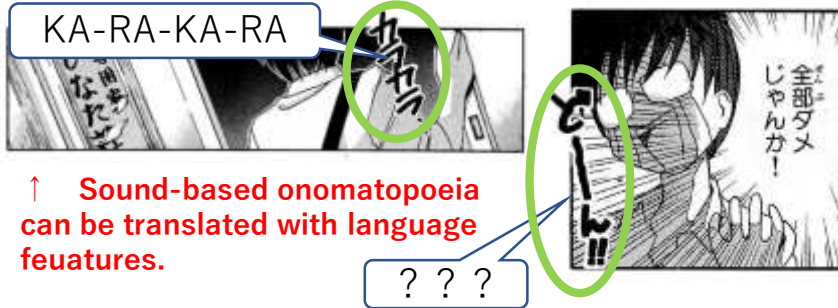


A method to select comic frames for supporting mimetic onomatopoeia study

Yoko Nishihara, Shuang Wu (Ritsumeikan Univ., Japan), and Ryosuke Yamanishi (Kansai Univ., Japan)

1. Background



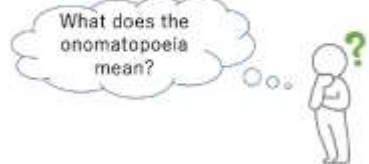
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↑ Sound-based onomatopoeia can be translated with language features.

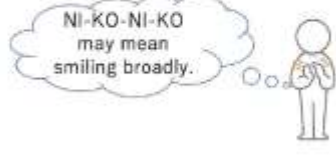
Mimetic onomatopoeia ↑ can not be translated because those reflect situations and atmosphere.

2. Our approach

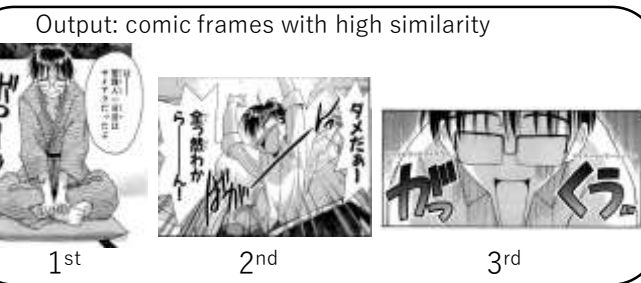
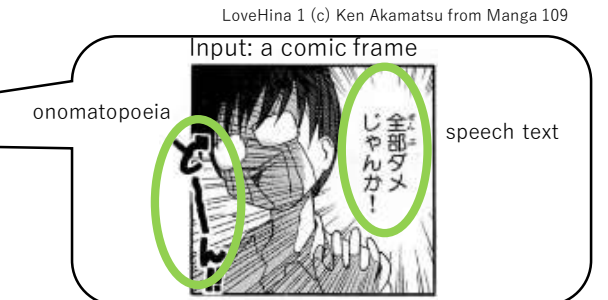
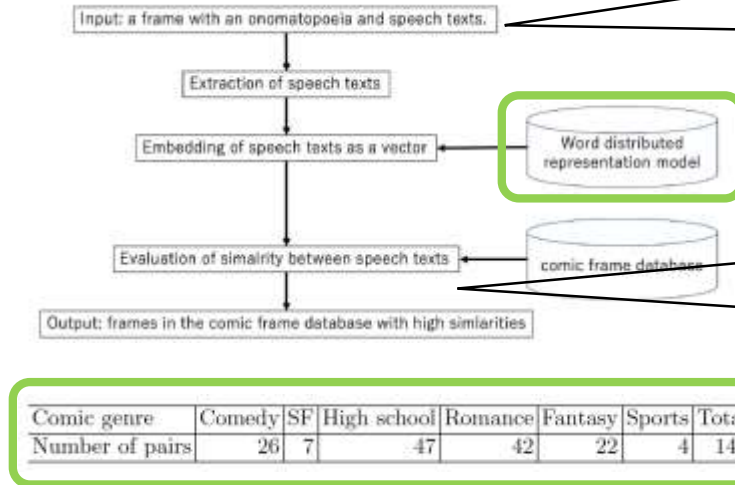
A frame of comic with an onomatopoeia NI-KO-NI-KO.



Another frame of comic with a similar speech text is given as a hint to understand the meaning of the onomatopoeia.



3. Proposed method



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4. Preliminary experiments

Procedures

- (1) We output 3 frames with a high similarity for an input frame. **Table 2** shows used frame information.
- (2) We asked participants to judge whether the output frame is similar to the input frame and give a score (1: Not similar, 5: Very similar).
- (3) We calculated the average score for each output frame. **Table 3** shows the average score of participants. The average was 2.90 that was higher than the intermediate score 2.50.

Table 2. Frame information in the preliminary experiments

Comic genre	Comedy	SF	Fantasy	Sports	Total
Number of frames	4	8	4	4	20

Table 3. Averages of participants' scores for output frames

Similarity rank	1	2	3	Average
Averaged score	2.99	3.00	2.72	2.90

5. Conclusions and future work

Our proposed method could select frames for supporting mimetic onomatopoeia study. However, some of the mimetic onomatopoeias were related not only speech texts but also contexts of comic story. We will consider how to evaluate the relation between a mimetic onomatopoeia and speech texts in a comic frame.

Contact:

Yoko Nishihara, Ritsumeikan University, Japan
nishihara@fc.ritsumeiji.ac.jp
<https://www.nishihara-lab.org/>

