Focus and Givenness in Turkish Sign Language (TİD)

Interlocutors shape information packaging to indicate the locus of message via multiple tools across languages and modalities. Focused units carry the locus of the message and flow of exchange while given units maintain the unity of the exchange. In spoken languages, the focus has a boosting effect as higher in pitch, intensity, or longer in duration or a combination of these strategies. That is, the focused variety is more prominent than the non-focused variety (Büring 2009; Genzel, Ishihara, and Surányi 2014). Givenness has a lowering effect in that the prefocal given unit is lowered in prominence, and postfocal given items are deaccented (Féry & Samek-Lodovici 2006; Féry & Kügler 2008).

Sign languages have been reported to use simultaneous strategies in information structure, such as nonmanuals (body and facial gestures), syntactic marking, or modulations in manual signs. A few studies on modulations in manual signs discussed that signers manipulate the size, speed, location, or height of the manual signs in Russian Sign Language (RSL), Sign Language of Netherlands (NGT) (Kimmelmann, 2014), French Sign Language (LSF), and American Sign Language (ASL) (Schlenker et al., 2016) to signal focushood. However, there is no study investigating the effects of prefocal and postfocal givenness on the manual signs' prosody.

This study investigates how focushood and prefocal, and postfocal givenness shape the manual prosody of Turkish Sign Language (TİD). In the study, twenty participants (17 female, 10 Deaf of Deaf (DoD), 10 Deaf of Hearing (DoH)) answered questions eliciting broad focus (BF, 1), presentational focus (PF, 2), and contrastive focus (CF, 3) in the syntactic roles of SOV. A Deaf research assistant annotated target trials in ELAN, and duration measurements were extracted from these annotations. The authors also annotated nonmanuals in the target trials.

(1) Q: WHAT HAPPEN
    'What happens?'
    A: [ECE BANANA EAT]$_{BF}$
    'Ece is eating a banana.'

(2) Q: WHO BANANA EAT
    'Who eats a banana?'
    A: [ECE]$_{PF}$ BANANA EAT
    'Ece is eating a banana.'

(3) Q: ECE EAT WHAT? BANANA, STRAWBERRY?
    'What does Ece eat, banana, strawberry?'
    A: ECE [BANANA]$_{CF}$ EAT
    'Ece is eating a banana.'

All data points (2520) were analyzed with a linear mixed effects model in R where participant and item were treated as random effects. We found that a focused manual sign (M=0.540 ms., SD=0.05) is significantly longer in duration (b=0.075, SE=0.01, t=8.44, p<.001) than a non-focused sign (M=0.465, SD=0.05). Pairwise comparisons of estimated marginal means revealed that focused constituents in the CF condition are longer than their BF counterparts (b=0.052, SE=0.016, t=3.201, p=0.02) and PF counterparts (b=0.043, SE=0.014, t=2.953, p=0.03). However, focused constituents in PF do not differ from their BF counterparts. In addition, we modeled the data from each syntactic category separately. This analysis has revealed that focused subjects (b=0.12, SE=0.027, t=4.422, p=0.001) and objects (b=0.056, SE=0.019, t=2.985, p=0.035) in CF condition are longer than their BF counterparts, while we have not found a similar effect for the verbs.

As for prefocal and postfocal domains, participants signed PF subjects shorter than BF subjects when the object was focused (b=-0.074, SE=0.026, t=-2.882, p=0.013) or when the verb was focused (b=-0.097, SE=0.027, t=-3.577, p=.002) (Figure 1). Participants also signed CF verbs significantly shorter than BF verbs when the object was focused (b=-0.083, SE=0.027, t=-3.021, p=0.008) and when the subject was focused (b=-0.079, SE=0.026, t=-2.998, p=0.009), while the difference between PF and BF verbs when the subject was focused was only marginally significant (b=-0.061, SE=0.026, t=-2.313, p=0.057). Although both DoD

and DoH participants used the same strategies significantly, DoH participants overall had longer signing duration (M=0.579, SD=0.310) than DoD (M=0.408, SD=0.274) signers (b=0.172, SE=0.0822, t=2.091, p=0.04). There was no significant effect of focushood on the production of nonmanuals in the data.
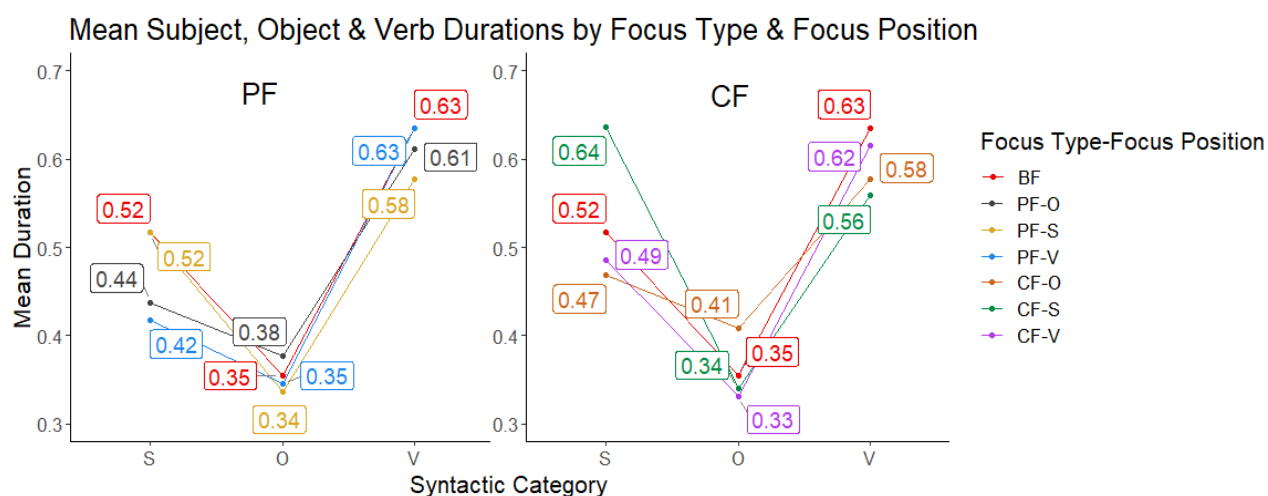

Figure 1. Pre-focal and post-focal compression effects across focus positions and focus types

Taking the BF condition as the baseline condition, we found that the PF condition is on par with the BF condition, but the CF condition has higher values. In line with the focus marking implication (Zimmermann 2011), we suggest that this is due to the fact that the PF condition is the unmarked focus condition in the sense that if a strategy is used to mark the PF focus, it is also used for the marked CF focus condition but not vice versa. Similar to spoken languages, the strategy used to mark focus as a boosting effect, duration in TİD is shortened to mark given constituents. However, the given object in the prefocal or postfocal domains is never compressed in duration. We suggest that this is because the object has the lowest values in duration, as illustrated in Figure 1 above, and this threshold level is preserved. Finally, we argue that this study's prefocal and postfocal compressions cannot be analyzed as a pure givenness marking strategy. The compression effect is not always observed in all the comparisons, although the target signs are always given. As the first study investigating givenness effect on manual prosody, this study shows that both speakers and signers apply similar strategies in distinct modalities.

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