

## The perception of focus prosody across contexts

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Speakers predictably use prosodic focus to highlight contrastive information within a given context [1], and listeners' judgements of focus prosody increase with their knowledge of the discourse context [2]. Focus prosody is context-dependent, however the relationship between context and the perception of focus prosody remains unclear. Three pilot experiments investigate the relationship between context and prosody in the perception of information structure to answer the following **research questions**: Do the judgements of focus prosody differ based on context (Exp 1)? Do we perceive a mismatch between focus prosody and context (Exp 2)? How are prosodic and contextual cues weighed (Exp 3)? Overall, we find that context is crucial in the perception of information structure, while prosody is one of the less important cues.

In three pilot experiments, native English speakers completed a forced choice task, in which short stories were paired with pictures and were manipulated so that either an adjective or a noun is contrastive (*adjective* and *noun context / picture*). Afterwards, a character said an utterance that prosodically emphasizes an adjective (*adjective focus*) or a noun (*noun focus*). Filler items were noun minimal pairs (e.g., cute bug – cute pug).

### A) *Adjective context*

Sally and John are at a farm and they're looking at some cows. Sally and John really want to see a small one. Sally sees one and says something to John.

### B) *Noun context*

Sally and John are at a farm and they're looking at small animals. Sally and John really want to see a cow. Sally sees one and says something to John.

*Adjective focus*: "Look, there's a SMALL cow over there!"

*Noun focus*: "Look, there's a small COW over there!"

*Adjective picture*



*Noun picture*



**Experiment 1:** Participants (N=7) are presented with one context and two utterances, and then select the best of two utterances. Participants were highly accurate in selecting the correct prosody given a biasing context: *Adjective utterance* is selected 88% of the time for the *adjective context*, while *noun utterance* is selected 98% for the *noun context*. (Filler accuracy 98%.) Since we rarely hear two alternative utterances/prosodies to select one in actual communication, we decided to also test participants' accuracy in a different paradigm.

**Experiment 2:** Participants (N=17) are presented with one context and one utterance, and then indicate if the two match. While participants were very accurate in detecting a mismatch in the filler items (84% correct), they always judged the utterance as matching the context for the test items, ignoring the prosody of the utterance (5% correct). These results were somewhat surprising, so we decided to conduct a third experiment.

**Experiment 3:** Participants (N=17) are presented with one context and one utterance that either matches the context (*congruent condition*) or not (*incongruent condition*). Then, they select which of two pictures on the screen (*adjective vs noun pictures*) is correct. Participants were variable in their answers for the incongruent fillers, choosing the picture that matched the context only 71% of the time (cf. 99% in congruent). In fact, 6 of the participants only chose the context picture 0-50%. In the incongruent test items, participants chose the context picture 88% of the time, with the lowest score being 60% and matching the results of the congruent items (87%).

We are currently re-running these experiments with more participants so that we can confirm these patterns with statistical analyses.

## References

1. Turnbull, R., Burdin, R. S., Clopper, C. G., & Tonhauser, J. (2015). Contextual predictability and the prosodic realisation of Focus: A cross-linguistic comparison. *Language, Cognition and Neuroscience*, 30(9), 1061–1076. <https://doi.org/10.1080/23273798.2015.1071856>
2. Turnbull, R., Royer, A. J., Ito, K., & Speer, S. R. (2017). Prominence perception is dependent on phonology, semantics, and awareness of discourse. *Language, Cognition and Neuroscience*, 32(8), 1017–1033. <https://doi.org/10.1080/23273798.2017.1279341>