A Kite Analysis of Person

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1. Claim Most studies on person discuss combinations between persons, such as syncretism between inclusive and exclusive (explained in Section 3.) (e.g. Cysouw 2009; Harbour To Appear). However, they do not consider the internal make-up of the person itself. This is particularly relevant for inclusive, which I argue to be the only person that uses a combination of atoms. The other combinations are unlexicalisable. I show that this follows from an analysis of person atoms in the kite framework explained below.

2. Background and Introduction - Seuren & Jaspers (2014) have argued for a semantic rather than pragmatic analysis for the ambiguity of the quantifier *some*. By extending the logical square of Aristotle (Figs. 1 and 2) to the hexagon of Jacoby, Sesmat and Blanché (Figs. 3 and 4), 'two distinct though related logical operators' emerge, each occupying a corner in the hexagon (Seuren & Jaspers, 2014, p. 618). *Some* in the Y-corner means 'only some, not all'. *Some* in I is in fact the disjunction of Y and A. It refers to the restricted *some* in I and to *all* in A.

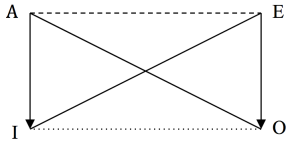

Figure 1: The square

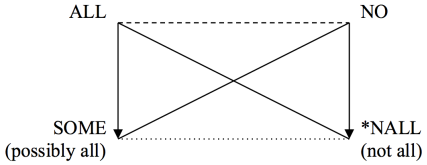

Figure 2: The quantifier square

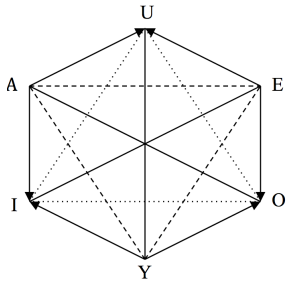

Figure 3: The hexagon

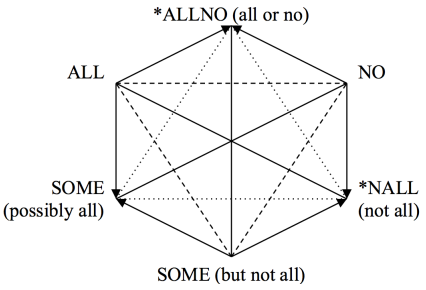

Figure 4: The quantifier hexagon

The hexagon makes an interesting prediction for lexicalisation in closed lexical fields (Seuren & Jaspers 2014): both the O- and U-corner never receive a simplex lexicalisation. This CONCEPT FORMATION CONSTRAINT (CFC) turns the hexagon into a kite:

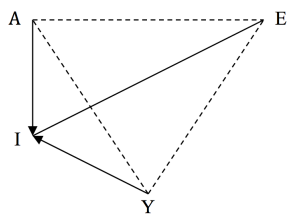

Figure 5: The kite

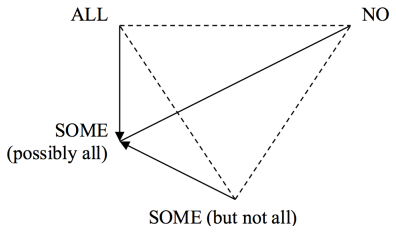

Figure 6: The quantifier kite

So far, the CFC has been applied to the predicate logic operators (Seuren & Jaspers 2014), colour (Jaspers 2012) and adjectives (Roelandt 2016).

3. Person - In Indo-European languages, a 3-atom person system (for 1st, 2nd, 3rd person) is commonly assumed:

(1) English

	SG	atoms	PL	atoms
1	*I*	speaker	*we*	speaker + associates
2	*you*	hearer	*you*	hearer + associates
3	*he, she, it*	non-participant	*they*	non-participant + associates

However, non-Indo-European languages can have an inclusive person, referring to *we* including the hearer (*tammü* (2)), as opposed to *we* excluding the hearer (*nümmü* (2)):

(2) Tümpisa Shoshone (Dayley 1989)

	SG	atoms		PL	atoms	
incl				*ta-mmü*	sp + hr + assoc	(*we*)
1	*nü*	sp	(*I*)	*nü-mmü*	sp + assoc	(*we*)
2	*ü*	hr	(*you*)	*mü-mmü*	hr +assoc	(*you*)
3	(demonstr)	non-part	(*he, she, it*)	(demonstr)	non-part + assoc	(*they*)

Semantically, inclusive refers to a group including speaker and hearer. Morphologically, inclusive is most often independent from first (sp) and second person (hr) (80%), as in Tümpisa Shoshone (2) (Daniel 2005). Otherwise, it is not infrequently related to first person (3) and sometimes also to second (4).

(3) Quechua (Adelaar 1977)

	SG	PL
incl		**nuxa**-ñči(k)
1	**nuxa**	**nuxa:**-guna
2	xam	xam-guna
3	pay	pay-guna

(4) Tok Pisin (Zidowecki et al. 2015)

	SG	PL
incl		**yu-mi**(-pela)
1	**mi**	**mi**-pela
2	**yu**	**yu**-pela
3	em	ol

Therefore, I consider inclusive to be a combination of the atoms for first and second person. To show how the person atoms can combine, I use a Hasse diagram with bitstrings representing the atoms (Smessaert 2009; Jaspers 2013): every 1-bit represents exactly one atom (Fig. 7). Level 1 in Fig. 8 shows the atoms corresponding to first (sp), second (hr) and third person (non-part). Level 2 on the left shows the combination of speaker and hearer: the inclusive (part). I argue that the other two bistrings (sp & non-part and hr & non-part) are never lexicalised as a person morpheme, as illustrated in Fig. 9.

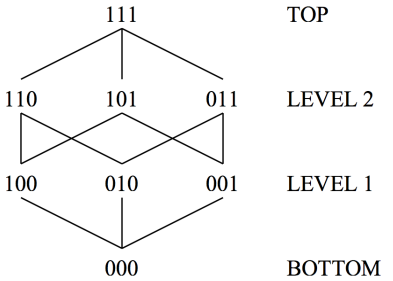

Figure 7: 3-atom Hasse diagram

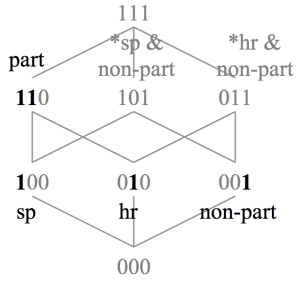

Figure 8: Person Hasse diagram

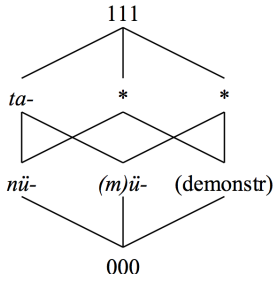

Figure 9: Tümpisa (2)

The CFC in the kite framework predicts the only lexicalised combination of atoms to be the inclusive.

4. The Concept Formation Constraint for Person - The person kite differs from the quantifier kite in that it is a mereological rather than a logical system. This means a.o. that the entailment relations of the quantifiers are proper parthood relations for person, and the disjunctive I-O-U corners are in fact mereological sums. The hexagon and kite below portray exactly the relations we expect to find between the attested person distinctions. E.g., both speaker and hearer are proper parts of participant, the inclusive. Also, the other combinations of person atoms as seen in the Hasse diagram in Fig. 8, reside in the unlexicalised corners. In the 39 languages of my sample and the typological literature studied (a.o. Daniel 2005; Cysouw 2009; Forchheimer 2014; Harbour To Appear), there is no person morpheme to express a non-speaker, i.e. the mereological sum of hearer and non-participant, nor is there one for non-hearer or a sum of speaker and non-participant (as exemplified in Fig. 12).

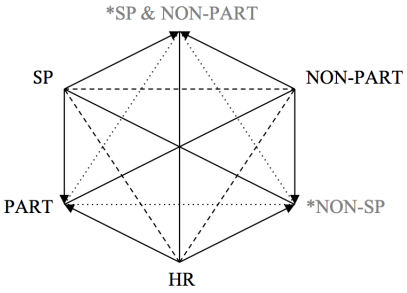

Figure 10: Person hexagon

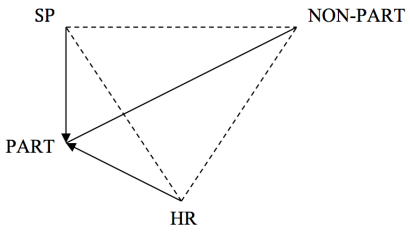

Figure 11: Person Kite

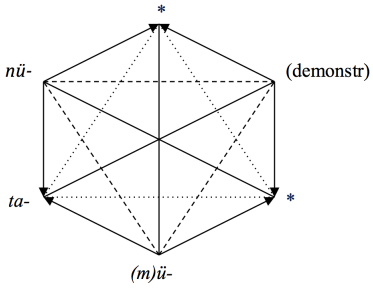

Figure 12: Tümpisa

5. Conclusion - The restrictions on lexicalisability for quantifiers also hold for other lexical fields. For person, the CFC sheds light on the internal make-up of person by confirming inclusive to be the only combination of person atoms that can be lexicalised.

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