

**P3**

## **Facial Expressions in Sign Language Grammar: What Does the 'Flat Chin' Mean?**

**Lauren NIKOLAI and Ronnie B. WILBUR**  
(Purdue University, USA)

### **ABSTRACT**

Despite decades of research, a great deal of the structure of American Sign Language (ASL), and indeed of many sign languages, remains to be investigated. One such area that remains to be fully investigated are Non-Manual Markers (NMM), which are incredibly important in sign language, but still poorly understood. This study looks at the linguistic function in ASL of the NMM Action Unit 17 (AU-17) (Ekman & Friesen 1978), which looks like a pout and is produced using the mentalis muscle in the chin. Previous research suggests AU-17 correlates with expressing disgust cross-culturally (Ekman et al. 1969) and, within ASL, negation (Benitez-Quiroz, Wilbur, & Martinez, 2016). Using evidence from *The Face of ASL* video series, we hypothesize AU-17 has three functions: indicating speaker evaluation, discussing detail, and signaling specific words. When indicating speaker evaluation, AU-17 occurs over a clause, such as in FEEL IDENTICAL FINISH (“When you're finished and you feel you've copied (the example) identically...”), where the signer expresses uncertainty over how satisfactorily she has signed a practice sentence. We also see AU-17 over a classifier or word which specifies type of detail. For example, in NOW VIDEOTAPE SPLIT FEW CL:1+5 “many parts” CUT (“Now, this videotape is cut into a few parts.”) AU-17 occurs over the classifier describing how the video is split apart into smaller pieces. Finally, AU-17 consistently accompanies signs such as MISS (as in “I’ll miss you”), suggesting lexicalization for affective function. Given this data, we will argue that in ASL, AU-17 has three functions besides negation. Ultimately, our analysis of AUs will also feed the development of automatic sign language facial translation algorithms as well as improving the accuracy of ASL second language instruction and ASL first language interpretation.

### **REFERENCES**

- Benitez-Quiroz, C. F., R. B. Wilbur, & A. M. Martinez. 2016. The Not Face: A Grammaticalization of Facial Expressions of Emotion. *Cognition* 150: 77-84.
- Ekman, P. & W. V. Friesen. 1978. *Facial Action Coding System: A Technique for the Measurement of Facial Movement*. Palo Alto, California: Consulting Psychologists Press.
- Ekman, P., E. R. Sorenson & W. V. Friesen. 1969. Pan-Cultural Elements in Facial Displays of Emotion. *Science* 164(3875): 86-88.