Meaning category	Saturation: B_S	Propensity $\tilde{p}_S$
STAR	1234.2	0.025
SUN	25.0	0.126
YEAR	1234.2	0.021
SKY	1234.2	0.080
SEA/OCEAN	1234.2	0.026
STONE/ROCK	1234.2	0.041
MOUNTAIN	1085.9	0.049
DAY/DAYTIME	195.7	0.087
SAND	1234.2	0.026
ASH(ES)	13.8	0.068
SALT	1234.2	0.007
FIRE	1234.2	0.065
SMOKE	1234.2	0.031
NIGHT	89.3	0.034
DUST	246.8	0.065
RIVER	336.8	0.048
WATER	1234.2	0.073
LAKE	1234.2	0.047
MOON	1.2	0.997
EARTH/SOIL	1234.2	0.116
CLOUD(S)	53.4	0.033
WIND	1234.2	0.051

TABLE III. A table of fitted values of parameters B_S and $\tilde{p}_S$ for the saturation model of Eq. (9) . The saturation value B_S is an asymtotic number of meanings associated with the entry S, and the propensity $\tilde{p}_S$ is a rate at which the number of polysemies increases with n^L at low n^L_S.

mean-square error

$$E \equiv \sum_L \frac{1}{\langle n^L \rangle} \sum_S \left(\langle n^L_S \rangle - \frac{A_S \langle n^L \rangle}{B_S + \langle n^L \rangle} \right)^2 . \tag{10}$$

The function (10) assigns equal penalty to squared error within each language bin $\sim \langle n^L \rangle$, proportional to the variance expected from Poisson sampling. The fit values obtained for A_S and B_S do not depend sensitively on the size of bins except for the Swadesh entry MOON in the case where all 81 single-language bins are used. MOON has so few polysemies, but the MOON/month polysemy is so likely to be found, that the language Itelman, with only one link, has this polysemy. This point leads to instabilities in fitting B_{MOON} in single-language bins. For bins of size 3–9 the instability is removed. Representative fit parameters across this range are shown in Table III. Examples of the saturation model for two words, plotted against the 9-language binned degree data in Fig. 6,