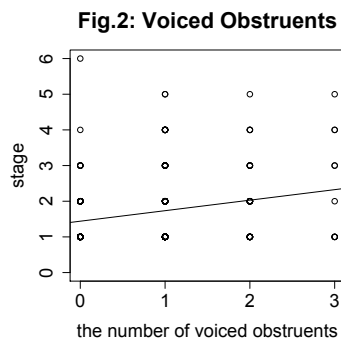
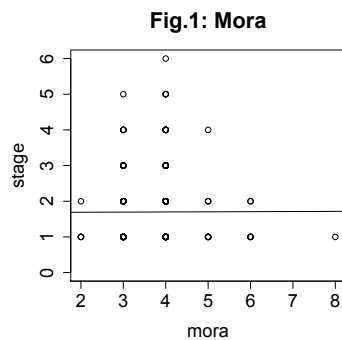


## The sound-symbolic effect of voiced obstruents on the spell names of *Final Fantasy* Takuya Matsuhashi and Gakuji Kumagai (Meikai University)

**Introduction:** Sound symbolism refers to systematic associations between linguistic sounds and particular meanings (e.g., Hinton et al. 1994). Kawahara (2017) offers a sound-symbolic analysis of the spell names used in *Dragon Quest*, a series of computer games first released in 1986 in Japan, in which spells are classified into several levels by spell strength. 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* (2morae) → *me-ra-mi* (3) → *me-ra-zo-o-ma* (5) → *me-ra-ga-i-ya-a* (6)). However, what still remains unclear is 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. To address this issue, the current study analyzes the effects of these factors on the spell names in *Final Fantasy* (aka FF), a series of role-playing games that have been released since 1987 (see [1]).

**Analysis:** The current analysis extracted 258 spell names from the website in [2]. Three of them were excluded from analysis because they contained Chinese characters. The remaining 255 spell names were used for our analysis. There are six spell levels in FF (e.g., *kearu* (Level 1) → *kearua* (Level 2) → *kearura* (Level 3) → *kearuda* (Level 4) → *kearuga* (Level 5) → *furukea* (Level 6)), which were encoded by the level numbers. In order to examine the effects of voiced obstruents and of mora length on the spell levels, the current analysis conducted regression analyses in which the spell levels were dependent variables, and the numbers of voiced obstruents and of morae independent variables.

**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. The results show that 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 mora ( $t = 0.05, n.s.$ ). 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.



**Table 1: Average numbers of mora and voiced obstruents at each spell level**

Spell levels	N	Mora	VdObs
1	148	3.74	0.75
2	62	3.84	0.89
3	25	3.68	1.16
4	15	3.73	1.4
5	4	3.75	1.75
6	1	4	0
ALL	255	-	-

### References

Kawahara, Shigeto. 2017. Sound symbolic patterns in the spell names of *Dragon Quest*: Teaching phonetics with sound symbolism. [in Japanese]. *Journal of the Phonetic Society of Japan* 21(2): 38-42.

[1] <https://jp.finalfantasy.com>

[2] <https://dic.nicovideo.jp/t/a/ファイナルファンタジーの魔法一覧#cure>