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## Jespersen's Cycle and scope of negation in American Sign Language

**Introduction.** Under contemporary logicians' conception, negation is generally thought to be purely external, and none of the current theories of negation straightforwardly accommodates the distinction between external (i.e. sentential) and internal (constituent) negation (Gazdar 1979, Levinson 1983, Horn 1989, a.o.). In American Sign Language (ASL), it is known that facial expressions and head movements serve grammatical functions, with the negative headshake capable of signifying external negation in combination with an optional manual negative marker (negative adverb) (Zeshan 2004, Veinberg & Wilbur 1990). Yet previous research on the syntax and semantics of negation in ASL has overlooked the possibility of internal negation as separate from external negation. Fischer (2006) mentions the possibility that internal negation exists in ASL in her discussion of negative incorporation, but an in-depth analysis has not been undertaken for internal negation the way that it has for external negation.

**Proposal.** Recent research (Pfau 2015) suggests that, just as negation in French has evolved, this pattern of negation in ASL has arisen as the result of Jespersen's Cycle where the negative headshake (<u>hs</u>) replaces the original head of NegP, manual negation (NEG<sub>adv</sub>). The goal of the present paper, however, is the following: First, our data confirm that the headshake has strengthened, i.e. reanalyzed and grammaticalized as the main marker of external negation indeed (while the accompanying manual negation has become only optional) (Figure 1). Second, more importantly, we show that the job of the manual negation marker was not merely weakened or nullified in this process, contrary to the general assumption in the literature. Instead, the manual negation, standing alone, has become a marker of *internal negation* (Figure 2).



Figure 1: Jespersen's Cycle in sign languages (Pfau 2015)



(i) New dichotomy: external vs. internal negation in ASL. We show that ASL exhibits two subtle yet distinct patterns of negation: External negation in (1) requires the presence of a non-manual marker in the form of a negative headshake, indicated in the gloss by a line marking the scope and duration of the headshake (<u>neg</u>). Internal negation with manual negation (NOT) in (2) requires no such marker. This means the manual negation undergoes a vehicle change w.r.t. both syntactic category (from 'Neg<sup>0</sup>-potential in NegP' to 'negative Adv (without projecting NegP)') and semantic type (from propositional operator of <t,t> to predicate modifier of <<e,t><e.t>>).

neg	
(1) MOTHER FUTURE (NOT) BUY HOUSE	(External Negation)
[ASL]	
'Mother will not buy a house'	
(2) JOHN SORRY NOT READ BOOK	(Internal Negation)
'John regrets not having read the book'	

noa

(ii) Evidence: scope diagnostics. Though it is easy to confuse the precise scope of negation, the results of the following tests collectively support our proposal that the negative headshake (\_\_neg) and the manual negation (NOT) have clearly divided the labor as external and internal negation, respectively. (The co-occurrence of headshake and manual negation shows negative concord.)

I. Tag questions: internal negation exclusively allows for negative tag-questions neg. \_y/n (3) TIME LATE, TRUE BUSINESS (External Negation) 'It's not late, is it?' \_y/n (4) \*JOHN SORRY NOT READ BOOK TRUE BUSINESS (Internal Negation) 'John regrets not having read the book, does he?' II. Again-test: external negation gives rise to both restitutive and repetitive readings neg. (5) a. SALLY (NOT) PAINT DOOR BLUE AGAIN (External Negation) b. SALLY **NOT** PAINT DOOR BLUE AGAIN (Internal Negation) 'Sally didn't paint the door blue, but she had painted the door blue before.' (a/b) 'Sally didn't paint the door blue, but it had been blue previously.'(a) *III*. Deliberately-*test: external negation gives rise to ambiguity* neg. (6) JOHN (NOT) SEE MARY ON PURPOSE (External Negation) 'John avoided (did not see) Mary on purpose.' or 'John saw Mary, but not on purpose.' (7) JOHN NOT SEE MARY ON-PURPOSE (Internal Negation) 'John avoided (did not see) Mary on purpose.' *IV. Metalinguistic Negation: not available to internal negation* \_y/n \_\_\_\_**neg**. (8) IX:1P HAPPY (NOT) IX:1P THRILLED (External Negation) y/n (9) \*IX:1P HAPPY NOT IX:1P THRILLED (Internal Negation) 'I'm not happy, I'm ecstatic.' *V. Expletive Negation: not available to internal negation* neg. (10) WOW SHOW-UP MANY (External Negation) (McClave 2003; 8) 'Wow, many (non-handed signs) showed up!' (11)#WOW NOT SHOW-UP MANY (Internal Negation) (12) #WOW SHOW-UP NOT MANY 'Wow, many (non-handed signs) showed up!' VI. Try-to-V Constructions: narrow scope is available to internal negation neg. (13) BILL TRY LAUGH (External Negation) 'Bill didn't try to laugh.' (14) BILL TRY NOT LAUGH (Internal Negation) 'Bill tried not to laugh.'

**Implications.** In exploring negation in ASL, we show that there exist asymmetries between two negative markers. We suggest that manual negation has been 'reanalyzed' (à la Hopper & Traugott 1993) as an internal negation. Our analysis implies that negation in ASL patterns with other paths of meaning change involving two levels of semantic 'restructuring' (Eckardt 2006) in the semantic composition: (i) manual negation undergoes a shift akin to Jespersen's Cycle, losing its  $Neg^0$  status; and (ii) it is reanalyzed as negative Adverb with a concomitant shift in meaning (propositional operator > predicate modifier). Such processes of semantic restructuring are the subject of great interest in the recent semantics literature (see Deo 2015), and can yield insights into the relation between diachronic change and synchronic meaning.