

## Default meanings in compound interpretation

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There is agreement in the morphological as well as the semantic literature that novel English noun-noun compounds can receive many different interpretations when considered in isolation (Bauer et al. 2013:464, Jackendoff 2016:26). It is unclear, however, whether and in what sense any of these interpretations can be considered to be a default meaning. In this study, we approach this issue by drawing on two ideas from the semantic literature. Jaszczolt (2016:105) argues that default meanings are “effortless, automatic interpretations” contrasting with “effortful, inferential ones”. Levinson (2000:147), on the other hand, discusses compound interpretations as examples of generalised conversational implicatures, which he holds to be default inferences “captur[ing] our intuitions about a preferred or normal interpretation” (Levinson 2000:11). We provide empirical evidence that these two notions of defaultness are interconnected, by demonstrating that, for novel compounds, ease of processing is correlated with the extent to which speakers’ interpretations converge. Furthermore, it is possible to place such compounds on a continuum from those that are relatively easy to interpret and receive relatively few interpretations, to those that are more difficult to interpret and receive more diverse interpretations.

For our sample of novel compounds, we selected 22 noun-noun compounds that occur only once in ukWaC, a 2 billion word corpus of British English; we therefore knew that the combinations could occur in natural language but that our participants were unlikely to have encountered them. Fifteen native speakers of British English provided paraphrases of each compound presented in isolation, and rated the difficulty of doing so on a 10-point Likert scale. Across participants, the compounds were presented in five different randomised lists. To operationalise Jaszczolt’s (2016) notion of defaultness as ease-of-processing, we built a mixed effects regression model of the difficulty ratings; this included fixed effects for the random list seen by the participant and the presentation order within the list, plus random intercepts for participants and items (i.e. the compounds). We did this because the raw Likert scale ratings reflect not only the relative difficulty of the different compounds, but also differences in how individual participants use the Likert scale and effects related to order of presentation, such as habituation, boredom and fatigue. In our model, the random intercepts for items represent the adjustment in the baseline of ratings for a given compound that is solely due to peculiarities of that compound to the exclusion of other factors. In other words, they represent the tendency of a given compound to lead to default interpretations in the sense of Jaszczolt (2016). To operationalise Levinson’s (2000) notion of defaultness, we exploit his reference to a ‘preferred or normal interpretation’. The paraphrases were coded and grouped according to whether or not they represented the same interpretation. This coding was undertaken independently by two trained coders, who exhibited a high level of agreement ( $r = 0.76$ ,  $p < 0.001$ ). Differences between the two coders were adjudicated through the judgements of a third coder, and any where the differences could not be resolved were discarded from the analysis. We calculated a measure for the spread of the interpretations (number of distinct interpretations/number of paraphrases analysed) and a measure for the degree of convergence in interpretations (percentage of participants who gave the same interpretation as at least one other participant).

The results are summarised in Table 1. The random intercepts fall on a continuum, with e.g. *memory sheet* and *health song* tending to be judged as easy and e.g. *acid ring* and *cheat engine* tending to be judged as difficult. That is, the novel compounds differ in their tendency to produce default interpretations in the sense of Jaszczolt (2016). As for defaultness in the Levinson (2000) sense, that is, in terms of speaker agreement, we find little evidence that compounds have a single normal or preferred interpretation: only in four cases do more than 50 percent of the paraphrases converge on a single meaning. However, all but one compound in our sample have two, three or four interpretations on which at least two speakers converged. Our measure of spread ranges from 0.64 for e.g. *engine egg*, where 14 paraphrases fall into 9 different interpretations, to 0.21 for

*ivory wall*, where 14 paraphrases fall into only three interpretations. Our measure of convergence ranges from 50% for e.g. *cheat engine*, where only four people gave a non-unique interpretation, to 93 % for *kangaroo song*, where only one person gave a unique interpretation. Strikingly, both measures correlate with the random intercepts of the compounds, i.e. with ease of interpretation. Spread shows a large positive correlation with the random intercepts ( $r = 0.81$ ,  $p < 0.001$ ): the more difficult is it to interpret a compound, the more the paraphrases are spread across different interpretations. In contrast, the participant convergence measure shows a large negative correlation with the random intercepts ( $r = -0.72$ ,  $p < 0.001$ ): the less difficult it is to interpret a compound, the more participants tend to converge in their interpretations.

**Table 1**

Compound	Random intercept	Spread	Convergence
ivory wall	-0.48	0.21	92.86
memory sheet	-0.31	0.4	80
health song	-0.3	0.4	73.33
monkey ring	-0.27	0.43	71.43
kangaroo song	-0.26	0.33	93.33
snake tank	-0.25	0.38	76.92
kangaroo egg	-0.19	0.4	73.33
china tank	-0.14	0.55	81.82
rat service	-0.13	0.4	86.67
diamond pool	-0.03	0.45	90.91
acid floor	-0.02	0.53	66.67
flea reaction	-0.02	0.36	78.57
agony service	0	0.38	84.62
rush sheet	0.07	0.54	69.23
cloud floor	0.09	0.45	72.73
climate engine	0.21	0.4	80
engine wall	0.21	0.64	57.14
cloud pool	0.26	0.62	69.23
bank reaction	0.29	0.6	70
engine egg	0.37	0.64	50
acid ring	0.39	0.57	64.29
cheat engine	0.53	0.62	50

Our findings advance our understanding of novel compound interpretation in a number of important ways. First of all, we have shown that in order to meaningfully talk about default meanings we need to distinguish between defaultness in terms of ease-of-processing and defaultness in terms of preferred interpretations. Secondly, we have shown that compounds fall on a continuum in terms of ease-of-processing. Thirdly, while our data does not support the notion of a single preferred interpretation for a novel compound, we have shown that there is variation in the extent to which speakers converge in their interpretations. Finally, we have shown that there is a correlation between ease of processing and convergence in interpretations, so that the two ideas of defaultness in the literature can fruitfully be combined.

## References

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