**A sound symbolic analysis of the monster names of *Monster Hunter***

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**Introduction**: Sound symbolism is a phenomenon in which linguistic sounds evoke particular meanings or images (e.g., Hinton et al. 1994). In terms of sound symbolism, Kawahara et al. (2018) analyzed the names of more than 700 characters appearing in Pokémon, a series of computer games that have been released since 1996. Some Pokémon characters undergo evolution to be bigger, heavier, and stronger. Kawahara et al. showed that as Pokémon characters become bigger, their names are more likely to contain voiced obstruents and more morae (e.g., ***go-o-su*** (3morae) → ***go-o-su-to*** (4) → ***ge-n-ga-a*** (4)). What remains to be seen, however, is whether either of these effects—the effects of voiced obstruents and of length in morae—is enough singly to express the largeness of monsters, or whether both are necessary. To address this issue, the current study provides a sound-symbolic analysis of the monster names in a computer game named *Monster Hunter* (a.k.a. *Monhan*), which has been released since 2004 (see [1]).

**Analysis**: Each monster has a different size, although there seem to be individual differences in size for each monster. The current study extracted 155 names from the website in [2], but excluded 65 of them from analysis because their sizes have not been publicly released, and analyzed the remaining 90 names. In our analysis, since some monsters are less than one meter in size while others exceed 400 meters (e.g., *meraruu* = 0.39m; *dara amadyura* = 440.397m), their real size (m) was log-transformed (base = *e*). The current analysis performed regression analyses with the log-transformed sizes as dependent variables and with the numbers of voiced obstruents and morae as independent variables.

**Results & Discussion**: Figure 1 shows the relationship between size (log m) and morae, and Figure 2 the relationship between size (log m) and number of voiced obstruents. Tables 1 and 2 indicate the average log-transformed size by morae and by number of voiced obstruents, respectively. Regression analysis showed a significantly positive correlation between size and the number of morae ($t = 5.55$, $p < .001$), while the effect of number of voiced obstruents on size was not significant ($t = 1.98$, *n.s.*). This result suggests that voiced obstruents and morae together do not necessarily serve to express the sizes of monsters. In *Monhan*, the size of the monsters is expressed by making their names longer.

**Fig.1: Mora**

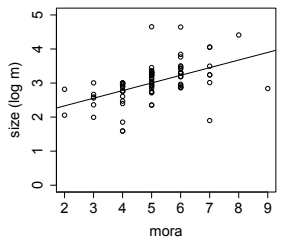


**Fig.2: Voiced Obstruents**

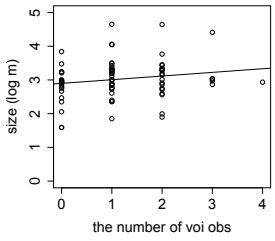


**Table 1: Average log-transformed size by mora**

| Mora | *N* | LogSize |
|---|---|---|
| 2 | 2 | 2.44 |
| 3 | 6 | 2.53 |
| 4 | 17 | 2.60 |
| 5 | 30 | 3.10 |
| 6 | 25 | 3.29 |
| 7 | 8 | 3.27 |
| 8 | 1 | 4.41 |
| 9 | 1 | 2.84 |
| ALL | 90 | - |

**Table 2: Average log-transformed size by voiced obstruents**

| VdObs | *N* | LogSize |
|---|---|---|
| 0 | 25 | 2.82 |
| 1 | 34 | 3.10 |
| 2 | 23 | 3.10 |
| 3 | 5 | 3.26 |
| 4 | 3 | 3.14 |
| ALL | 90 | - |

**References**

Kawahara, Shigeto, Atsushi Noto, and Gakuji Kumagai. 2018. Sound symbolic patterns of Pokémon names. *Phonetica* 75(3): 219-244.

[1] http://www.capcom.co.jp/game/monsterhunter/

[2] https://matome.naver.jp/odai/2141802741963299701