

# The sound-symbolic effect of voiced obstruents

## on the spell names of *Final Fantasy*

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### BACKGROUND

- *Final Fantasy*, often abbreviated as FF, is a series of Japanese role-playing games released by Square-Enix. Since 1987, it has released 15 series. Players battle monsters using items and spells (called *mahoo* in Japanese).
- In FF, there are a variety of spell types, such as Restore and Attack. A spell has a maximum of five stronger variants. For example, *kearu* (English: Cure) is a recurring spell that restores a small amount of hit points (HP). Its stronger variants include, in order of strength, *kearua*, *kearura*, *kearuda*, *kearuga*, and *furukea*.

### RESEARCH QUESTIONS

- Kawahara (2017) offers a sound-symbolic analysis of the spell names used in *Dragon Quest*. He found positive correlations between the level of a spell and the number of voiced obstruents in its name and between those and the number of morae in the name (e.g., *me-ra* (2 morae) → *me-ra-mi* (3 morae) → *me-ra-zo-o-ma* (5 morae) → *me-ra-ga-i-ya-a* (6 morae)).
- **The current issue: It is unclear whether either of these effects —of voiced obstruents and of mora length— is enough to express the strengths of spell names, or whether both are necessary.**
- **The current study analyzes the effects of these factors on the spell names in FF.**

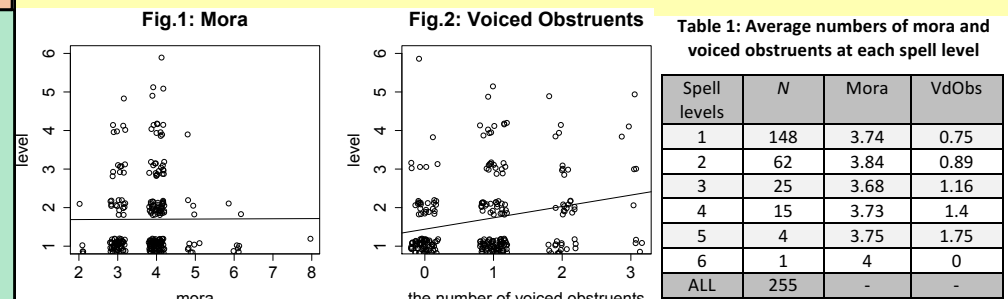
### THE CURRENT ANALYSIS

- Focused on the spell names that appear in the 1st to 14th series (i.e., FF1 to FF14).
- Excluded spell names that appear in the sequels of those series, such as FF10-2.
- Extracted 258 spell names from <https://dic.nicovideo.jp/t/a/ファイナルファンタジーの魔法一覧#cure>.
- Excluded three of them from analysis because they contained Chinese characters.
- **Targeted the remaining 255 spell names** in our analysis.
- **The six spell levels were encoded by the level numbers** (e.g., *kearu* = Level 1; *kearua* = Level 2; *kearura* = Level 3; *kearuda* = Level 4; *kearuga* = Level 5; *furukea* = Level 6).
- Conducted regression analyses in which the spell levels were dependent variables, and the numbers of voiced obstruents and of morae independent variables.

### TAKE-HOME MESSAGE

The effect of voiced obstruents appears in *Final Fantasy*. The combined effect of voiced obstruents and mora length is not necessary to express strength in the spell names.

### RESULTS & DISCUSSION



(Figures 1 and 2 illustrate the effects of voiced obstruents and of morae on the spell levels, respectively. Table 1 shows the average numbers of mora and of voiced obstruents at each spell level.)

- There is a significant correlation between the spell levels and the number of voiced obstruents ( $t = 3.82, p < .05$ ), but not between the spell levels and the number of morae ( $t = 0.05, n.s.$ ).
- This result suggests that the combined effect of voiced obstruents and mora length is not necessary to express strengths in their names, and only the effect of voiced obstruents is shown in FF.
- It is left for future research to explore whether there are computer games whose character or spell names use only mora length to express strength.