Nalle Wörter werden Brüder: explaining a universal lexical gap
Hedde Zeijlstra, University of Amsterdam (zeijlstra@uva.nl)

1. An old problem in linguistic theory, dating back to at least Thomas Aquinas, concerns the (universal) absence of universals quantifiers that are morphologically marked for negation, whereas such negative marking is widely attested for existentials (1).

(1) a. *Nall, *nevery, *neverything, *neverybody, …

  b. No, nobody, nothing

A similar observation can be made for connectives: whereas many languages have a word for *nor* ('neg or'), no language in the world has a word for *nand* ('neg and') (cf. Horn 1989, Jaspers 2007). So the question rises: why is it not possible to have a lexicalized form for *not all* or *not or*? More crucially, the question arises as to whether the ban on words like (1a) is formally excluded (due to some syntactic or semantic universal principle) or whether there are extra-grammatical reasons why such expressions never occur. In this talk I will show that the latter approach is correct, indicating that extra-grammatical reasons filter out linguistic constructions that do not violate any grammatical constraint. **2.** Huybrechts (1979) and Horn (1989) argue that due to the existence of other expressions that can convey the same meaning as *nall*, no such lexicalized expression can be formed. For Huybrechts (who takes this to be a syntactic principle) these are the existence of opposite negatives (such as *no(body/thing)*) for Horn they are expressions such as *some* that come along with an implicature saying *not all*. Huybrechts' proposal has been falsified by the existence of languages that lack negative existentials (e.g. Japanese), Horn's proposal faces the problem that whereas such implicatures can easily be cancelled, the ban on *nall* (and *nand*) is much stronger. Others, e.g. Löbner (1990) and Jaspers (2005), have argued that *nall* is not a primitive quantifier such as *all*, *some* or *no*. However, even if such a claim is correct (mostly depending on one's view on the square of opposition), it is still not explained why a derived expression such a *not all* cannot be lexicalized in the first place, given that the meaning of it is logically accessible: *not all* is a fine expression. **3.** The discussion above already shows that the problem of *nall* and *nand* is not so much about the unlikeliness of uttering something carrying the meaning $\neg\forall$ (or $\neg\&$). In fact, in almost every language this can easily be realised. The question is why negative prefixes such as English *n(o)-* in *nothing* (or even better: *n-* in Dutch *niets* ('nothing')) cannot be prefixed to other quantifiers or connectives. But closer inspection on these prefixes reveals that synchronically *nothing* or *niets* are not morphologically complex in the first place. They only seem to be so because they are the outcome of a diachronic process stemming back to the days where *n(e)-* was still a productive prefix (Jespersen 1917, Zeijlstra 2004). So the real question is: why in the periods of (any) language, when quantifiers could transparently be negated by means of prefixation, did this not happen with universal quantifiers and *and*? **4.** In this paper, I demonstrate that no diachronic lexicalisation process could yield words

such as *nall* and *nand*. The discussion will focus on the Germanic languages, but extends universally. As Zeijlstra (2004, 2008) has shown, all languages that have a prefixal negative marker at their disposal that could (also) be attached to non-verbal elements, are Negative Concord languages, i.e. languages where the combination of multiple negative elements only yields a single semantic negation. The reason for this is that according to his theory Negative Concord is a necessary condition for the acquisition of affixal and other syntactic head-like markers. Since in those constructions multiple quantificational elements in one and the same clause could be negatively prefixed (without giving rise to multiple semantic negations), Zeijlstra takes these elements to carry an uninterpretabe formal feature [uNEG] that needs to be checked against a higher semantically interpretable negation that may be phonologically abstract. Moreover, it is a property of those Negative Concord language where the negative marker on existentials is free (i.e. yielding morphologically transparent n-words), this negative marker is the same as the negative marker that attaches to V_{fin}. As Zeijlstra has shown, such languages are always Strict Negative Concord languages where in every sentence that exhibits sentential negation is obligatorily marked on V_{fin}. Thus, in languages where the negative marker could precede quantification elements, such as existentials or universals, this negative marker is accompanied by a negative marker on V_{fin}: scope-marking of quantifiers for negation only takes place in sentences that are already negative. 5. Now it follows why in languages that had such a (semantically non-negative) negative marker, this marker would be attached to existentials and *or* but not to universal quantifiers and *and*. For the former there is a functional necessity, for the latter not. As is shown in (2), existentials may but don't have to outscope negation, whereas universals cannot raise across negation at LF (cf. Nilsen (2003) among many others).

(2) a. I didn't read a book ($\neg > \exists; \exists > \neg$)

  b. I didn't read every book ($\neg > \forall; *\forall > \neg$)

Hence attaching a free, optional negative marker does not add any new interpretational information to a universal, as it must be under the scope of negation anyway in a negative sentence. Attaching it to an existential, though, disambiguates the sentence, as it marks that the existential is now under the scope of negation. Note that this does not entail that combining a productive marker with a universal is a priori forbidden, though, but as they do not add any new information, nothing motivates it either. A similar problem arises for cases where a universal quantifier appears in preverbal position. Note that any sentence in a Negative Concord language that marks a quantifier for negation must also mark the verb for negation. Hence marking the universal quantifier subject for negation as well only weakens the sentence: (3a) already entails (3b). Hence, also in the case of preverbal universal quantifiers extra scope marking only yields a sentence that is already entailed by the sentence without the scope marker. That is to say, unless the universal is has been focussed as in (3c), which yields a reading that is not entailed by (3a). However, a

focussed expression of the form [*ne* [FOC *ALL*]] can never be the input for a lexicalisation process leading to *nall*, due to the emphasis on the second part and the intonational break that immediately precedes it (cf. Selkirk 2001).

(3) a. All boys didn't eat
      b. Not all boys ate
      c. Not ALL boys ate

6. The same applies to *and* and *or*. The benefit of marking a connective for negation would be disambiguation as well. This clearly works for *or*. Take for instance (4a), which is ambiguous between (4b) and (4c), (4b) being a case of ellipsis. Marking that the scope of *or* is under negation (by using *ne or → nor*) rules out the reading in (4b).

(4) a. I didn't see John or Mary
      b. [I didn't see John] or [~~I didn't see~~ Mary]
      c. [I didn't see [John or Mary]]

However, this is not the case with (5). Whereas (4b) does not entail (4c), (5b) does entail (5c).

(5) a. I didn't see John and Mary
      b. [I didn't see John] and [~~I didn't see~~ Mary]
      c. [I didn't see [John and Mary]]

Therefore marking that the connective *and* is under the scope of negation, again does not provide any new information at all. Therefore, there is no functional need to mark and for negation, whereas there is strongly such a need for marking *or* for negation. **7**. Consequently, if there are no constructions *ne all* and *ne and*, processes of diachronic lexicalisation can never yield lexical words such as *nall* and *nand*. Therefore no language can exhibit such lexical words either, without any formal syntactic or semantic principle excluding it.

<u>References</u>: **Hoeksema, J.** (1999), "Blocking effects and polarity sensitivity", in: *JFAK. Essays dedicated to Johan van Benthem on the Occasion of his 50th Birthday*, Vossiuspers AUP, Amsterdam. **Horn, L.** (1989). *A Natural History of Negation*, University of Chicago Press, Chicago. **Huybregts, R.** (1979), "De biologische kern van taal", in Huybregts, R. & L. des Tombe, eds., *Verkenningen in taal*, Inst. De Groot, Utrecht. **Jaspers, D.** (2005), *On the negative logic of natural language. Operators in the lexicon*. PhD Diss., University of Leiden. **Jespersen**, O. 1917. *Negation in English*. Copenhagen: Høst. **Löbner, S.** (1990), *Wahr neben Falsch. Duale Operatoren als die Quantoren natürlicherSprache,* Niemeyer, Tübingen. **Nilsen, O.** (2003). *Eliminating Positions*. PhD Diss., Utrecht University. **Selkirk, E.** (2001), "The syntax-phonology interface." In *International Encyclopedia of the Social and Behavioral Sciences*, eds. N.J. Smelser and P.B. Baltes, 15407-15412. Oxford: Pergamon. **Zeijlstra, H.** (2004), *Sentential negation and Negative Concord*. PhD Diss. University of Amsterdam. **Zeijlstra, H.** (2008), "On the syntactic flexibility of formal features", In: *The Limits of Syntactic Variation*, ed. Th. Biberauer, 143-174. Amsterdam: Benjamins.