Eye tracking study on the apology text

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Introduction

- **Six components that compose the apology text (Lewicki & Polin, 2012)**
  - Lewicki and Polin(2012) argued that a maximally effective apology should consist of six components in the table 1.

< Table 1. Six main components for the effective apology >

Component	Label	Definition
Expression of Regret	R	A statement in which the violator expresses how sorry they are for the offense
Explanation	E	A statement in which the reasons for the offense are described to the victim
Acknowledgement of Responsibility	A	A statement which demonstrates the violator understands their part in the offense
Declaration of Repetance	D	A statement in which the violator expresses their promise to not repeat the offense
Offer of Repair	O	A statement extending a way to work toward trust rebuilding on the part of the violator
Request of Forgiveness	F	A statement asking for the victim to pardon the violator's actions

- **The most effective components (Lewicki et al., 2016)**
  - In a subsequent study, they reported that **A, O** and **E** were chosen as the three most effective individual components for the effective apology.

Research Question

- **What are the most important components for the effective apology to Korean?**
  - we used eye tracking to investigate (i) how promptly the sincerity evaluation of the apology proceeded and (ii) the Koreans to pay attention to what factors while reading the apology.
- **Which strategy is better? including all components or excluding discomfort expression?**
  - how much attention to be paid by participants when the expressions that caused discomfort and how this expression affected the sincerity evaluation.

## The Study

Pretest for item normalization

- **Material**
  - We have selected eight real-world apology texts that contain all six components.
  - All texts received a score of 5 or higher on sincerity scale-test(1~6 scale).
  - One of these texts is used as a Full condition and six texts were used in one component omitted condition.
  - The other was manipulated in the condition including the unpleasant expression.

- **The sincerity scale-test with a marking a positive expression**

<Fig 1. Marked a positive expression>

<Fig 2. % of positive expressions>
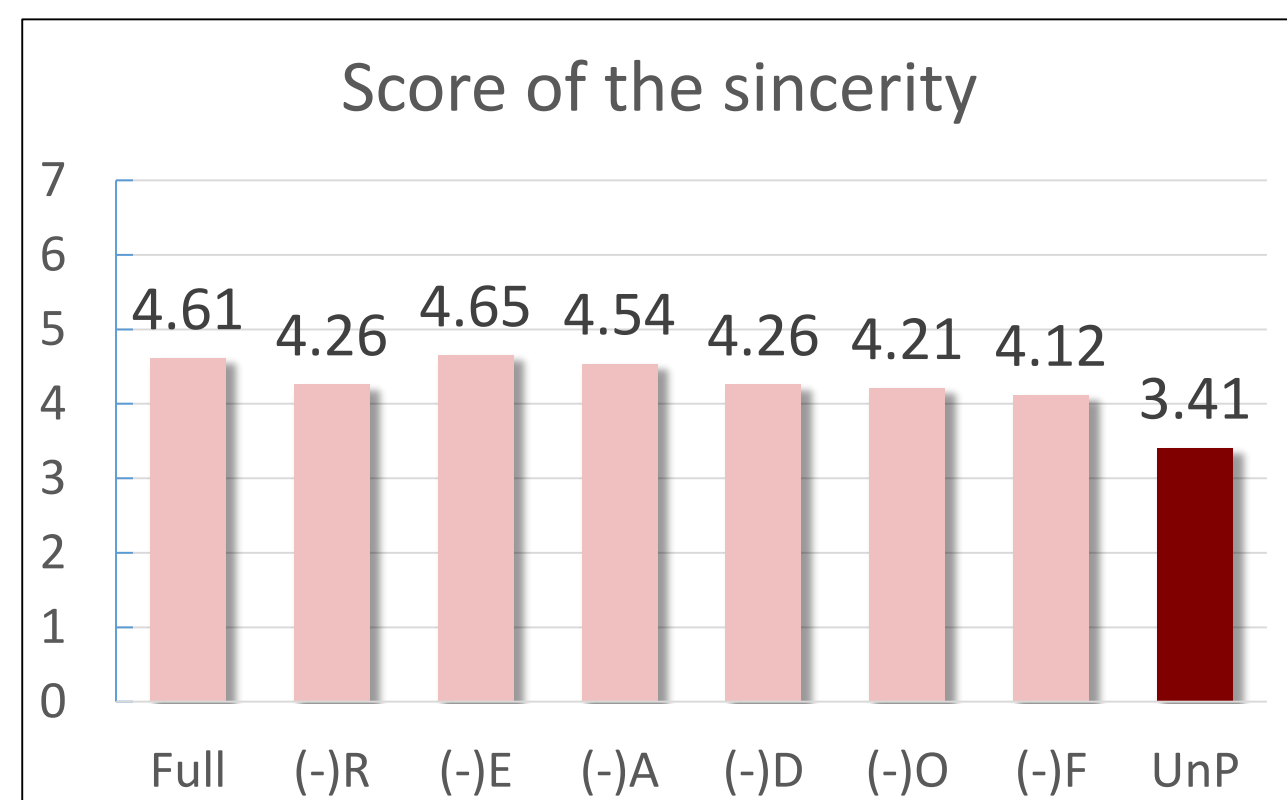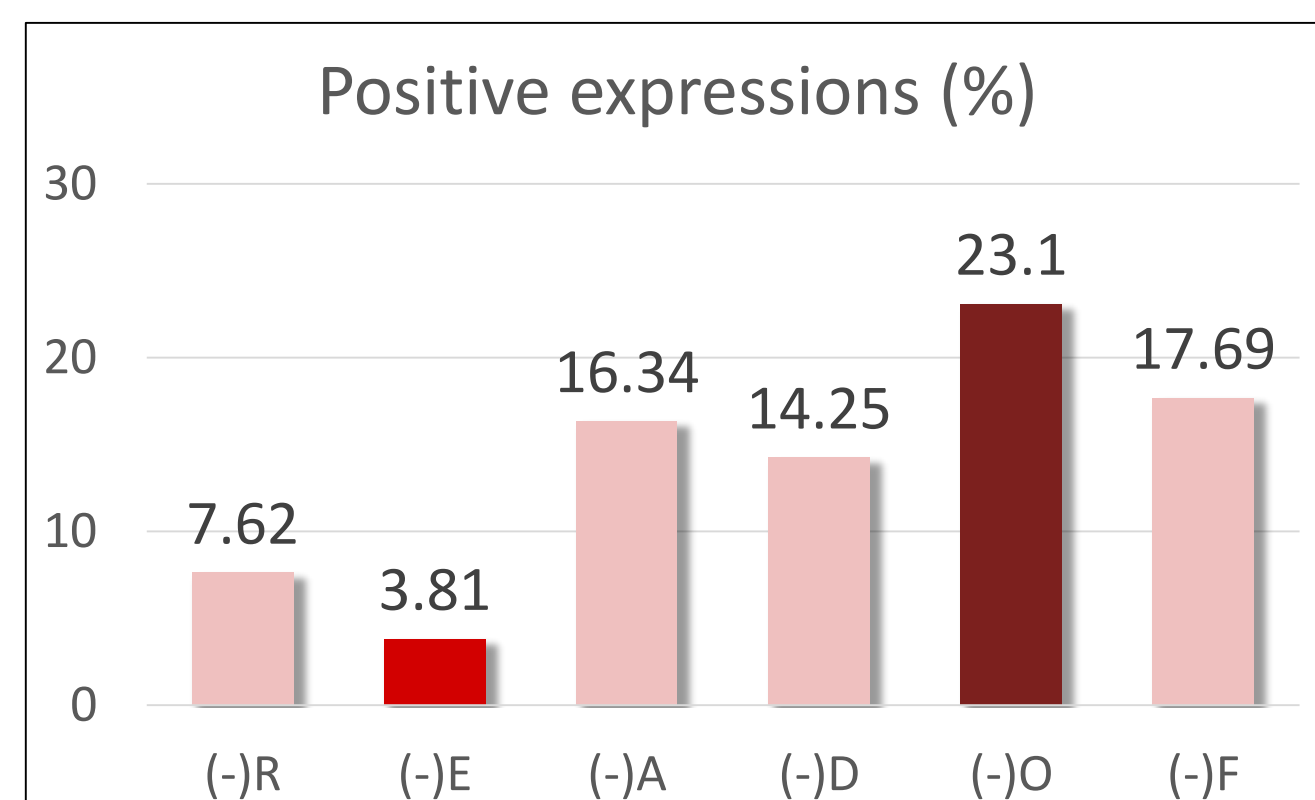
- Among 8 conditions the lowest sincerity scale-test was the unpleasant expression including condition (Fig. 1).
- The highest percentage was marked as a positive expression for the expressions included in the O component(23.1%) and the least was in (E)(3.81%) → O is likely to be treated as a positive component, and E as a relatively neutral component (Fig.2).
- Moreover, when the unpleasant expression was appeared in (A), they reported that the sincerity was most undermined → we included the unpleasant expression in A component in eye-tracking experiment in order to reveal the effect of the UnP expression clearly.

Eye tracking study

- **Participants: 20 Korean native speakers** (Twenty 10, Thirty 10, female 10)
- **Materials / Experiment conditions**
  - 8 apology texts received a score of 5 or higher on sincerity scale-test (Pretest) were selected.
  - Total 32 materials (8 text targets + 8 text fillers + 16 video fillers)
- **Procedure**
  - During a text reading, the participants' eye movement was recorded (250 Hz).
  - The sincerity assessment questionnaire was given right after the each apology text.
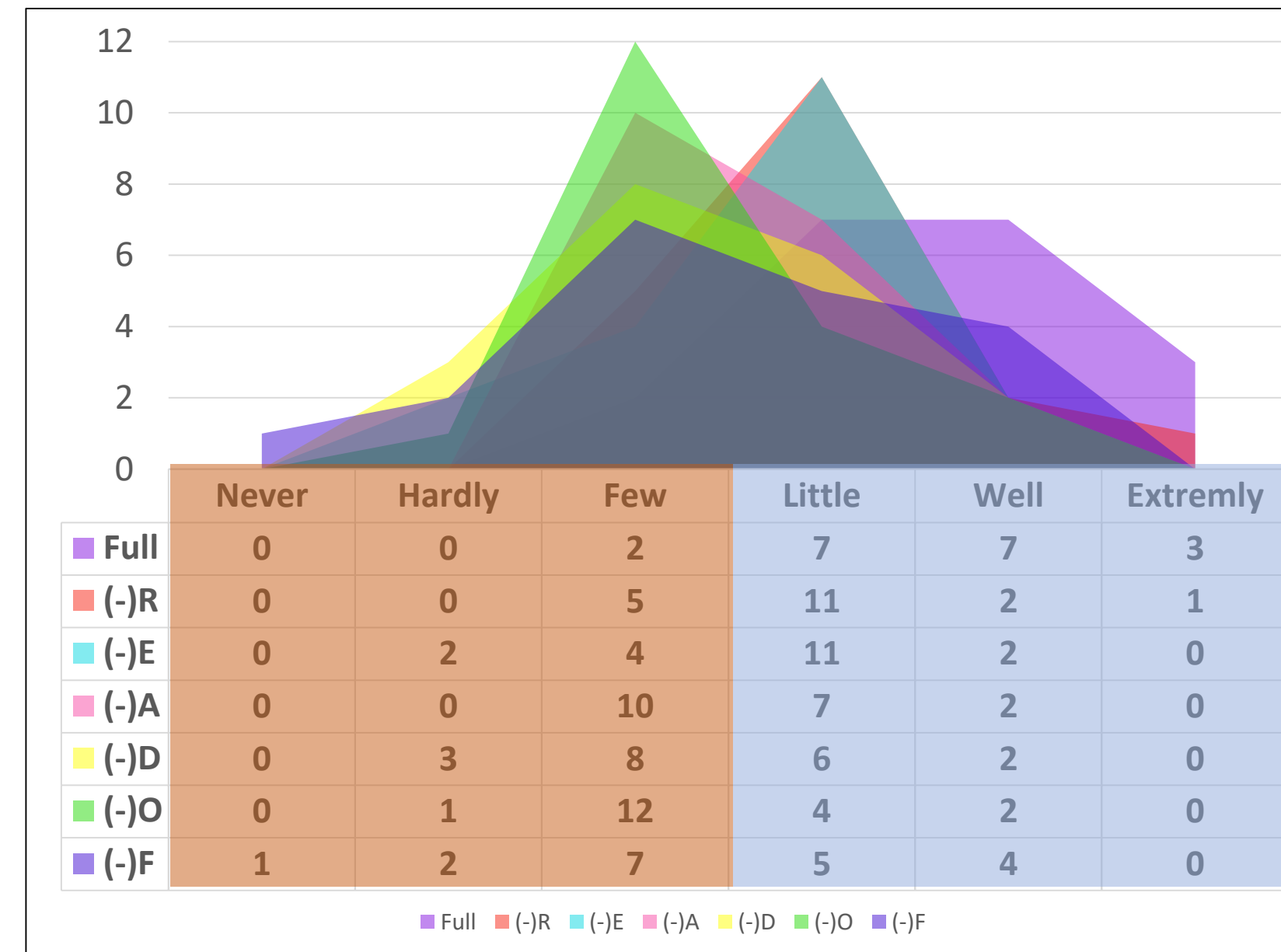- **AOI: Component by component**
- **Data analysis _ Main analysis index**
  - Normalized Fixation Time(ms) : A value normalized by dividing the time the eye movement is fixed in the area by the extent of the area.
  - Normalized Fixation Count : A value normalized by dividing the number of fixation in the area by the extent of the area.
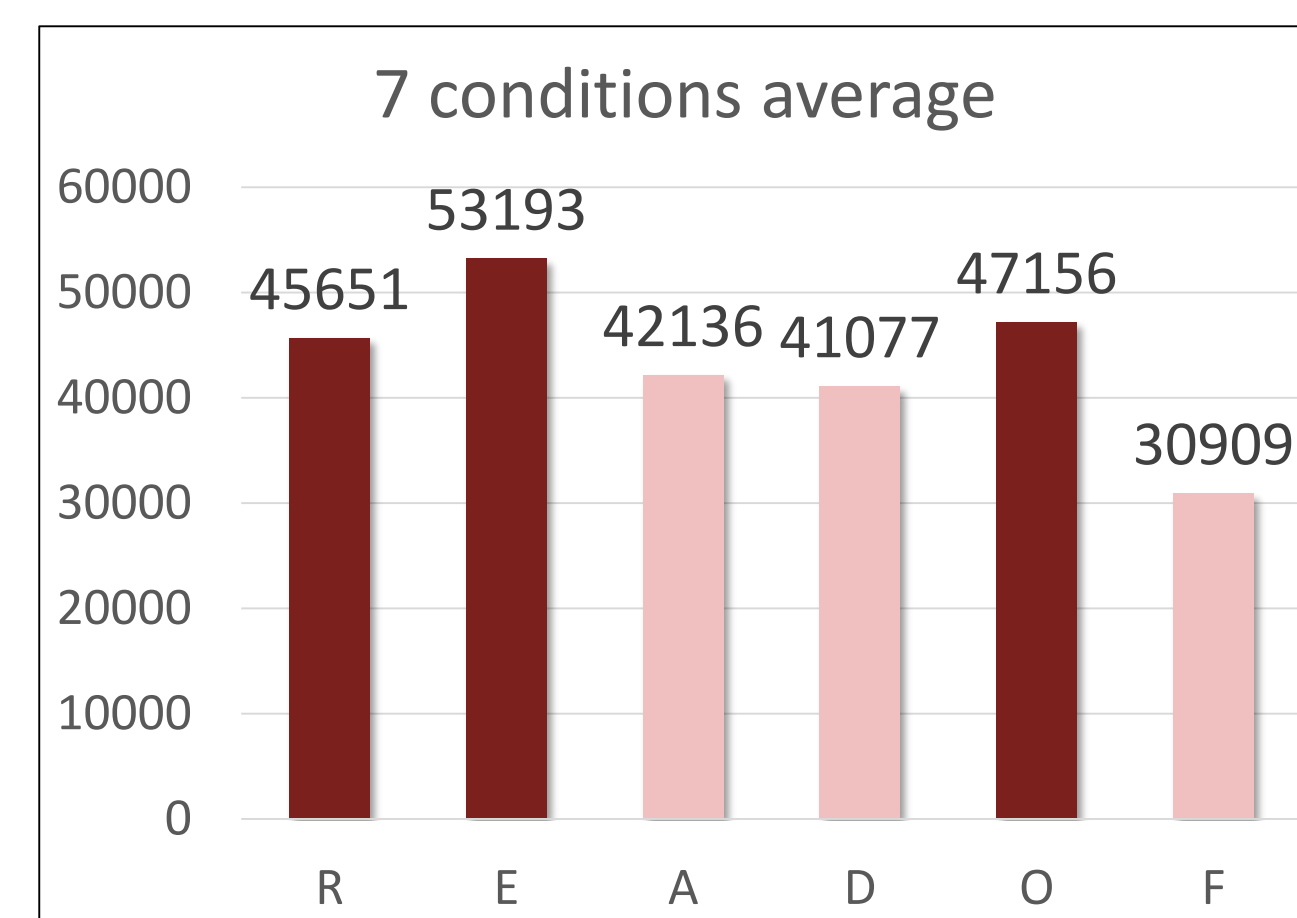
Results

The offline judgement task

<Fig 3. The result of the sincerity assessment>

<Table 2. The percent of a negative/ positive answer>

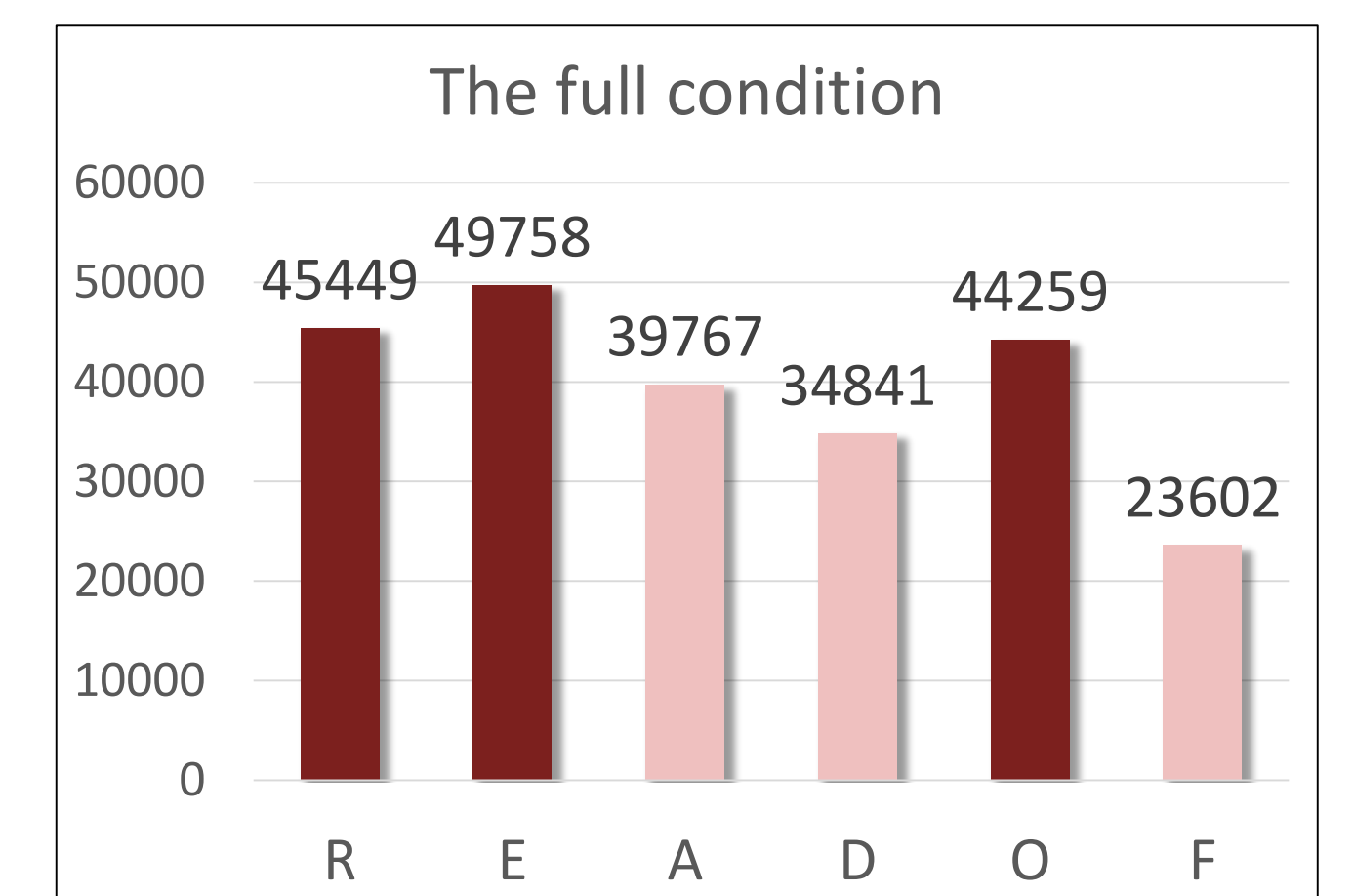| Condition	Negative(%)	Positive(%)
Full	11	89
-R	26	74
-E	32	68
-A	53	47
-D	58	42
-O	68	32
-F	53	47

- This result shows that the degree of involvement in the sincerity of the apology text is different for each component: when D or O is omitted, sincerity is most impaired.

The online eye-tracking

- **Normalized fixation time** (The unpleasant expression condition was excluded in 7 conditions average)

<Fig 4. Normalized fixation time in 7 conditions>

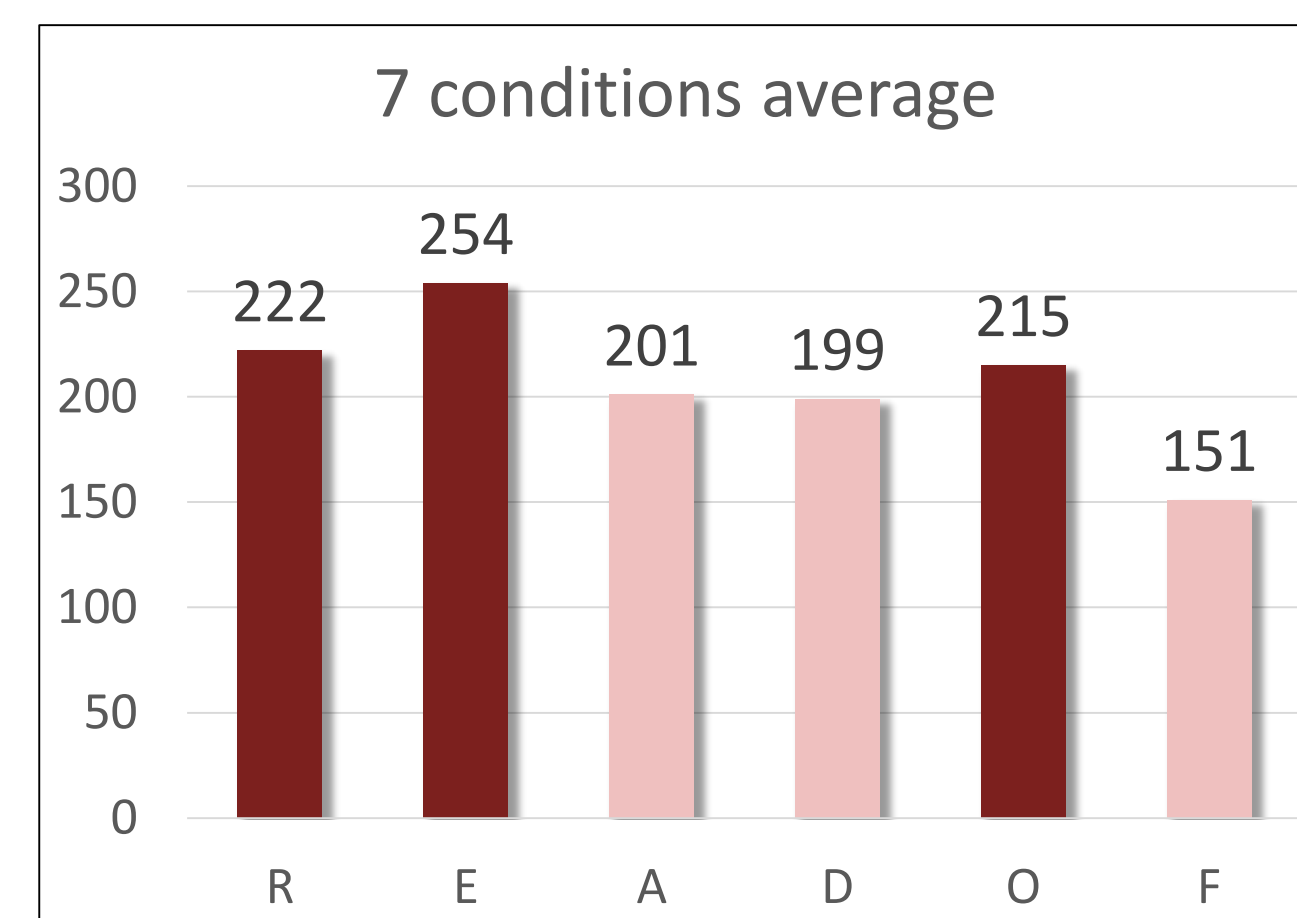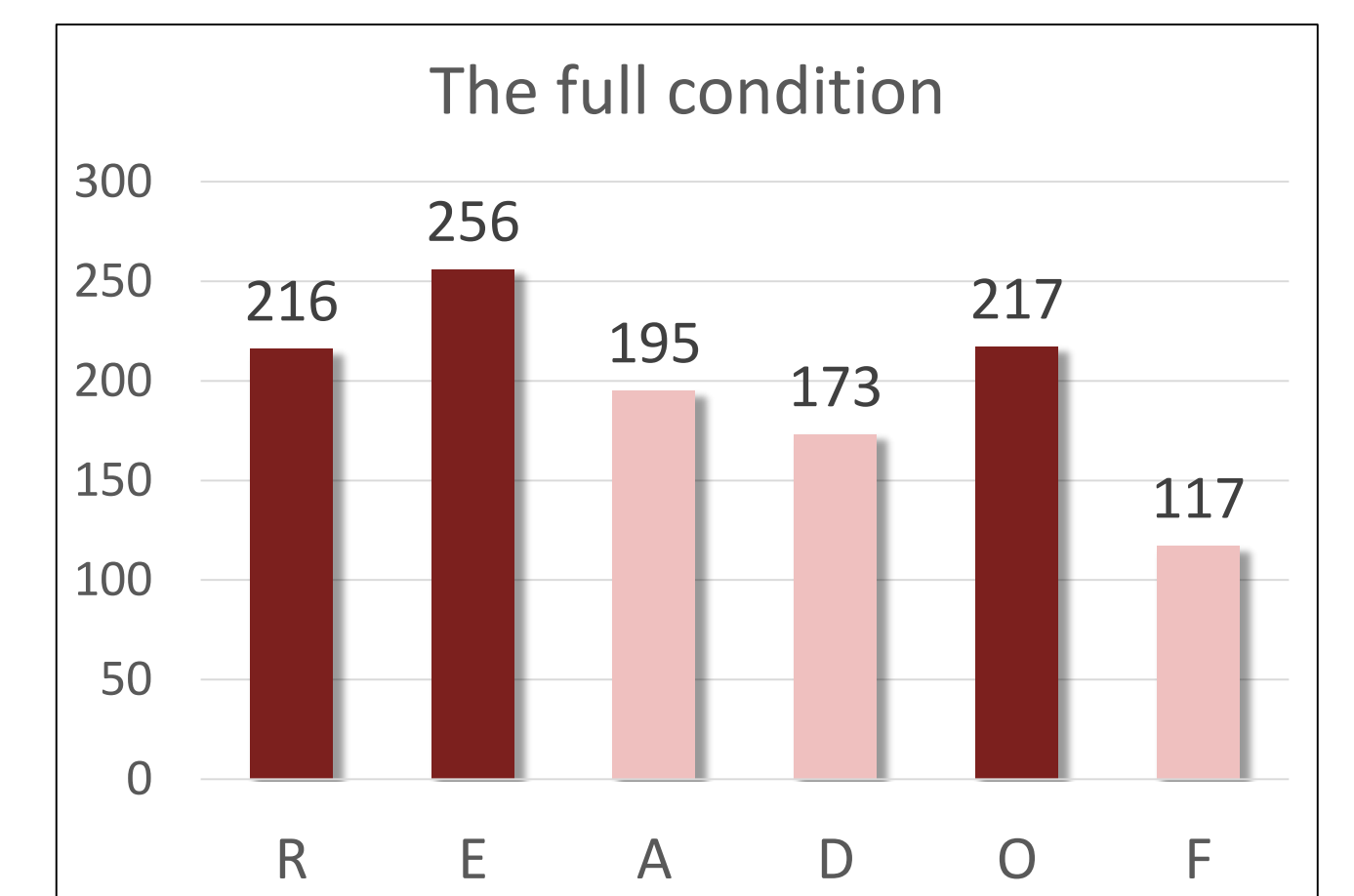<Fig 5. Normalized fixation time in full condition>

- Under all conditions, NFT in (E)(49,758ms) were the longest, followed by (O)(47,156ms) and (R)(45,651ms) in 7 conditions average, by (R)(45,449ms) and (O)(44,259ms) in the full condition.

- **Normalized fixation count** (The unpleasant expression condition was excluded in 7 conditions average)

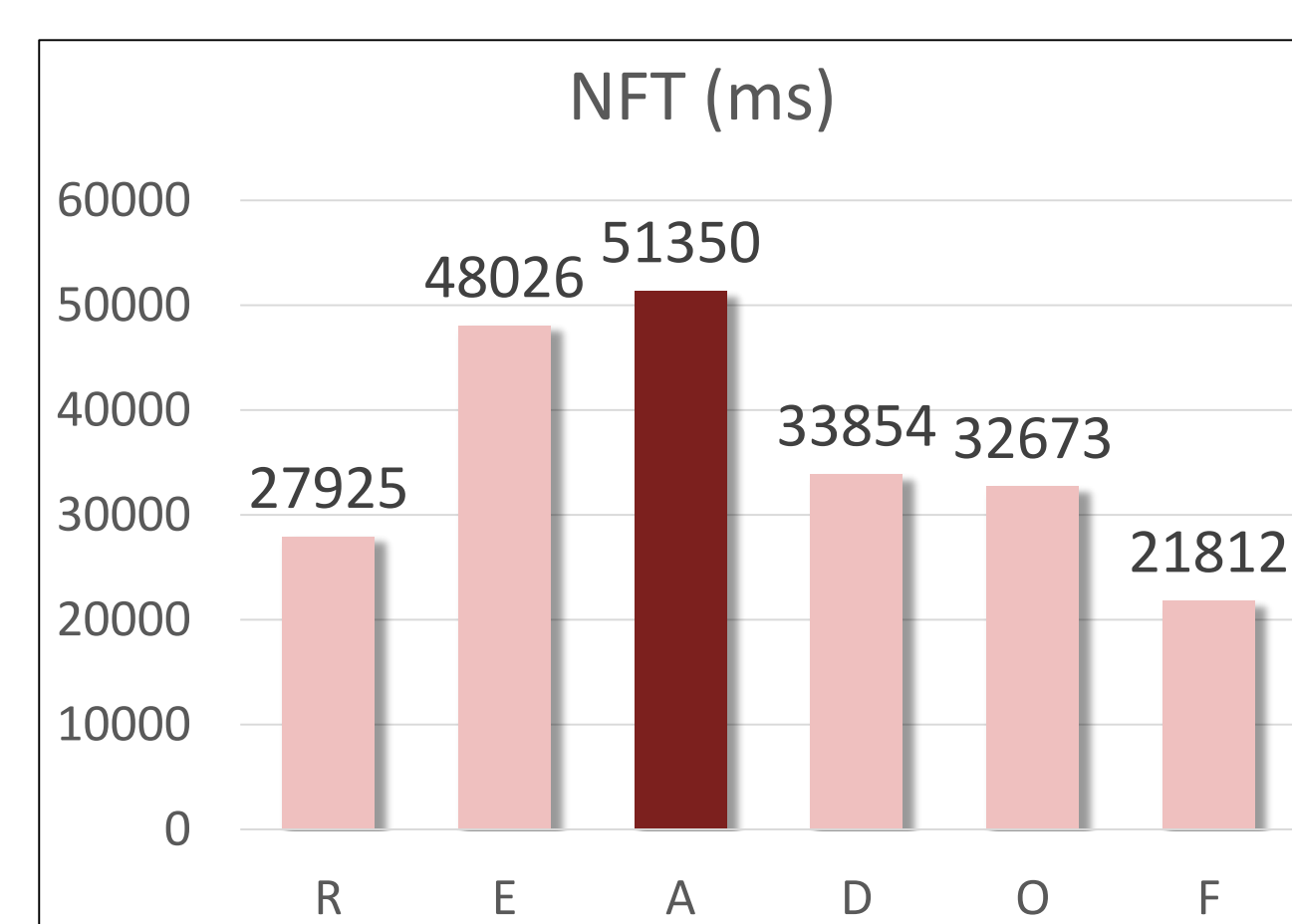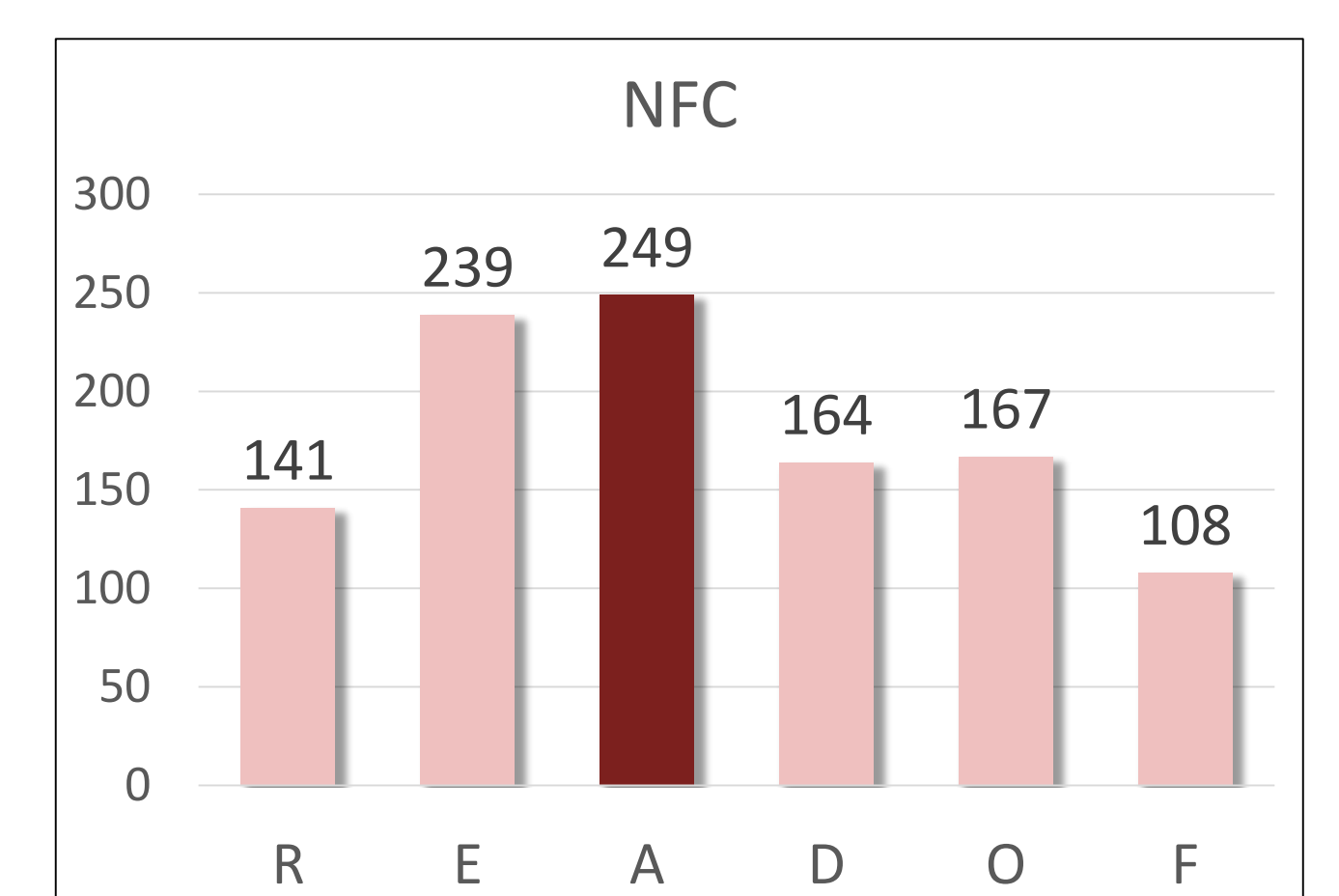
<Fig 6. Normalized fixation count in 7 conditions>

<Fig 7. Normalized fixation count in full condition>

- In (E)(254, 256) were occurred the most fixations in all conditions, in 7 conditions average NFC appeared in order (R)(222) and (O)(215), and in full conditions NFC occurred in order (O)(217) and (R)(216).
- The results clearly demonstrated that it is crucial to give Korean rational information about the events,((E), (O)) and express emotional sincerity(R).

- **Normalized fixation time when the unpleasant expression was included in A**

<Fig 8. NFT by the unpleasant condition>

<Fig 9. NFC by the unpleasant condition>

- When the unpleasant expression was appeared in (A), NFT in (A) was longer(51,350ms) than others, also NFC in (A) was the highest(249).
- it is also important not to include in the apology the expressions that seem to circumvent your responsibility.

Discussion

- **The effective component of the apology text to Korean**
  - Lewicki et al.(2016) found that A, O, and E, which have clearly an informality, are the most important to English native speaker, but the Korean native speaker paid attention not only to objective information(the component (E) as the neutral information, the component (O) as the positive information) but also to emotional expression (the component (R)).
  - It can be concluded that components which are important in apology can be similar but slightly different from culture to culture.
  - Moreover, we can suggest that It is a best way to increase the sincerity of apology by not using the most unpleasant expressions such as "avoiding oneself responsibility" or "passing responsibility to others".

REFERENCES

Polin, B., Lount, R. B., & Lewicki, R. J. (2012, July). On the importance of a full apology: How to best repair broken trust. In *Academy of Management Proceedings* (Vol. 2012, No. 1, p. 14152). Briarcliff Manor, NY 10510: Academy of Management.

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