

Poster: Extensive Evaluation of Emotional Contagion on Smiling Selfies over Social Network

Wataru Sasaki, Mikio Obuchi, Kazuki Egashira, Naohiro Isokawa, Yuki Furukawa, Yuuki Nishiyama, Tadashi Okoshi, Jin Nakazawa
Graduate School of Media and Governance, Keio University
wataru@ht.sfc.keio.ac.jp

ABSTRACT

We propose “SmileWave”, the first selfie social networking service to reveal the existence of emotional cognation through smiling selfies on the social network. We conducted multiple rounds of in-the-wild user studies with 86 cumulative total users for total duration of 5 weeks. Throughout the entire study, we confirmed the occurrence of smile-based emotional contagion over social network, not only in the momentary duration but in longer term period.

Keywords: Emotional Contagion; Social Network; Mobile Sensing.

1. BACKGROUND

In our daily lives, we have experiences such that we become happier when we see people smiling happily. A specific mechanism occurring in such emotional propagation is called “emotional contagion”, where people experience the same emotion expressed by someone when communicating with them [1]. Emotional contagion on the online communication has not been well investigated yet. In this research, we aim to reveal how emotional contagion occurs and propagates on the social network and particularly spotlight smile selfie photos as communication media. To address the problem above, we propose “SmileWave”, a photo-based social networking service that analyzes the changes in user’s smile degree on looking at posted smiling selfies posted by other users. The features of SmileWave are (1) real-time feedback to users, (2) ease of use anytime and anywhere and (3) simple user interface and high usability. Figure 1 shows the overview of SmileWave.

2. EVALUTAION AND RESULTS

Firstly, we conducted an in-the-wild user study with 48 participants for 30 days [2]. Next, we further conducted the second extensive in-the-wild user study with 38 participants for 2 weeks, preparing the second generation of SmileWave with brush-ups/fixes. We found that there is a change in the

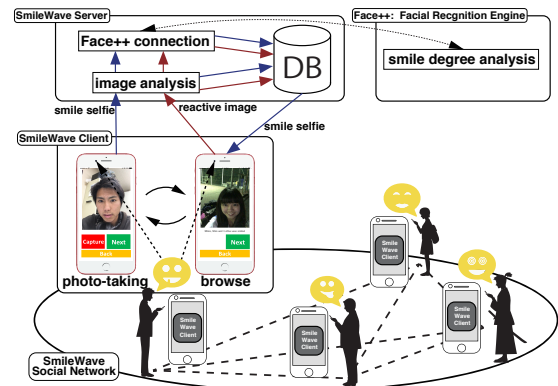


Figure 1: Overview of the SmileWave System

effect on smile-based emotional contagion, by showing smile selfies with higher smile degree, not only in the momentary duration but also in longer term duration. We also found that there is a stronger effect on smile-based emotional contagion after she/he viewed the posted selfie photos ordered from the one with the lower smile degree to the one with the higher degree. Those differences were found with statistical significance in our ANOVA analysis.

3. CONCLUSION AND FUTURE WORK

We conclude that smile-based emotional contagion over the social network is occurring. Our future work includes longer-term and larger-scale user study to validate SmileWave’s performance on the degree of happiness directly.

4. ACKNOWLEDGMENTS

This work was supported (in part) by National Institute of Information and Communications Technology, (in part) by RIKEN, Japan and (in part) by Ministry of Education, Culture, Sports, Science and Technology (MEXT) Grant-in-Aid for the “Program for Leading Graduate Schools”.

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MobiSys '17, June 19–23, 2017, Niagara Falls, NY, USA.

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ACM ISBN 978-1-4503-4928-4/17/06

DOI: <http://dx.doi.org/10.1145/3081333.3089324>