

Appendix

Correlation tables showing the Pearson correlation coefficients for the six cohort entropy and phoneme surprisal variables at each phoneme, for the set of noun and verb target words together.

Phoneme 1:

| | standard surprisal | form-conditional surprisal | usage-conditional surprisal | standard entropy | form-conditional entropy | usage-conditional entropy |
|-----------------------------|--------------------|----------------------------|-----------------------------|------------------|--------------------------|---------------------------|
| standard surprisal | 1 | 0.8654029 | 0.7705351 | -0.4099644 | -0.3875688 | -0.2830657 |
| form-conditional surprisal | 0.8654029 | 1 | 0.9032990 | -0.5000255 | -0.3420780 | -0.1506223 |
| usage-conditional surprisal | 0.7705351 | 0.9032990 | 1 | -0.6348247 | -0.4729810 | -0.2853977 |
| standard entropy | -0.4099644 | -0.5000255 | -0.6348247 | 1 | 0.9303908 | 0.6451922 |
| form-conditional entropy | -0.3875688 | -0.3420780 | -0.4729810 | 0.9303908 | 1 | 0.7137079 |
| usage-conditional entropy | -0.2830657 | -0.1506223 | -0.2853977 | 0.6451922 | 0.7137079 | 1 |

Phoneme 2:

| | standard surprisal | form-conditional surprisal | usage-conditional surprisal | standard entropy | form-conditional entropy | usage-conditional entropy |
|-----------------------------|--------------------|----------------------------|-----------------------------|------------------|--------------------------|---------------------------|
| standard surprisal | 1 | 0.76215389 | 0.48460698 | 0.09324606 | 0.04961806 | 0.16040294 |
| form-conditional surprisal | 0.76215389 | 1 | 0.69588794 | -0.05067962 | 0.04391651 | -0.17637977 |
| usage-conditional surprisal | 0.48460698 | 0.69588794 | 1 | -0.1618773 | -0.1539304 | -0.0676296 |
| standard entropy | 0.09324606 | -0.05067962 | -0.1618773 | 1 | 0.91806651 | 0.76041686 |
| form-conditional entropy | 0.04961806 | 0.04391651 | -0.1539304 | 0.91806651 | 1 | 0.77213028 |
| usage-conditional entropy | -0.16040294 | -0.17637977 | -0.0676296 | 0.76041686 | 0.77213028 | 1 |

Phoneme 3:

| | standard surprisal | form-conditional surprisal | usage-conditional surprisal | standard entropy | form-conditional entropy | usage-conditional entropy |
|-----------------------------|--------------------|----------------------------|-----------------------------|------------------|--------------------------|---------------------------|
| standard surprisal | 1 | 0.869584 | 0.64577049 | -0.03063804 | -0.06821948 | -0.11492408 |
| form-conditional surprisal | 0.869584 | 1 | 0.752940332 | 0.076589190 | 0.068971324 | 0.009315376 |
| usage-conditional surprisal | 0.64577049 | 0.752940332 | 1 | 0.0109308 | -0.0306308 | 0.0525247 |
| standard entropy | -0.03063804 | 0.076589190 | 0.0109308 | 1 | 0.92104449 | 0.85856960 |
| form-conditional entropy | -0.06821948 | 0.068971324 | -0.0306308 | 0.92104449 | 1 | 0.89831754 |
| usage-conditional entropy | -0.11492408 | 0.009315376 | 0.0525247 | 0.85856960 | 0.89831754 | 1 |

Final Phoneme:

| | standard surprisal | form-conditional surprisal | usage-conditional surprisal | standard entropy | form-conditional entropy | usage-conditional entropy |
|-----------------------------|--------------------|----------------------------|-----------------------------|------------------|--------------------------|---------------------------|
| standard surprisal | 1 | 0.910492 | 0.7485916 | 0.2126326 | 0.1570043 | 0.1414156 |
| form-conditional surprisal | 0.910492 | 1 | 0.8211059 | 0.2277835 | 0.1950650 | 0.1503207 |
| usage-conditional surprisal | 0.7485916 | 0.8211059 | 1 | 0.15657817 | 0.06677721 | 0.11999771 |
| standard entropy | 0.2126326 | 0.2277835 | 0.15657817 | 1 | 0.8310044 | 0.7577957 |
| form-conditional entropy | 0.1570043 | 0.1950650 | 0.06677721 | 0.8310044 | 1 | 0.89971486 |
| usage-conditional entropy | 0.1414156 | 0.1503207 | 0.11999771 | 0.7577957 | 0.89971486 | 1 |