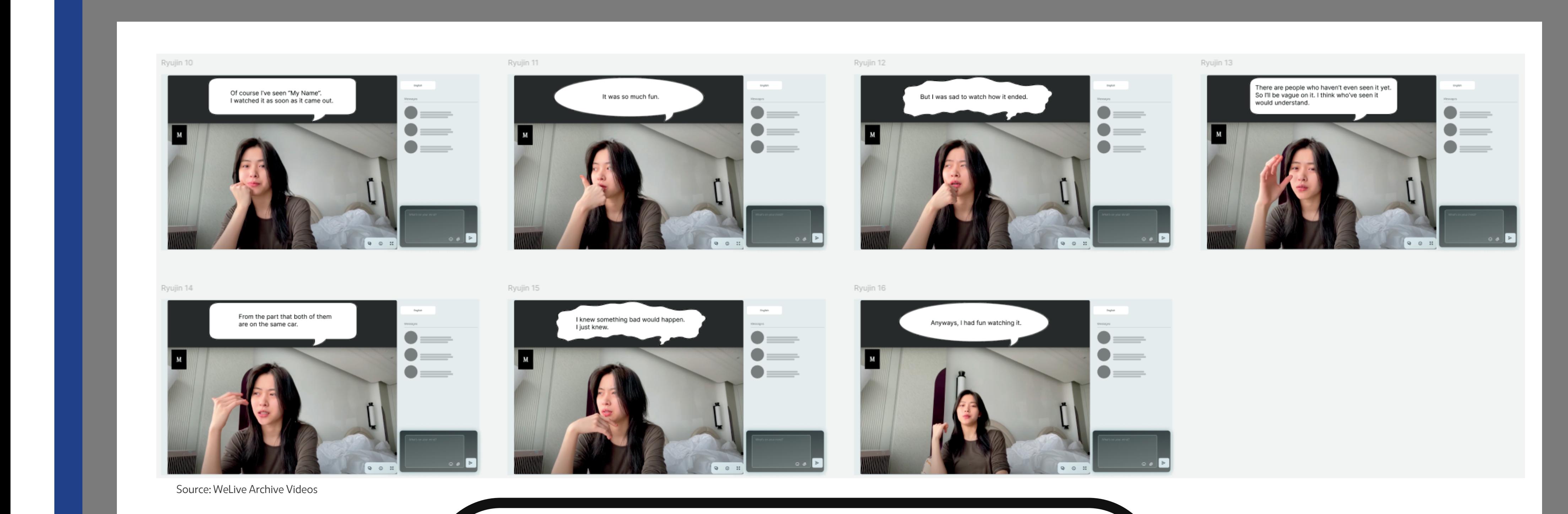
- Overall response to the emotive bubbles was positive
- Emotive translation bubbles allowed users to understand gist of story without having to read each translation word for word
- Unanimous appreciation towards the "love" bubble
- Inconsistency between participants' interpretation of the meaning of the specific bubble design
- Without bubbles, users relied on body positioning and facial expression

Interface Design

Emotive Translation Bubble Design



Emotive Translation Bubbles in Context of a K-Pop Live



Future Work

- Refinement of the bubble design to ensure more consistent interpretation
- Future analysis of other techniques that can be used to improve machine translation output
- A formal user study using an improved UI designs and/ or live videos
- Further exploration is needed to improve the accuracy of multi-lingual translation models



References

- [1] S. Hillman, J. Procyk and C. Neustaedter. "Alksjdfklksfd": Tumblr and the fandom user experience. Proc. Conference on Designing Interactive Systems (DIS), pp. 775–784, 2014.
[2] P. Obst, L. Zinkiewicz and S. G. Smith. Sense of community in science fiction fandom, Part 1: Understanding sense of community in an international community of interest. J Community Psychol. 30(1): 87–103, 2002.
[3] J. L. Dibble, T. Hartmann, and S. F. Rosaen. Parasocial Interaction and Parasocial Relationship: Conceptual Clarification and a Critical Assessment of Measures. Hum Commun Res. 42 (1): 21–44, 2016.