

**Fig. 1.** Form of the model for predicting fMRI activation for arbitrary noun stimuli. fMRI activation is predicted in a two-step process. The first step encodes the meaning of the input stimulus word in terms of intermediate semantic features whose values are extracted from a large corpus of text exhibiting typical word use. The second step predicts the fMRI image as a linear combination of the fMRI signatures associated with each of these intermediate semantic features.