## Quantificational force of Hungarian NPIs: evidence from adverbial scope

This paper investigates the quantificational force of Hungarian Negative Polarity Items (NPIs), using novel data from a test inspired by Shimoyama (2011). We examine the relative scope of time adverbs ('usually' and 'often') to negation and the NPI. There are two results we report on. First, we find that the scope of the adverb and NPI are frozen; that is, once the NPI is below the adverb on the surface, it cannot QR above it. Second, we find, in accordance with Surányi (2006) that Hungarian NPIs can have both the  $\exists$  and  $\forall$  readings.

The adverb 'usually' scopes above negation in Hungarian. (1a) shows this (assuming that 'usually' does not mean the same as 'half of the time', which some speakers might not agree with); the continuation is infelicitous because it contradicts the first sentence. If 'usually' scoped *below* negation, the continuation should not be contradictory. Note that the scope facts hold even if 'usually' is in a postverbal position (1b). Compare this to 'often', whose scope seems to mirror surface order (2).

- - b. János nem eszik reggelit általában. # Pontosabban, az esetek felében nem eszik reggelit. János NEG eats breakfast usually. in fact, the occurances half.POSS. NEG eats breakfast
- (2) a. János gyakran nem eszik reggelit. # Pontosabban, az esetek felében nem eszik reggelit. János often NEG eats breakfast. in fact, the occurances half.POSS. NEG eats breakfast
  - b. János nem eszik reggelit gyakran. Pontosabban, az esetek felében nem eszik reggelit. János NEG eats breakfast usually. in fact, the occurances half.POSS. NEG eats breakfast

NPIs can be either universally interpreted, in which case they scope above negation  $(\forall > \neg)$ , or existentially interpreted, scoping below negation  $(\neg > \exists)$ . Table 1 shows all possible configurations of scope between NPI, negaion, and adverb, as well as the corresponding situation as illustrated in Table 2. The situations are designed for test sentences (3).

	adverb $> \neg$	$\neg > adverb$	Corresponding	(3)
			situation	
$\forall$	$\forall > adverb > \neg$	$\forall > \neg > adverb$	a,b	-
	adverb $> \forall > \neg$		b	
Ξ	$adverb > \neg > \exists$	$\neg > adverb > \exists$	b	_
		$\neg > \exists > adverb$	a,b	

Table 1: Scope options for NPI, negation, adverb

- a. Senki nem megy be általában/gyakran az órákra. NPI NEG go PRT usually/often the classes,TO 'Nobody goes to classes usually.'
- b. Nem megy be senki általában/gyakran az órákra.
- c. Nem megy be általában/gyakran senki az órákra.
- d. Általában/gyakran senki nem megy be az órákra.
- e. Általában/gyakran nem megy be senki az órákra.

(b) True for all scope options.

	Monday	Wednesday	Friday		Monday	Wednesday	Friday
Anna	$\checkmark$			Anna	$\checkmark$		
Billy		$\checkmark$		Billy	$\checkmark$		
Cecily			$\checkmark$	Cecily	$\checkmark$		

(a)  $\forall > \neg > adverb$ ,  $\forall > \neg > adverb$ ,  $\neg > \exists > adverb$ 

## Table 2: Possible situations

If Hungarian NPIs can have the universal quantifier reading, then we expect the situation illustrated in Table 2a ( $\forall$ (NPI) > adverb >  $\neg$ ) to be available when adverb >  $\neg$ , and the NPI scopes *above* the adverb. The unavailability of this reading when the adverb scopes over negation, however, does not indicate anything, as then the  $\exists$  and  $\forall$  readings of the NPI are identical. When the adverb scopes under negation (as in (3a)-(3c) for 'often') and Table 2a is not an available reading, it indicates that the NPI must be existential, scoping *below* the adverb.

sentence	usually $> \neg$	often > $\neg$	$\neg > often$
(3a)	a,b		a,b
(3b)	$^{\rm a,b}$		$^{\mathrm{a,b}}$
(3c)	b		b
(3d)	b	b	
(3e)	b	b	

Table 3: Results

The results are shown in Table 3. They indicate that NPIs can be interpreted both as  $\forall$  and  $\exists$  quantifiers, depending on context. When the adverb scopes above negation, we get the  $\forall$  reading for the NPI unambiguously when it is above the adverb on the surface (3a and 3b with 'usually'). When the adverb scopes below negation, it unambiguously only has the existential reading when the NPI is below the adverb on the surface (3c with 'often'). Note that these results are only possible if the NPI could not QR above the adverb; that is, its scope had to be frozen relatively to the adverb.

**References** • Shimoyama, J. (2011). Japanese indeterminate negative polarity items and their scope. Journal of Semantics 28(4), 413–450. • Surányi, B. (2006). Quantification and focus in Negative Concord. Lingua 116(3), 272–313.