



Focus Attraction, Accents, and Attachment

*Theresa Vetter, *Victoria Nash, & *Alora Chesney; Dr. Katy Carlson & Dr. David Potter, Mentors, Department of English, Caudill College of Arts, Humanities, and Social Sciences



Introduction

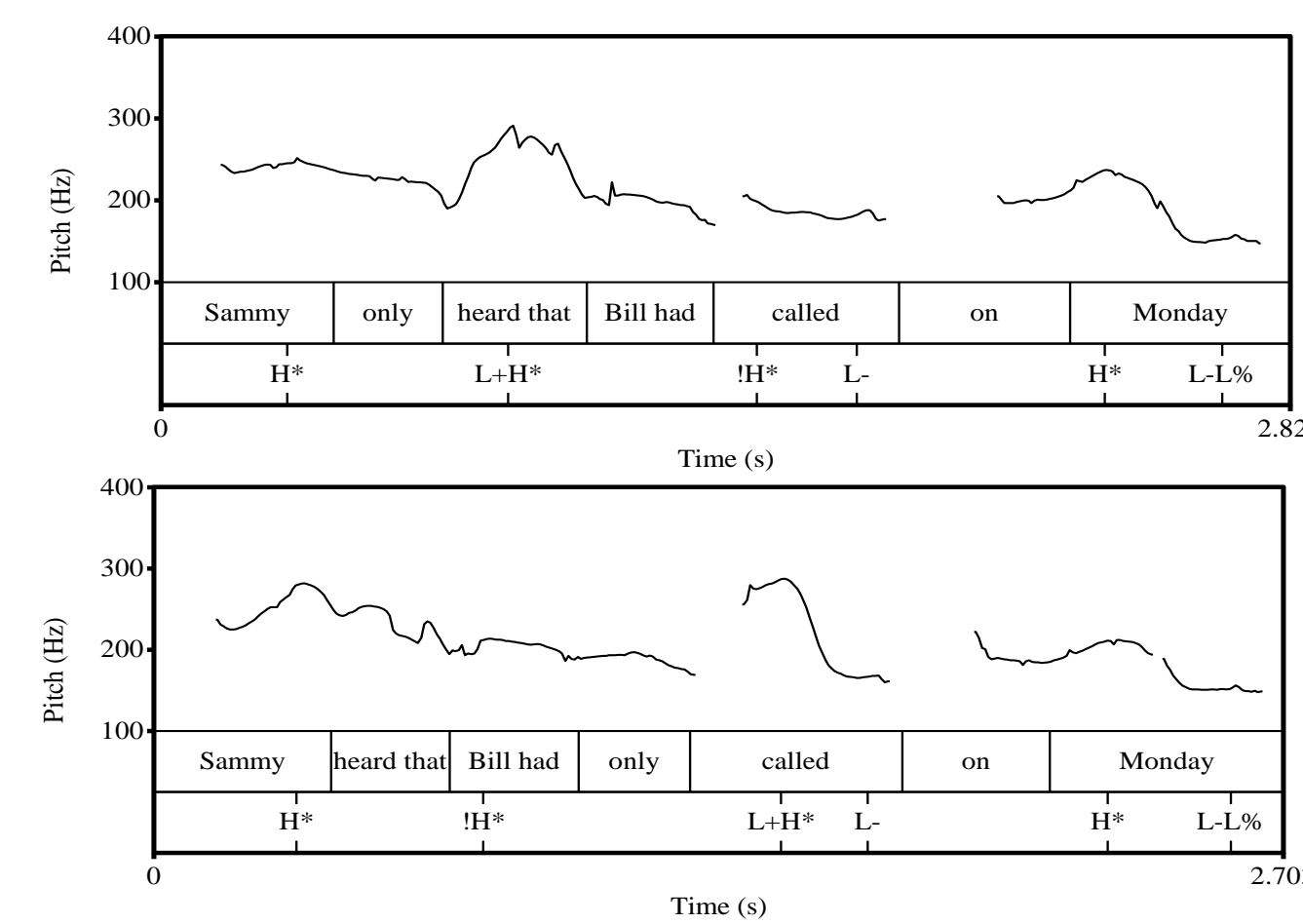
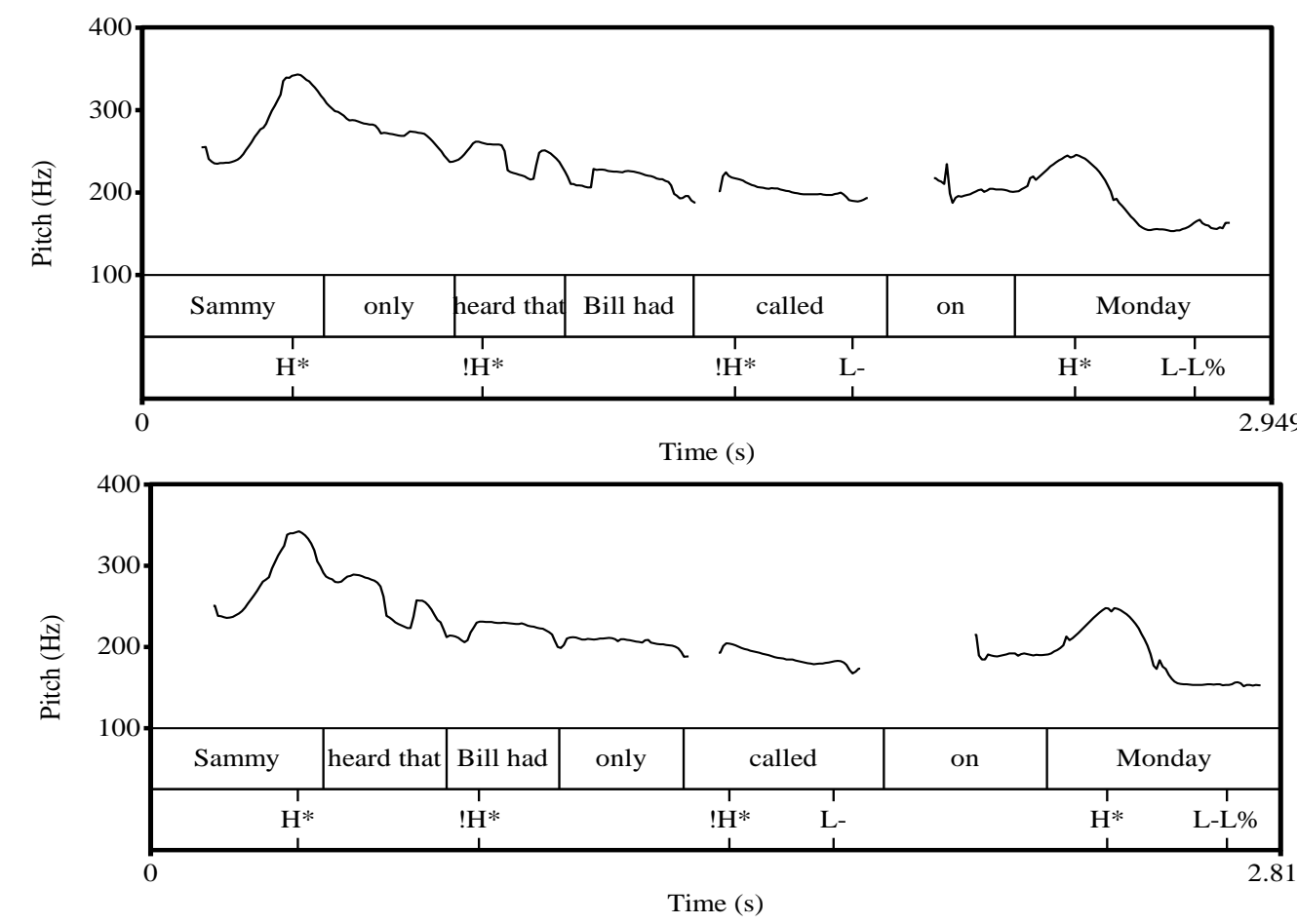
- Consider an ambiguous sentence like (1):

 - Sammy heard that Bill had called on Monday.
 - Sammy **heard** something **on Monday**. [high/Verb1 attachment]
 - Bill **called on Monday**. [low/Verb2 attachment]

 - On the original version of the Focus Attraction Hypothesis, accents on the heads of attachment sites draw the attachment of a modifying phrase due to their focus status: focused elements are important to the main assertion of a sentence, and processors prefer to associate ambiguous material with this important information rather than other parts of a sentence (Carlson & Tyler 2018).
 - In two experiments, we tested the Focus Attraction Hypothesis, originally proposed just for accent effects, with accents plus a focus particle.
 - Focus can be indicated by an accent or a focus particle like *only*.
 - Specifically, when the focus particle *only* is placed before a verb (“Sammy only heard” or “Bill only called”), it marks the verb or another constituent below the verb as important.
 - We predicted that this would draw the attachment of the adverbial phrase “on Monday.”

Experiment 1

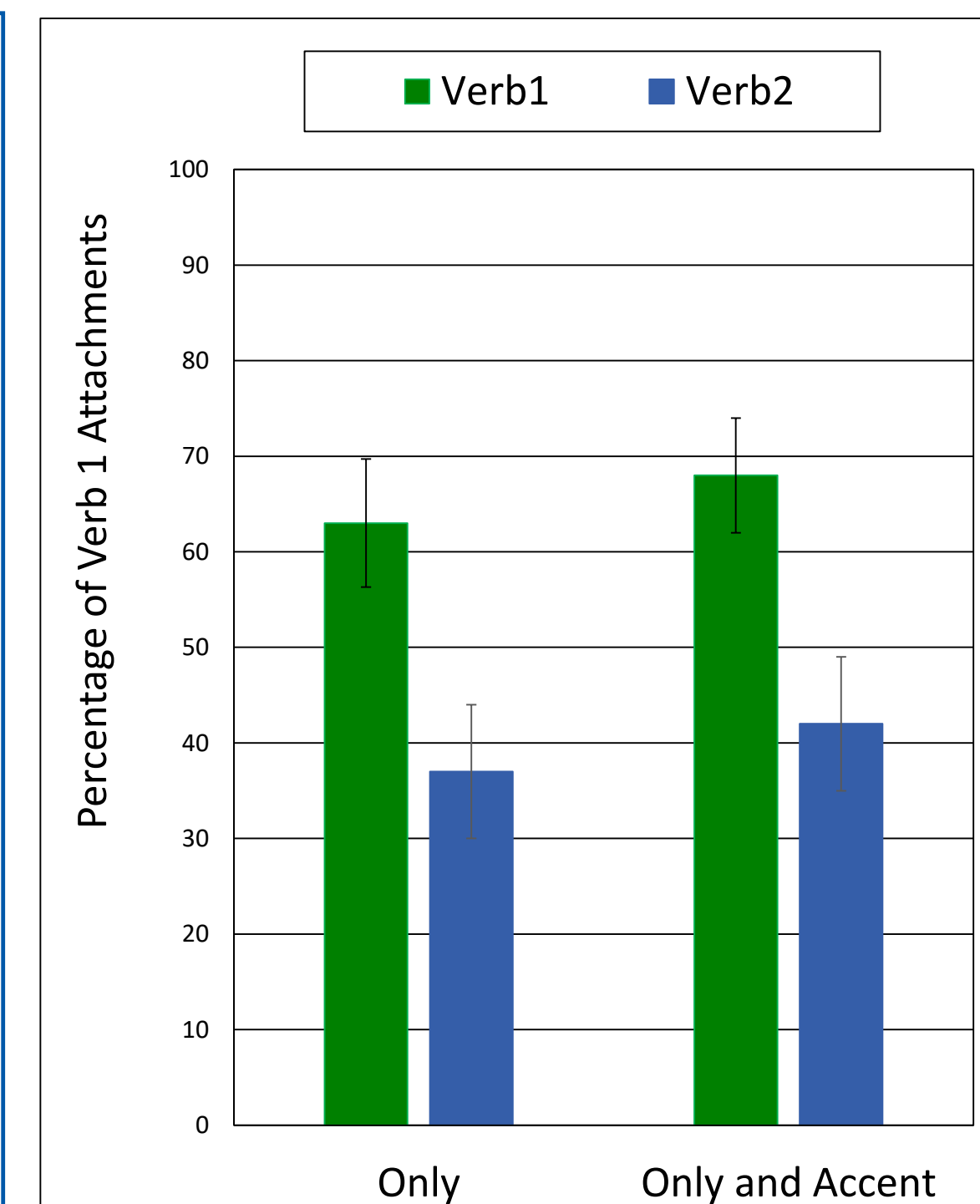
- What if attachment sites are focused using a focus particle (*only*) in addition to/ instead of accents? Do particles still draw attachment?
 - Ambiguous adjunct sentences as in (2) were produced with *only* alone, or *only* and contrastive accents, on Verb1 or Verb2 in an auditory experiment.
 - An ip boundary preceded the prepositional phrase, *Monday* also bore a H* accent.
- Sammy **only** heard that Bill had called ip on Monday.
 - Sammy **only HEARD** that Bill had called ip on Monday.
 - Sammy heard that Bill had **only** called ip on Monday.
 - Sammy heard that Bill had **only CALLED** ip on Monday.



- Participants were asked “What happened?” and given choices as in (3):
- Sammy heard something on Monday. [high/Verb1 attachment]
 - Bill called on Monday. [low/Verb2 attachment]
- 52 participants on AMT, 20 items, among 79 filler items.
 - In previous studies, these sentences got 10%-30% high attachment responses, higher with a pre-PP boundary and higher with V1 accent.

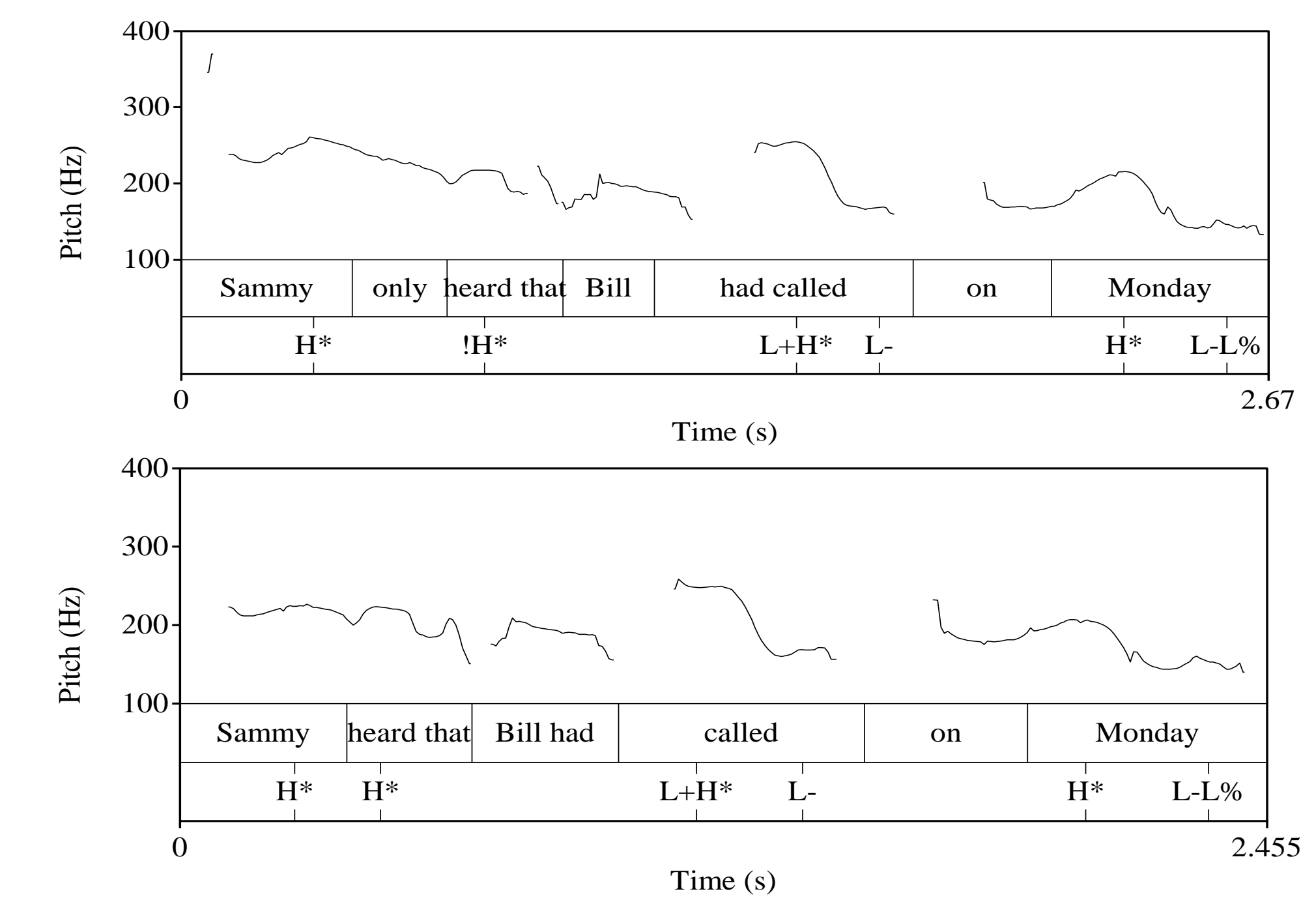
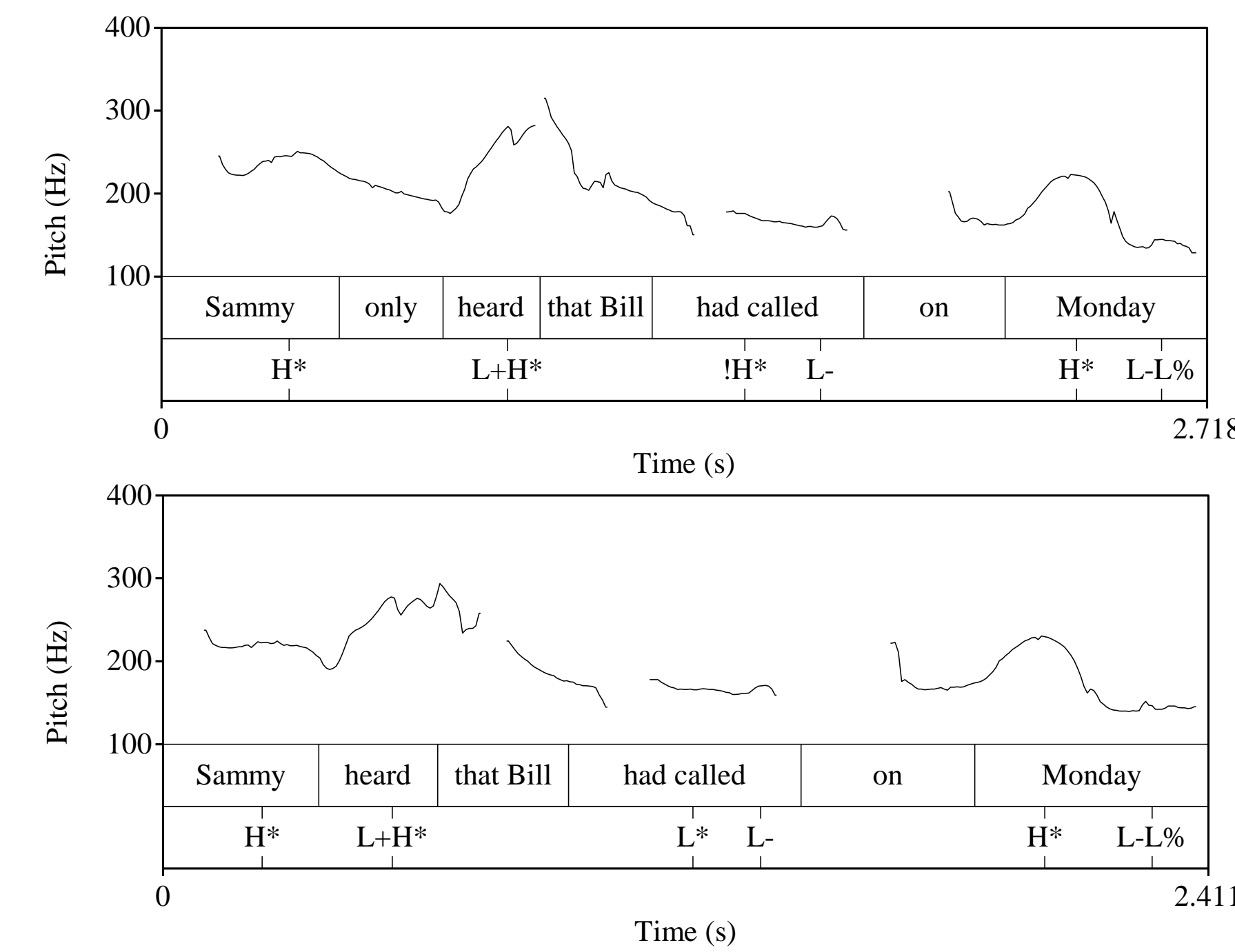
Results

- a. *only* on V1 and no accent: 63%; b. with accent, 68%; c. *only* on V2 and no accent: 37%; d. with accent, 42%
- Participants chose Verb1 *heard* as the attachment site more often when *only* modified it than when it modified Verb2 *called*.
- Significant effect of focus particle position on attachment: *only* before Verb1 increased high attachments ($\chi^2=22.69$, $p<.001$).
- Accents on either verb increased high attachments marginally ($\chi^2=3.41$, $p<.065$); no significant interaction.
- Effects of *only* in the same direction but larger than previous effects of accents on attachment (5-10% in Carlson & Tyler 2018).
- Only* before V1 seems to associate with V1 regardless of accent. Less clear what *only* before V2 is doing, given relatively high rate of V1 attachments.



Experiment 2

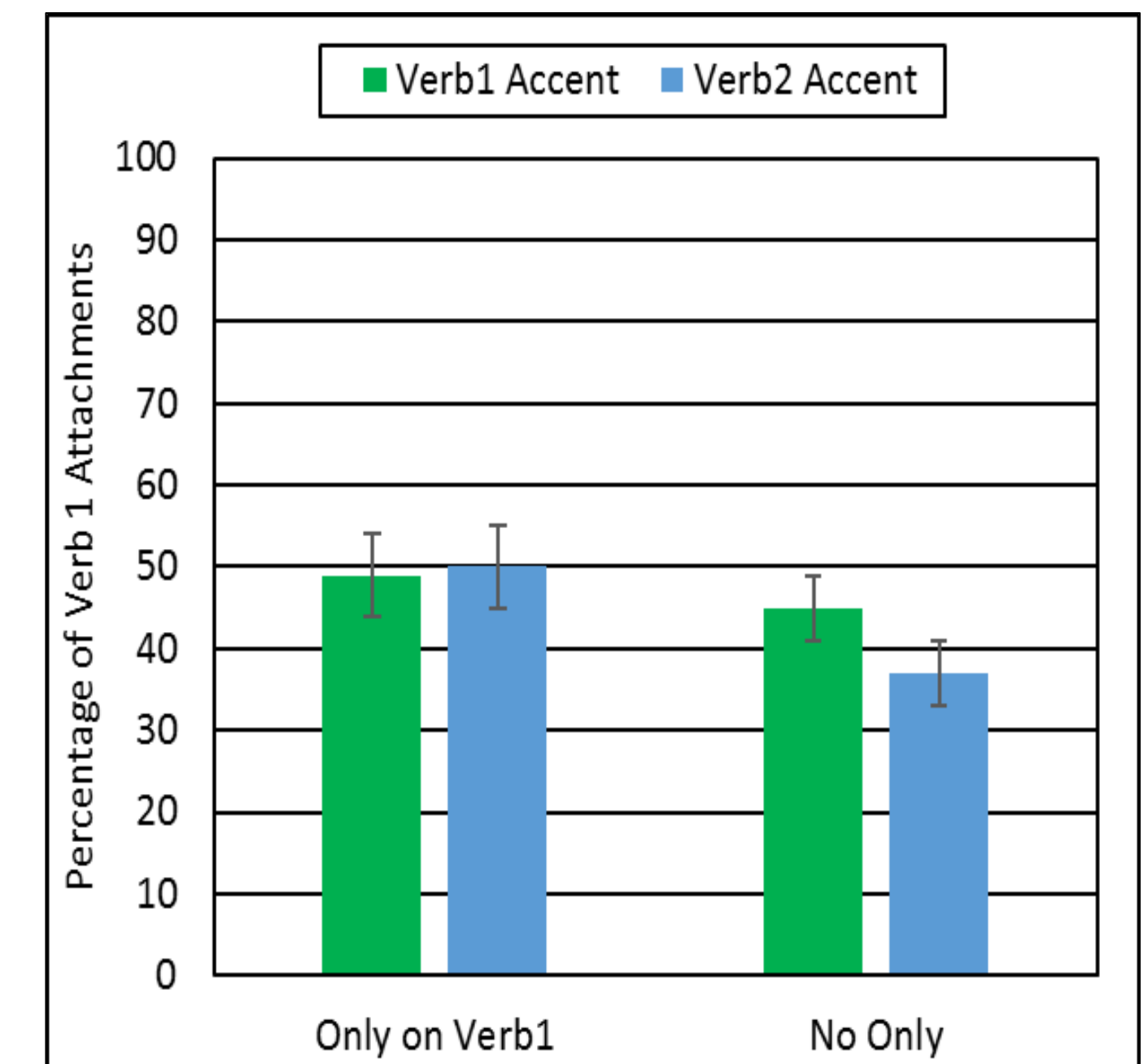
- In this experiment, we used ambiguous sentences (4) produced with *only* before Verb1 or no *only*, plus contrastive accents on Verb1 or Verb2.
 - An ip boundary preceded the prepositional phrase. *Monday* also bore a H* accent.
- Sammy **only HEARD** that Bill had called # on Monday.
 - Sammy **only** heard that Bill had **CALLED** # on Monday.
 - Sammy **HEARD** that Bill had called # on Monday.
 - Sammy heard that Bill had **CALLED** # on Monday.



- Participants were asked “What happened?” and given choices as in (5):
- Sammy heard something on Monday. [high/Verb1 attachment]
 - Bill called on Monday. [low/Verb2 attachment]
- 53 participants on AMT, 20 items, among 84 filler items.

Results

- a. with *only*, V1 accent 49%; b. V2 accent 50%
- c. without *only*, V1 accent 45%; d. V2 accent 37%
- Interaction between *only* and accent position ($\chi^2=3.77$, $p=0.052$): accent position effect was significant without *only* ($\chi^2=4.44$, $p=0.035$), but not with it ($p>0.96$).
- When *only* appears in the higher clause, it draws more high attachment than when it is absent. ($\chi^2=10.86$, $p<0.001$).
- The effect of accent position on attachment, visible when alone, is erased by *only* before Verb1: When *only* was before Verb1 and a pitch accent was placed on Verb2, the ambiguous clause “on Monday” was still associated with Verb1.



Conclusions

- Experiment 1 shows that the focus particle *only* also draws the attachment of the adverbial, in the same way as accents.
- Accents in addition to *only* do not significantly change the interpretation.
- Experiment 2 finds that the effect of pitch accent disappears when *only* is present.
- The presence of *only* in the higher clause has the effect of ensuring that the alternatives introduced by a pitch accent, whether located in the embedded or higher clause, are interpreted high.
- Overall, then, focused constituents do not directly draw attachment, but rather attachment is drawn to the position where these focused constituents are interpreted.
- Focus particles like *only* unambiguously mark the focus scope position, and thus their effects appear to outweigh those of lower accents.
- Therefore, the Focus Attraction Hypothesis needs to be updated to state that attachment is drawn to the focus scope position, which is unambiguously marked by *only* but not pitch accents.

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References

Carlson, K., & Tyler, J. (2018). Accents, not just prosodic boundaries, influence syntactic attachment. *Language and Speech*, 61, 246-276.