On the Functional Architecture of DP and the Feature Content of Pronominal Quantifiers in Low German

1. Introduction

The article discusses the syntax and semantics of quantificational and interrogative DPs in Low German, the language variety traditionally spoken in the Northern parts of Germany.[*] Drawing mostly on original fieldwork, and contributing to the growing body of literature on the complex structure of DPs in Germanic, we focus on the functional architecture of nominal expressions and on the formal feature content of functional elements in Low German. Particular attention is paid to the following phenomena: (i.) the structural realization of complex pronominal quantifiers such as *jeder-een* 'everyone', *keen-een* 'no-one' and *mannich-een* 'some, many a'; (ii.) the syntactic and semantic behavior of the simplex indefinite expressions *een* 'someone' and *wat* 'something'; (iii.) the syntactic distribution and feature specification of the expression *wat*, which – unlike *een* – can occur as a relative pronoun, as an interrogative pronoun in *wh*-questions, and as a complementizer in embedded *yes/no*-questions, in addition to its use as a plain indefinite.

A central insight of the discussion is that complex pronominal quantifiers in Low German provide overt evidence for a complex DP-structure and for the existence of an intermediate functional projection between NP and DP, namely NumP, which has been argued for on independent grounds by Heycock & Zamparelli (2005), among many others. In addition, the indefinite element *wat* 'some' is argued to be underspecified in its feature content, as previously argued for its High German counterpart *was* in Jäger (2000) and Bayer (2002).

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This accounts for the observed flexibility in the syntactic distribution of *wat*. More generally, a comparison of the empirical results with the findings for other German(ic) dialects and some Romance languages will increase our insight into how certain semantic distinctions are grammatically encoded, and which of these encodings are subject to cross-linguistic (micro-) variation.

The remainder of the introduction provides some background information on Low German. Section 2 discusses the structure of complex pronominal quantifying expressions in Low German. Here, the functional element *–een* 'one', which shows up as an integral part of these constructions, is analyzed as an overt Num-head with a negative lattice feature. Section 3 compares the syntactic and semantic behavior of the simple pronominal quantifying expressions *een* 'someone' and *wat* 'something'. It is shown that the two elements differ in syntactic status and feature content: While *–een* is the syntactic head of NumP, *wat* is analyzed as an NP-proform with an unvalued lattice feature. As a result of this lexical underspecification, *wat* can range over atomic entities and mass entities alike. Section 4 extends the discussion to the clausal domain, by looking at other occurrences of *wat* in the left periphery of relative and interrogative clauses. Section 5 concludes.

1.1 Background on Low German

Low German (henceforth: LG) is the cover term for a continuum of dialects spoken throughout the North German lowlands. There are three larger dialect areas, see e.g. Goltz & Walker (1989): *North Saxon*, which is spoken in the Northwestern parts of the language area; *East Low German*, which is spoken to the east of the river Elbe; and *West- and Eastphalian*, which are spoken in Northern Northrine-Westphalia. In this article, we concentrate on data

from North Saxon, in particular on data from the *Harsfelder dialect* (*Nordhannoversch*), which is spoken in and around the town of Harsefeld in Northern Lower Saxony.[1]

1.2 Grammatical Properties of Low German

General information on the grammar of Low German can be found in the concise overviews by Goltz & Walker (1989) and Stellmacher (1990) and in a more recent descriptive grammar by Lindow et al. (1998). Same as Standard High German (*SHG*), LG is a V2-language with underlying SOV-order, but the LG case and agreement system is quite impoverished when compared to SHG. The case system is reduced to a binary system of nominative (NOM) and non-nominative, or oblique (OBL) case (Lindow et al. 1998: 144), where overt case marking on non-NOM DPs is quite restricted (Rohdenburg 1993). On lexical nouns, the difference between NOM and OBL is only coded on MASC nouns denoting animate beings (Goltz & Walker 1989: 43). In the determiner and pronominal system, it only shows on MASC.SG expressions, cf. (1ab).

(1)	a.	de / een	Minsch	-	de-**n**	/	een-**en**	Minsch-**en**
		the/ a	man.NOM.M		the- OBL.M		a- OBL.M	man- OBL.M
	b.	de / een	Disch	-	de-**n**	/	een-**en**	Disch
		the/ a	table.NOM.M		the- OBL.M	/	a - OBL.M	table.OBL.M

As in SHG, there are three genders (masculine, feminine and neuter), but the three categories are only overtly visible on singular DPs in oblique case (Lindow et al. 1998: 143):

(2) **de-n / een-en** Disch - **de /een(e)** Döör - **dat / een** Huus

[1] The data presented in this article stem mainly from directed elicitations with three native speakers of this dialect, Anne Fitschen, Johannes Fitschen, and Martina Wohlers, which I would hereby like to thank. Occasionally, the elicited data are backed up by written sources, and by corpus findings from the internet.

the-OBL.M a-OBL.M table.M the.F /a.F door.F the.N/ a.N house.N

The verbal system in North Saxon shows a lot of syncretism, too, as the 3SG and 1/2/3PL forms of present indicative verbs all end in *–t*, (3a). The perfect participle is formed without the SHG prefix *ge-*, cf. (3b):

(3) a. ik sing - du sing-st he/ wi/ ji/ se sing-**t**
1SG sing.1SG 2SG sing-2SG 3SG 1PL 2PL 3PL sing-**3SG/PL**
b. ik heff **anropen** - ik heff **köfft**
1SG have called 1SG have bought

Finally, there is evidence for an articulated left periphery of the DP in Low German. Prenominal possessors are expressed by means of a possessive pronoun intervening between the possessor in Spec,DP and the possessed NP (Lindow et al. 1998: 144; Strunk 2004).

(4) [$_{DP}$ de Vadder [$_{D}$ sien [$_{NP}$ Huus]]]
the father his house
'the father's house'

This article argues for an even more articulated functional architecture inside the DP.

2. The structure of pronominal quantifiers and the structure of DP

This section looks at the morpho-syntactic structure of pronominal quantifying expressions (henceforth: *PQEs*) corresponding to *everybody*, *something*, *nobody*, *all*, etc, which are traditionally called indefinite pronouns. The central claim is that some PQEs in Low German

provide overt evidence for a complex functional architecture inside the DP, and that the overt syntactic structure of PQEs and the feature content of their parts exhibit micro-variation across the West Germanic dialects. As such, the article contributes to the growing body of literature in this domain; see e.g. Barbiers (2005) on variation in the syntax of indefinite numeral expressions; Corver & Ostendorp (2006) on micro-variation in possessive DPs in various Low Saxon dialects of the Netherlands; Kallulli & Rothmayr (2008) on complex indefinite DPs in upper German dialects; and Kallulli & Rothmayr (2008), Leu (2009) and Roehrs (2010) on the complex PQE *ein jeder* in Standard German.

Section 2.1 introduces the empirical facts for the North Saxon variety of Low German and shows that some of the expressions falling into the class of PQEs are morpho-syntactically complex, while others are not. A striking property of the complex expressions in LG is that they all contain the element *–een* 'a/one'. It is also shown that the system of pronominal quantifying expressions in LG differs from the English and High German systems. Section 2.2 puts forward a semantic account of this difference according to which the complex form in LG can be chosen whenever the domain of quantification consists of singular individual entities only. Section 2.3 presents the syntactic analysis of complex PQEs. Section 2.4 spells out the analysis of the restricting element *–een* as a functional head in *Num* in more detail. Section 2.5 compares the complex universal PQE *jeder-een* in LG to the complex PQE *ein jeder* 'an every' in High German, and Section 2.6 adds a brief discussion of PQEs in English and Romance languages.

2.1 The system of pronominal quantifying expressions (PQEs)

Pronominal quantifying expressions are nominal expressions that are headed by a quantifying element, and can (or must) occur without an overt NP-complement that would restrict the quantificational domain of the quantifier (henceforth: *Q-domain*). As a result, the Q-domain

of PQEs is predominantly determined by contextual information. The class of pronominal quantifying expressions in LG divides into three subclasses: The first subclass consists of morpho-syntactically complex expressions, as in (5), which are grammatically singular, which contain the element *een* '(lit.) one', and which normally occur as full DP-arguments without lexical NP-material (Lindow 1998, Lindow et al. 1998: 183ff.):[2]

(5) a. **Jeder-een / jed-een** snackt Platt. [SHG: *jeder*]
every-one speaks LG
b. **Keen-een** snackt Platt. [SHG: *keiner/ niemand*]
no-one speaks LG
c. **Mannich-een** snackt Platt. [SHG: *mancher/ manch einer*]
many-one speaks LG
'Everyone / Noone / Many a (person) speaks Low German.'

The expressions in (5) are analyzed as compounds in Lindow et al. (1998: 180), and, indeed, they appear to have been lexicalized to some extent in their diachronic development.[3] It will emerge, however, that the syntactic functions and semantic contributions of the individual subparts are still fully transparent. For this reason, we follow the procedure in Barwise & Cooper (1981: 168) for the complex English PQEs *everything*/ *nothing*/ *something* and treat

[2] In addition, there are some complex non-quantificational expressions in LG: *anners-een* 'somebody else', *jichens-een*, 'someone/anyone', *wat för (ee)'n* 'what a' and *wok-een/ welk-een* 'who' (see Lindow et al. 1998: 175, 178). Given that the first element in all these expressions is not a quantifier, but serves other semantic functions (alterity, domain widening, interrogativity), we will set them aside, with the exception of *(wo)keen* 'who', which we will discuss in section 4.1.

[3] That some process of lexicalization has taken place is witnessed by the fact that the complex PQEs *jeder-een*, *mannich-een* (*männig-een*), and *keen-een* are less frequently marked for oblique case than the simplex expressions *een* and *keen* (Rohdenburg 1993: 215). This notwithstanding, Rohdenburg (1993: 228, fn.2) observes that oblique case marking on the universal form *jede-**n**-een* 'every-OBL-one' is still widespread, cf. (i) :
(i) Ik heff jede-**n**-een inlodt.
I have every-OBL-one invited
'I have invited everybody.'
This suggests that at least some complex PQEs are not fully lexicalized (yet), and that the individual sub-parts of these PQEs are still accessible to morpho-syntactic processes, and arguably to semantic interpretation as well.

the expressions in (5) as structurally complex from a synchronic perspective as well (see also Martí 2008: 24, for relevant discussion of this point). Two additional examples of complex PQEs from written texts are found in (5de):

(5) d. ... een Persönlichkeit, vör de **jedereen** Hochachtung hebben kann.
…a character$_{SHG}$ for which everyone high esteem$_{SHG}$ have can
'a character that everybody can hold in high esteem' [Gerken 1990: 16]

e. **Keeneen** müch achterher no Huus führen. [Gerken 1990: 37]
no-one wanted afterwards to home drive
'Nobody wanted to go home afterwards.'

The second subclass of PQEs consists of grammatically plural forms that are structurally simplex and freely occur with an overt NP-complement (cf. Lindow et al. 1998: 185ff.):

(6) **Welke** / **Mennige**/ **Veel(e)**/ **Keene**/ **All(e)** / **de meisten** (Lüüd) snackt Platt.
some a few many no all most people speak LG
'Some / Many / No / All / Most (people) speak Low German.'
[SHG: einige/ viele / keine / alle / die meisten]

The third subclass contains the elements *wat* 'something' and *nix* 'nothing'. These expressions are morpho-syntactically simplex, grammatically singular, and never take an NP-complement (Lindow et al. 1998: 180). On the face of it, the bare form *een* 'one, someone' in (7b) belongs into this class, too. As we proceed, though, we will encounter ample evidence against this classification, and thus treat *een* as a special subcase of the group of complex expressions in (5).

(7) a. Gerd hett **wat** / **nix** köfft. [SHG: *etwas*]

Gerd has something nothing bought

'Gerd bought something / nothing.'

b. **Een** hett anropen / Dor hett **een** anropen. [SHG: *jemand/ einer*]

someone has called / there has someone anropen

'Someone/One person has called.'

The emerging system of PQEs is shown in Table 1. The LG data in the middle column are juxtaposed to their High German and English counterparts to the left and to the right, respectively. The right-most column gives a semantic specification of the quantifiers involved. The left-most column shows the semantic properties of the Q-domain. As will emerge, the occurrence of a PQE as complex, simplex_{SG}, or simplex_{PL} in LG is determined by the semantic properties of the Q-domain.[4]

Tab.1: Morpho-syntactic realization of pronominal QPs

Properties of Q-domain	**High German**	**Low German**	**English**	**Properties of Q**

[4] Tab. 1 shows that *wat* is the only LG expression occurring in two cells, as it can refer to [+count] and [-count] entities alike. In section 3.4, this double occurrence is attributed to an underspecification in the lexical entry for *wat.* Also notice that the [+sg, -count] expressions *veel* 'much' and *all* 'all(the)' are omitted for expository reasons. Notice, finally, that the complex forms are often replaced with shorter forms in contemporary LG, presumably under the influence of the standard language.

[+sg], [+count]	jeder, ein jeder	***jeder-een, jed-een,*** jeder	every-one, every-body	non-intersective
	mancher, manch einer	***mannich-een, mennig-een,*** männig-(een)	∅, (many a?)	
	keiner, niemand	***keen-een,*** keener**,** nüms	no-one, no-body	intersective
	jemand	***een***	some-one, some-body	
	etwas	**wat**	some-thing	
[+sg], [-count]	etwas	***wat,*** **'n beten**	some-thing	
	nichts	***nix***	no-thing	
[+ pl]	manche, einige	**welk(e), mennige, 'n paar, de een un anner**	some, several, a few	
	viel(e)	**veel(e)**	many	
	keine	**keen(e)**	no	
	alle	**all(e)**	all (the)	non-intersective
	die meisten	**de meisten**	most	

The shaded parts of Table 1 show that High German, Low German, and English exhibit cross-linguistic variation in the morpho-syntactic realization of pronominal quantifying expressions. With the exception of the universal PQE *ein jeder* 'an every', to be discussed in section 2.5, and the non-colloquial PQE *manch einer* 'many a', there are no complex expressions (left) in synchronic Standard High German[5], whereas in English the range of complex expressions extends further than in LG, the determining factor being grammatical number: All plural expressions are simplex, while all singular expressions are complex, irrespective of whether they refer to count or mass entities, cf. (8ab):

(8) a. Peter bought something, namely a horse. [+count]

b. Peter bought something, namely (some) milk. [- count]

[5] Historically, the forms *niemand* and *jemand* derive from complex forms in Old High German (Deutsches Wörterbuch, vol. 13, columns 824 - 833), but synchronically they are simplex. The treatment of the synchronous High German PQEs as structurally simplex is at odds with Leu's (2009) analysis of High German *jeder* 'every' as syntactically complex, which we will briefly discuss in sections 2.3 and 2.5.

Whether a complex form ends in *–one/body* or in *–thing* depends on the semantic nature of the Q-domain. If the Q-domain is restricted to human individuals, *-one/body* is chosen. If it consists of non-human entities, including [-count] mass entitites, *-thing* must be chosen.

In the next two sub-sections, it is shown that complex PQEs in LG differ from their English counterparts in that their formation is governed by other factors than the singular-plural distinction. Section 2.2 shows that complex PQEs with *–een* in LG only show up when the Q-domain consists of singular discrete entities. In section 2.3, the constitutive subpart *–een* is analyzed as the head of a functional projection NumP, located between DP and NP.

2.2 Analysis, 1st part: Semantic factors behind the formation of complex PQEs

In this section, we discuss the semantic factors behind the presence of *–een* in PQEs. To this end, it is instructive to first look at which ones do not. Tab. 1 shows that there is no correlation between the presence of *–een* and the semantic nature of the quantifier as *intersective/weak* or *non-intersective/strong*, respectively. Consider the minimal pair in (9):

(9) a. *keen*-een → $[\![keen]\!] = \lambda P \in \wp(D).\lambda Q \in \wp(D).\ P \cap Q = \varnothing$ *intersective*

b. *jeder*-een → $[\![jeder]\!] = \lambda P \in \wp(D).\lambda Q \in \wp(D).\ P \subseteq Q$ *non-intersective*

On standard accounts (Barwise & Cooper 1981, Keenan 1996), the truth of a sentence containing *keen* 'no' depends only on the size of the intersection of two sets, P and Q, which must be empty. It follows that the arguments of *keen* can be interchanged without a change in meaning. The universal quantifier *jeder* 'every', in contrast, specifies that the first set argument (P) be a subset of the second set argument (Q), such that a change in the order of arguments would result in different truth-conditions. Despite the different semantics of the quantifiers involved, both forms in (10ab) are complex PQEs. Furthermore, there is no

correlation between the presence of *–een* and the animacy or inanimacy of the entities in the Q-domain, nor does the feature [+/- HUMAN] play a role. Inanimate entities, such as e.g. houses, can be quantified over by *Q-een*, just like animate entities, as long as they are properly introduced as individuated entities into the discourse, cf. (10):

(10) There were many houses in the old village…

Keen-een wöör mehr bewohnt.

None was any longer inhabited

'None (of them) was any longer inhabited.'

There IS a correlation, however, between the presence of *–een* and another property of the Q-domain. The central observation is that the presence or absence of *–een* with a given quantified expression as part of a PQEs correlates with the selection requirements that this quantified expression imposes on its NP-complement in other syntactic environments:

(11) *Empirical Generalization:*

i. *-een* occurs only with quantifiers selecting for such NP-complements that can also be preceded by the indefinite article *een/'n*, i.e. singular count NPs.

ii. *-een* never occurs with quantifiers selecting for NP-complements that cannot be preceded by the indefinite article *een/'n*, i.e. plural and mass NPs.

In order for an NP to combine with the indefinite marker *een* it must be a singular count NP, i.e. its denotation must consist of singular discrete (i.e. atomic) entities only. In contrast, indefinite *een* is blocked from combining with plural and mass NPs, which denote sets of plural and mass individuals, respectively (Link 1983, Corbett 2000, Wilhelm 2008). In sum,

what licenses the presence of *–een* (and the appropriate quantifier on top of it) is a semantic property of the Q-domain, which must consist of atomic, countable entities only, and which is normally not overtly expressed; see the discussion of (17) and following (19) below.

(12) and (13) illustrate (11i) for the complex PQEs *jeder-een* 'everyone' and *keen-een* 'no-one' in (12a). (12bc) show that the overt complement NPs of the bare quantifiers *jeder* and *keen*, which provide the quantificational force of the PQEs in (12a), do occur with the indefinite article *een*.

(12)	a.	jeder/keen-een			–	jeder/keen-een			–	jeder/keen-een		
	b.	jeder/keen		Minsch	–	jede/keen		Kat	–	jede(t)/keen		Swien
		every/no		man		every/no		cat		every/ no		pig
	c.		een	Minsch	–		een(e)	Kat	–		een	Swien
			a	man			a	cat			a	pig

(13a) shows that the complex negative indefinite PQE *keen-een* is indeed ungrammatical when the context requires it to range over the denotation of a mass NP, which cannot be preceded by indefinite *een*, cf. (13b).

(13) a. Inne een'n Buddel wöör noch Water, inne annere wöör **keen(*- een)** mehr.
in.the one-OBL bottle was still water in.the other was no one left
'There was still water in one bottle, but in the other there was none left.'

b. Ik heff (*een) Water dronken.[6]

I have (*a) water drunk

'I have drunk water.'

(14) illustrates (11ii) for the simplex expressions *veel*$_{SG}$ 'much' and *veel(e)*$_{PL}$ 'many', which never combine with *–een*. (14ab) show that these quantifiers combine with mass and plural NPs, which cannot combine with the indefinite article, but occur as bare NPs on the surface:[7]

(14) a. veel (*een) Honnich, veele (*een) Eerdberen

much a honey many a strawberries

b. Ik heff (*een) Honnich / (*een) Eerdberen köfft.

I have a honey a strawberries bought

'I have bought (*a) honey/ strawberries.'

In light of the generalization in (11), I conclude that (complex) PQEs with *–een*, including bare *een*, impose the same semantic restriction on their Q-domain as the indefinite article *een*: They must range over the domain of singular discrete, i.e. countable atomic entities, which can be characterized as [-divisible, -cumulative] or [+count] (Krifka 1989): Atomic entities cannot be divided, nor can they combine to form entities of the same kind. From a formal perspective, such entities do not form a Boolean join-semilattice (Link 1983, Wilhelm 2008).

In contrast to complex PQEs, simplex PQEs (except for *een*) can or must range over the domain of plural or mass entities, which are [+divisible, +cumulative] (Krifka 1989), and which ARE organized in a Boolean join semi-lattice (Link 1983). Although plural and mass

[6] Of course, (13b) with *een* is grammatical on a count interpretation of water, according to which the speaker has drunk a contextually specified unit (a glass, a bottle etc.) of water. The relevant semantic mechanisms involved here are Bach's (1986: 10) *Universal Packager*, or Bunt's (1985: 11) *Universal Sorter*.

[7] Following Bhatt (1990), we analyze German bare plural and mass NPs as headed by a covert determiner D^0.

entities have this formal property in common, the grammar of LG distinguishes between the two kinds of entities, as the task of quantifying over plural and mass entities is systematically distributed between the second and third sub-class of PQEs from section 2.1: The plural forms in (6) range over pluralities of differentiated (i.e. countable) entities, whereas the simplex singular forms *wat* 'something' and *nix* 'nothing' in (7a) range over cumulations of non-differentiated minimal entities on their default use (see also section 3.4).[8]

Summing up, the possibility of forming a complex PQE with *–een* depends on a semantic property of the quantifier's Q-domain: Complex PQEs with *–een* are only attested with the quantifiers *jeder*, *mannich* and *keen*, which, semantically, do not operate over lattice structures, but over sets of singular discrete entities instead. This accounts for the inventory of complex PQEs in LG in table 1. In contrast, all other quantifiers in LG have a denotation that must combine with a (plural or mass) lattice structure, for which reason they are impossible in the presence of intervening *–een*. We turn to the syntactic (and semantic) analysis of the non-lattice marker *–een* next.

2.3 Analysis, 2nd Part: The Syntactic Structure of Complex Pronominal Quantifiers

The semantic literature offers the two competing options in (15) for the structural analysis of complex PQEs, such as LG *jeder-een* 'someone', *keen-een* 'no-one', and *mannich-een* 'many a':

(15) a. $[_{DP}$ jeder/ keen / mannich $[_{NP}$ een]]

b. $[_{QP}$ jeder/ keen / mannich $[_{DP}$ een $[_{NP} \varnothing$]]

[8] A parallel tripartition into [SG, +COUNT], [PL, +COUNT], and [SG, - COUNT] is found in the pronominal gender systems of several English dialects, North Frisian, and some varieties of Dutch, where the feature content of the 3rd person pronominal forms is roughly as in (i) (Siemund 2008):

(i) MASC/FEM, SG (≈ he/she): [SG, +COUNT], PL (≈ they): [PL, +COUNT], NEUT, SG. (≈ it): [SG, - COUNT]

See also Doetjes (1997) on the impact of the three feature combinations on the distribution of quantifying expressions in French, Dutch and English.

The structure in (15a), where the quantifier in D selects for an NP-proform, represents the standard analysis of quantifying DPs in the Generalized Quantifier framework of Barwise & Cooper (1981). The alternative structure in (15b), in which the quantifier heads a higher functional projection QP and selects for a DP headed by *een*, has been proposed by Matthewson (2001) as the general structure for quantification in natural language. This structure is adopted in Kallulli & Rothmayr's (2008) integrated syntactic and semantic analysis of indefinite determiner doubling construction in some Bavarian dialects of Austria and of the complex distributive quantifier *ein jeder* 'an every' in High German (see section 2.5).[9] In this section, I will show that neither structure allows for an adequate analysis of complex PQEs in LG. Instead, I will propose a modified variant of (15b), according to which *–een* is the syntactic head of NumP, a functional projection located between DP and NP.[10] In section 2.5, we will see that a third alternative, which has been proposed by Leu (2009) in his purely syntactic account of the distributive quantifier *jedi/jeder* in Swiss and SHG cannot account for the LG facts either.

[9] In order to account for indefinite doubling as in (ia), Kallulli & Rothmayr (2008: 216) propose the recursive D-structure in (ib), with the two indefinite determiners in their respective D-heads sandwiching a quantificational element in Q:

(i) a. **a** so **a** große Bua
a so/such a big boy
'(a) such a big boy.'

b. [$_{DP}$ a [$_{QP}$ so [$_{DP}$ a [$_{NP}$ große Bua]]]]

While not altogether implausible from a purely syntactic perspective, Kallulli & Rothmayr's semantics for structures such as (ib) appears to be problematic and not applicable to the analysis of complex PQEs in Low German. First, their semantic representation for the structurally parallel *a so a Pfead* 'such a horse' in (ii) (K&R 2008: 120, ex. (64)) is not well-formed, as a type <t>-statement ($f_y = g(i)$) is incorrectly combined with a type <e>-individual ($f_y(horse)$) by means of logical conjunction &:

(ii) $\lambda P. [f_y = g(i) \& f_y(horse)] \cap P(x) \neq \varnothing$

Moreover, the additional variable *x* in *P(x)* in (ii) is not bound, which is at odds with the purported quantificational meaning of *so* and leads to problems with the proposed analysis of the higher indefinite *a* as a cardinal existential quantifier (K&R 2008: 121, ex. (68), which is not found back in the semantic representation of the complex DP; see. E.g. K&R's ex. (70b). More generally, Kallulli & Rothmayr (2008) analyze the lower instance of *a* as denoting a choice function variable *f*, which is normally associated with specific/referring or (exceptional) wide scope indefinites (Reinhart 1997), but which is not applicable to non-referring/unspecific complex PQEs of the Low German type.

[10] See e.g. Ritter (1991), Heycock & Zamparelli (2005), Borer (2005), and others, on the existence of NumP inside the DP. An interesting precursor of the idea that the count or mass status of nouns is determined within the larger syntactic (i.e. DP-) context is found in Allan (1980).

Preliminary evidence for (15a) would seem to come from the existence of bare *een* in argument position, as in (7b). One could argue that *–een* is a semantically bleached NP-proform, specified only for the feature [+HUMAN]. Such an analysis meets with a number of problems, though. First, complex PQEs with *–een* can quantify over domains of inanimate entities. This was shown in (10) and should be impossible if *–een* contained the feature [+HUMAN]. Secondly, LG does not require an overtly filled NP in the presence of an overt determiner or other functional material, cf. (16):[11]

(16) [$_{DP}$ Dat [$_{NP}$ Kleed] von Marie] is blau, un [$_{DP}$**dat [$_{NP}$∅] von Mareike]** is root.
the dress of Mary is blue and the of Mareike is red
'The dress of Mary is blue and the one of Mareike is red.'

But if the NP is covert in (16), it can be equally covert in the case of complex PQEs containing *–een*. A third argument against (15a) is that it would force us to treat *–een* as structurally ambiguous. In (15a), *een* heads its own NP, but on its indefinite or cardinal use in (12b), it clearly combines with an overt NP. It will be more parsimonious to treat *een* as always combining with an NP, be it overt or covert.

The structure in (15b) achieves just that. There is only one instance of *een*, an indefinite article in D that takes an NP-complement. On the ordinary indefinite use of *een*, this NP will be overt. When *een* occurs inside a complex PQE, it will be covert. Apart from avoiding the

[11] The data in (16) and in (ib) below show that LG *een* differs from English *one* in important ways. Unlike *one*, which obligatorily occurs as an NP- preform with countable DPs, cf. (ia), *een* cannot occur in this function. In contrast to (ia), the presence of focused *een* in (ib) expresses the fact that Mareike has more than one dress:
(i) a. The dress of Mary is blue and **the one** of Mareike is red.
b. Dat Kleed von Marie is blau un **dat een** von Mareike is root.
the dress of Mary is blue and the one of Mareike is red
'The dress of Mary is blue and **one of Mary's dresses** is red.'
The more limited distribution of LG *een* shows that it is not identical to English *one*, which can be used both as a numeral head (*one book, someone*), and as a proform for count NPs in the presence of overt DP-initial material (*the one*) (Barbiers 2005), whereas the latter use is impossible for LG *een*. See section 3.5 for additional discussion.

ambiguity problem, the analysis in (15b) is more in line with the existence of empty NPs, as illustrated in (16).

The analysis in (15b) is not without problems either, though. First, it is a crucial ingredient of Matthewson's quantificational scheme that the selected DP be definite and not indefinite: The definite DP denotes a contextually specified maximal plural or mass individual whose individual subparts are then quantified over by the quantifier in Q. In the case of complex PQEs in LG, however, the presence of *–een* does not allow for the construal of a maximal individual that would provide the Q-domain for the quantifier. Rather, its presence indicates that the Q-domain consists of singular discrete entities only. This semantic effect shows most clearly in the emphatic (17), with an overt NP-complement, where the domain of quantification is explicitly restricted to singular discrete individuals.[12] The optional presence of an overt NP in (17) constitutes an additional argument against treating *–een* as an NP-proform on par with the English NP-proform *one* discussed in fn.12.[13]

(17) **Keen-een Minsch-en** is kommen.
not-one person-OBL is come
'Not a single person came.'

[12] Notice that the complement NP *minsch-en* occurs in its oblique form even though it forms part of the subject DP and should thus occur in the NOM form *minsch*, cf. (12b). The substitution of NOM forms with the corresponding OBL forms is quite frequent in present-day LG (see e.g. Stellmacher 1990: 161, Rohdenburg 1993: 217ff.), where substitution is subject to lexical (word class), phonological (case-marked DP preceded by word ending in *–n*) and pragmatic factors (emphasis). Notice that (17) is emphatic and stresses the fact that nobody came at all. The process of *oblique spread* in LG is thus reminiscent of the process of *pronoun exchange* in West Somerset English, where (OBL) object pronouns replace (NOM) subject pronouns in emphatic contexts (Siemund 2008: 24).

[13] An example with *mannig-een* followed by an overt NP-complement is given in (i) from Gerken (1990: 35):
(i) Un Hermann Quast de kunn so **mannigen-en Minschen** gode Raatslääg geben, [...]
and Hermann Quast the could prt many-a.OBL person.OBL good advice.PL give
'And Hermann Quast, he could give good advice to many people.'
There are also examples of the shortened distributive form *jed-een* with overt NPs, as in (ii), possibly pointing to an ongoing process of lexicalization from *jed* + *een* to *jedeen*$_{Q}$; see e.g. Pafel (1995) and Roehrs (2010)
(ii) snacks för **jed-een** Dag
stories for every day
http://www.weltbild.de/3/15944048-1/buch/schnacks-foer-jedeen-dag.html; 23-05-2011

Second, the DPs in (18ab) show that the indefinite or cardinal element *een* can be embedded under a definite determiner in LG, same as in SHG and many other languages. In such cases, the cardinal/indefinite element is commonly taken to be in a position lower than D (Munn & Schmitt 2005):

(18) a. de een-e Hond
the one-AGR dog
'the one dog.'

b. dat een-e Kalf
the one- AGR calf
'the one calf'

In order to overcome these problems with (15b), I follow proposals by Ritter (1991), Heycock & Zamparelli (2005), Borer (2005), Martí (2008), and Harbour (2008), and adopt the modified syntactic structure in (19), where *een* is the head of a functional NUM-projection situated between NP and DP.

(19) $[_{DP}$ jeder/ keen $[_{NumP}$ een $[_{NP} \varnothing]]]$

The revised analysis of complex PQEs in Low German retains Matthewson's original insight that quantificational structures involve two functional layers, but it does not generate the indefinite non-lattice marker *een* as a determiner head in D. Instead, *een* is the syntactic head of an additional functional projection NumP, which is situated between DP and NP. In the unmarked case, the NP is covert and its content must be recovered from the context. This preference for the NP-complement to be covert does not follow directly from the system, but may be an effect of lexicalization. In pragmatically marked cases, however, as in the emphatic (17), the NP-complement is realized overtly, providing direct evidence for the syntactic structure in (19).

2.4 The feature content of *–een*: [-LATT]

I have argued that *–een* in complex PQEs has the semantic effect of indicating that the quantifier's Q-domain does not form a lattice structure, but contains only singular discrete entities. This intuition can be formally captured in two ways. The first possibility is to treat *–een* as a cardinal modifier. According to Hoeksema (1983) and Wilhelm (2008), among others, this modifier would restrict the contextually given NP-denotation *P* in such a way that the output contains only singular discrete, i.e. atomic individuals, as in (20), which is the formalization found in Hoeksema (1983):

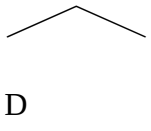
(20) $[\![\text{–}een]\!] = \lambda P_{<e,t>}. \lambda x_{<e>}. \text{ATOM}(x) \wedge P(x)$

The semantic modifier in (20) would filter out any plural or mass individuals from the NP-denotation. This works quite well for cardinal expressions in indefinite NPs, such as *een Minsch* 'one man' or *een(e) Fru* 'one woman', which are existentially closed. It runs into problems, though, when *een* finds itself in the scope of other quantifiers, as with the complex PQEs *jeder-een* and *keen-een*. Consider, for instance, the case of *keen-een*: Given the meaning of *een* in (20), sentences of the form *keen-een VP* should come out as true if and only if there is no individual x, such that x is an atom and x has the property specified by VP. Now, what if the denotation of the covert NP contained only plural or mass individuals? Then, the intersection of $[\![\text{-}een]\!]$ and $[\![NP_{\varnothing}]\!]$ would be empty. As a result, a clause of the form *keen-een VP* should be incorrectly judged as felicitous and true, even when it is used to talk about plural or mass entities, such as beas or honey, respectively. The same reasoning applies *mutatis mutandis* to universal *jeder-een*. We have seen, though, that *keen-een* and *jeder-een* cannot range over plural and mass entities.

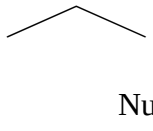
In light of this, I adopt a proposal by Heycock & Zamparelli (2005: 232), according to which indefinite/cardinal elements, such as LG *een*, have no truth-conditional effect. Instead, they are endowed with a formal feature [-LATT]. This [-LATT]-feature is comparable to Borer's (2005) feature [div] in #P and Harbour's (2008) feature [+/- singular], and must be matched with a corresponding feature on the covert NP-complement under the formal operation of AGREE (Chomsky 2001). The requirement of feature agreement triggers a presupposition to the effect that the NP-denotation must have no lattice structure.[14] This presupposition will only be satisfied by singular count NPs, the denotations of which – in Low German, same as in SHG and English – consists exclusively of differentiated singular individuals (Corbett 2000: 19). It follows that complex PQEs in Low German cannot be used to quantify over the domains of plural or mass individuals, which DO form a lattice structure; see Link (1983).

By way of conclusion I illustrate the syntactic derivation and interpretation of the universal Low German PQE *jeder-een* 'everyone' and of the ungrammatical **veel(e)-een* 'much a' in (21ab). Crucially, it is impossible for a covert NP to satisfy both the formal [-LATT] requirement of the Num-head *–een* and the semantic [+LATT] requirement of the quantifier *veel(e)* 'much/many' in (21b). By contrast, the matching [-LATT]–features of *–een* and the covert NP are compatible with an atomicity requirement in the lexical meaning of the distributive quantifier *jeder* 'every' in (21a); see also fn. 16.

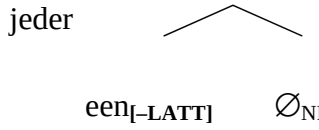
(21) a.



b.



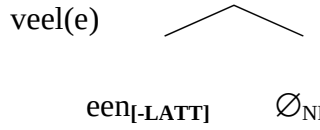
[14] Instead of postulating a formal syntactic feature [-LATT], it is also possible to adopt a more semantic approach, by writing the presupposition directly into the lexical entry of *–een*, as in (i):
(i) ⟦*een* ⟧= $\lambda P_{<et>}$. P; defined iff P consists of atomic individuals only.



⟦ jeder ⟧ =

$\lambda f_{<et>}$: $\forall x \in dom(f)$: atom(x).

$\lambda Q. \lambda g_{<et>}. \forall z$ [f(z)]: g(z)



⟦ veel ⟧ =

$\lambda f_{<et>}$: $\forall x,y \in dom(f) \wedge x \neq y$: $x<y \vee y<x$. $\lambda g_{<et>}$. the amount (number) of substance (entities) satisfying both f and Q is larger than a contextually given standard (Partee 1989).

Adopting Zamparelli's (2000) ban against semantic redundancy, another possibility would be to get rid of the additional presupposition in the meaning of *jeder*, such that the non-lattice requirement is exclusively provided by the meaning of *–een*. This is in keeping with a claim in Leu (2009: 174) that "there is always an *ein* present with determiner *jed-*, albeit not always overt". Interestingly, overt co-occurrences of (seemingly) distributive *jed-* and *ein* as a non-lattice marker are also attested in Standard High German.

2.5 *Jeder-een* and *ein jeder*

As already mentioned in section 2.1, the distributive PQE *jeder-een* 'every a' in Low German does have a complex High German counterpart with reversed word order, *ein jeder* 'an every', which can be optionally used in place of the simplex distributive *jeder*; see e.g. Kallulli & Rothmary (2008), Leu (2009), Roehrs (to appear) for recent discussions of *ein jeder*, and Pafel (1995) for an earlier treatment. An example from (Roehrs, to appear) is provided in (22):

(22) **(Ein) jedes** Kind sagte ein Gedicht auf.

an every child recited a poem PRT

'Each and every child recited a poem.'

Roehrs (to appear) and Kallulli & Rothmayr (2008: 129-130) show convincingly that the overt presence of *ein* strengthens the distributive meaning of the distributive quantifier, and they argue that *ein* modifies the meaning of the *jeder*-DP semantically. In view of the foregoing discussion of Low German *een*, a natural way of accounting for this strengthening effect would seem to consist in attributing it to the overt presence of *ein*, which appears to be specified as a [-LATT]-marker in High German as well.

In what follows, I briefly consider the different syntactic analyses proposed for *ein jeder*-DPs in Standard High German regarding their applicability to Low German *jeder-een*, paying particular attention to the question of semantic interpretability. To begin with, Kallulli & Rothmayr (2008: 130) propose the recursive DP-structure in (23) for *ein jeder*, but, again, their proposal fails on semantic grounds: They analyze the *–der* in *jeder* as a run-off-the-mill definite determiner, which triggers a uniqueness presupposition on the denotation of its singular NP-complement. *Ein jeder*-DPs are thus falsely predicted to be only felicitous in situations in which there is precisely one individual satisfying the NP-restriction.[15]

(23) $[_{DP}$ ein $[_{QP}$ je $[_{DP}$ der $NP_{SG}]]]$

Semantic problems aside, it is not immediately obvious how to derive the word order in LG *jeder-een* from the structure in (23), at least when an overt NP-complement is present; see (17) and fn.13 above.

[15] The second possibility of treating the purported definite determiner in (23a) as (trivially) picking out the unique kind denoted by the NP fails as well, for this would falsely block *ein jeder*-DPs from occurring in episodic sentences, which do not predicate over the kind as a whole; see Matthewson (2001) for discussion.

Based on the agreement properties of distributive quantified expressions built around *jed-*, Leu (2009) argues convincingly that the *–der*-part of *jeder* should not be analyzed as a definite determiner, but rather as a combination of two functional elements, an AP-complemetizer *d* and an adjectival inflectional head *–er*, which are both part of a complex AP built around the quantificational adjective *je*, as illustrated in (24a), in which the AP is c-commanded by another functional projection headed by *ein*. Importantly for our discussion of LG *jeder-een*, and based on cross-linguistic considerations (see below), Leu (2009: 174f.) postulates the structure in (24a) as the underlying structure for any kind of *jeder*-DP, with or without overt *ein*. According to him, and as illustrated in (24b), *je* in *jeder*-DPs without overt *ein* "moves to the left of *ein*, with the effect that *ein* can no longer be pronounced".

(24) a. [ein $[_{xAP}$ je_1-d_{COMP}-er_{AGRA} t_1 $]_2$ $[_{DP}$ $D_{\varnothing}$ Leopard t_2]

b. je EIN [t_{je} der NP]]

Clearly, the word order in (24b) does not match that observed with Low German *jeder-een*. Rather, it seems that the only feasible option for deriving the Low German word order from the underlying structure in (24a) would involve moving the entire xAP containing *jeder* across *een*, an option also compatible with the analysis of *ein jeder* in Roehrs (to appear).

Based on semantic and morpho-syntactic criteria, such as the agreement properties of DPs containing *ein jeder*, Roehrs (to appear) proposes three different structures for *ein jeder*-DPs in synchronous German. Next to the two syntactic analyses in (25ab), on which *jeder* is analyzed as a quantified phrase and a D-head, respectively, whereas *ein* is treated as a D-head or a modifying phrase in the specifier of an intensifier phrase IntP, respectively, there is also the emerging lexicalized variant in (25c), in which *ein* and *jeder* combine to form a complex D-head headed by *jeder*.

(25) a. $[_{DP}$ ein$_{D}$ $[_{CardP}$ jeder NP]]

b. $[_{IntP}$ ein Int $[_{DP}$ jeder$_{D}$ NP]]

c. $[_{DP}$ $[_{D}$ $[_{prefix}$ ein] jeder] NP]

Abstracting away from the theoretically undesirable state of a three-way ambiguity, the structures in (25a) would allow for the derivation of the Low German word order by moving phrasal *jeder* across the next higher D-head *ein*, possibly to Spec, DP. This does not solve the more general semantic problem, though, of how to interpret *ein* on top of the distributive quantifier expression *jeder*, a fate which Roehr's analysis shares with the two competing syntactic accounts. In a nutshell, the problem is that both the variable introduced and bound by *jeder*, and in particular the quantifier's nominal restriction P, are no longer accessible at the point at which *ein* enters the semantic derivation. By contrast, taking the structure proposed for Low German PQEs in (19) from section 2.3 as the underlying structure for SHG *ein jeder* as well, the semantics follow directly. By combining with its NP-sister, the [-LATT] *ein* checks that the NP-denotation will consist of atomic individuals only. The resulting set of atoms then provides an adequate range for the distributive quantifier *jeder*, as illustrated for Low German *jeder-een* in (21a) above.

Based on semantic considerations, we hence conclude that the surface structure of SHG *ein jeder* is derived by overt movement of *ein* across the quantificational determiner expression *jeder*. This conclusion is amply supported by cross-linguistic evidence from Romance, to be discussed in the next sub-section, as well as by diachronic evidence from Middle English, which still exhibits the underlying Low German word order *distributive quantifier > [-LATT]-marker*; see Leu (2009: 189) for the original source of this example.

(26) He dronk of **eche a** diche.
He drank of each a dish
'He drank from each dish.'

2.6 Cross-linguistic variation in PQEs

The existence of complex PQEs sets Low German apart from contemporary Standard High German and most other (e.g. Central and Upper) German dialects, as well as from Low German's close neighbor Dutch, which – with the exception of *ein jeder* and its counterparts in the individual languages/dialects – feature no complex PQEs in their grammatical systems (section 2.1).[16]

At the same time, complex PQEs in LG differ from their English counterparts in the role that the feature specification [+/-LATT] plays in their formation. In LG, complex PQEs are specified for the features [SG] and [-LATT] and therefore range over singular discrete entities, but they are insensitive to the featural distinction [+/-HUMAN], cf. (10). By contrast, complex PQEs in English are specified for the features [SG] and [+/-HUMAN], but not for [-LATT]. It follows that these expressions can range over atoms [-LATT] or mass entities [+LATT] alike, as long as their grammatical number is SG. To be concrete, the restricting expression *–one/–body* is specified as [SG, +HUMAN]. From this, it follows that it is also specified as [-LATT] and can never range over plural or mass entities, cf. (27a). Nor can it range over the domain of [-HUMAN] entities, as shown in (27b):[17]

[16] Dutch features the forms *elk-een* 'each one' and *ieder-een* 'everyone', and the Luxemburg variant of Central Franconian has the alternative forms *jidder-än, gidder-än,* and *jiddwider-än* 'everyone'. More generally, the complex PQE with the widest cross-linguistic distribution appears to be the one headed by the inherently distributive quantifier corresponding to *each*/ *every*. In line with the discussion surrounding the derivation in (21a), I contend that the cross-linguistic preference for the morpho-syntactic affinity of distributive quantifier and the non-lattice marker *een* follows from the semantic nature of strong distributivity, which – by definition – affects the individual atomic elements of a set.

[17] It follows that the *–one*-part in English *someone* differs from the NP-proform *one*, as in (i), which is shown to be specified for [-LATT], but not for [+HUMAN] in Barbiers (2005):
(i) Mary bought an interesting book and Paul bought a boring **one**.

(27) a. *I found **someone**, namely a team / a group of / some students.

b. *I found **someone**, namely a book.

The other restricting expression *–thing* has the feature specification [SG, -HUMAN]. Crucially, the lattice feature of *-thing* is unspecified, or unvalued, allowing it to range over singular discrete entities and substances alike, cf. (8ab) above. The fact that the lattice feature of an expression can be unvalued will play an important role in the analysis of the LG expression *wat* put forward in section 3.4.

A related, but even more articulated system of complex PQEs is found in Romance languages, which allow for the construction of singular complex PQEs as well. Examples are given in (28a-c) for Spanish, Italian, and French, respectively (see also Leu 2009).

(28) a. cada **uno/a**, ning-**uno/a**, alg-**uno/a**

b. ciasc-**uno/a**, ness-**uno/a**, qualc-**uno/a**

c. chac-**un(e)**, auc-**un(e)**, quelque-**un(e)**

everyone no-one someone

The singular cardinal/indefinite expressions *uno/a* and *un(e)* in these constructions can be plausibly analyzed in parallel with LG *–een*, i.e. as carrying a formal feature [-LATT]. Crucially, Romance PQEs also exhibit the word order *Q > a/one*, providing additional cross-linguistic evidence for adopting the Low German word order as the underlying word order for Standard High German *ein jeder* in section 2.5. In contrast to Low German, though, the Romance languages also have corresponding plural expressions that restrict the quantifiers to range over pluralities. According to Martí (2008), for instance, the Spanish plural form *unos/unas*, which occurs in the (complex) indefinite expressions *alg-unos (NP)* and *unos*

NP,[18] restricts the NP-denotation to contain only plural individuals by filtering out all the atomic individuals from the NP-denotation. In the present system, one can easily implement this by assigning *uno-s* (or *una-s*) the feature [+LATT], making it the semantic complement of Low German *–een*.[19]

2.7 Summary

Complex PQEs in Low German provide overt evidence for a complex DP-structure containing a functional projection NumP between the NP- and DP-layer, as illustrated again in (29):

(29) $[_{DP}\ Q\ [_{NumP}$ een $[_{NP}\ \varnothing\ ]]]$

Since *–een* is specified as [-LATT], its presence ensures that the Q-domain of the quantifier contains only singular discrete entities. It follows that complex PQEs can never quantify over plural or mass entities. A similar system of complex PQEs is found in the Romance languages, while such complex forms are curiously absent from most other Germanic languages and German dialects. This gives Low German an important role to play in the syntactic and semantic study of DPs in German(ic).

[18] An anonymous reviewer points out that the same holds for the plural form *uni* in Italian *alc-uni* 'some.pl' and *ness-uni* 'nobody.pl', as well as for the pluralized form *uns* in French *auc-uns*.

[19] The [+LATT]-marking of *unos/unas*, which effects the filtering out of atomic individuals from the NP denotation, is essentially due to the plural marker *–s*, which has the same semantic effect on lexical nouns (see e.g. Martí 2008, Wilhelm 2008). A remaining puzzle is if and how the complex forms get the feature [+LATT] in a compositional way, since the SG forms *uno/una* were argued to be marked for [-LATT] above. A possibility would be to assume a unification procedure on which identical features with different feature values combine by taking the positively specified value. Alternatively, one could follow Martí (2008: 28) in assuming that the lattice feature of the SG forms *uno/una* is not specified, or, one could give up on synchronic compositionality and simply assume that the forms *unos/unas* have been lexicalized with the feature specification [+LATT].

3. Indefinite expressions in Low German: The status of *een* vs. *wat*

This section takes a closer look at the simplex PQEs *een* 'one' and *wat* 'something' (as well as its negative counterpart *nix* 'nothing') from (7ab), repeated as (29ab):

(29) a. Gerd hett **wat** / **nix** köfft.
Gerd has something nothing bought
'Gerd bought something / nothing.'

b. **Een** hett anropen / Dor hett **een** anropen.
someone has called / there has someone anropen
'Someone/One person has called.'

At first sight, the two expressions appear to be parallel in structure and meaning. Both can occur as existential pronominal quantifiers on their own. And both seem to act as indeterminate pronouns with the feature specification [+HUMAN] for *een* and [-HUMAN] (or [+THING]) for *wat*. Hence, both forms might be plausibly analyzed as NP-proforms. In addition, the two expressions have the same distribution in declarative clauses, as shown in section 3.1. Finally, the simplex PQE *een* in (29b) differs from occurrences of *–een* as part of a complex PQE (section 2) in that its Q-domain is restricted to human individuals, a point to which we will return in section 3.4. Again, this seems to support a treatment of bare indefinite *een* not as a functional [-LATT] head in Num, but as a proper NP-proform.

Still, this section argues that – despite first appearances – the two expressions *een* and *wat* in (29ab) differ in their syntactic structure and in their formal feature specification and should therefore *not* be analyzed on a par. This conclusion is based on differences in the morpho-syntax of the two expressions, on differences in the DP-internal syntactic distribution of these elements, and on observable interpretive differences between the two elements. As a result,

the simplex PQE *een* is analyzed as the [-LATT] head of NumP, on par with the occurrences of *een* inside complex PQEs discussed in section 2, cf. (30a). The simplex PQE *wat*, in contrast, is analyzed as a genuine NP-proform with an unvalued lattice feature, cf. (30b).

(30) a. $[_{DP} \varnothing \quad [_{NumP}$ een$_{[-LATT]} \quad [_{NP} \varnothing \quad]]]$

b. $[_{DP} \varnothing \quad [_{NumP} \varnothing \quad [_{NP}$ wat$_{[LATT]} \quad]]]$

Section 3.1 introduces the external syntactic distribution of *een* and *wat*. Section 3.2 discusses differences in the agreement behavior and the DP-internal distribution of both expressions that motivate the asymmetric analysis in (25ab). Section 3.3 puts forward additional evidence, which comes in form of the different possibilities of *een* and *wat* for anaphoric reference to indefinite antecedents. The different anaphoric properties of *wat*, as opposed to *een*, give us further insight into the feature specification of *wat*, to be discussed in 3.4. Section 3.5 adds a few comments on micro-variation in the feature content of indefinite/cardinal expressions built on the number word *one*, briefly comparing Low German *een* to its Dutch and English counterparts *een* and *one*, respectively.

3.1 The distribution of *een* and *wat* in declarative clauses

Een and *wat* have the same syntactic distribution in declarative clauses. When used as simplex PQEs, both expressions occur preferably in unstressed position in the middle field:

(31) a. Dor / vondoog hett **een** anropen.
there today has someone called
'Somebody called (today).'

b. Fritz hett **wat** köfft.

Fritz has s.th. bought

'Fritz bought something.'

Occasionally, the two expressions occur sentence-initially, too, preceding the finite verb.[20]

(32) a. **Een** hett anropen.

someone has called

'Someone/One person has called.'

b. **Wat** hett Fritz verjoogt, dor wöör ´n swatte Kat.

something has Fritz scared there was a black cat

'Something scared Fritz, namely a black cat.'

The parallel distribution of indefinite *een* and *wat* in the clause would follow if *een* and *wat* were structurally identical NP-proforms. However, it also follows on the alternative asymmetric analysis in (30ab). On either account, *een* and *wat* are the sole overt subparts of an indefinite DP headed by a covert determiner. The parallel distribution is therefore expected, since it is independent of differences in the internal make-up of *een*- and *wat*-DPs.

3.2 Differences between *een* and *wat*

Looking closer at the morpho-syntax, prosody, and the DP-internal distribution of *een* and *wat*, a number of important differences emerge, though. Importantly, just like the instantiations of *een* as an indefinite determiner in (2) above, *een* also inflects for gender and

[20] In this respect, LG differs from SHG, which does not allow for bare *wh*-indefinites in sentence-initial position. Instead, the complex form *etwas* is required.

(i) **Etwas** / ***was** hat Fritz erschreckt.
something what has Fritz scared
'Something scared Fritz.'

case when occurring on its own, as shown in (33a) and (34a), whereas bare *wat* does not, cf. (33b):

(33) a. Dor hett **een-e** anropen.
There has one-FEM called
'Some female called.'

b.***Wat-e** hett Fritz verjoogt, dor wöör ´n swatte Kat.
Something-FEM has Fritz scared there was a black-FEM cat.FEM

Recalling from section 1.1 that overt gender inflection in Low German is only found on functional expressions, but never on the NP, the agreement facts point to a different structural status of *een* vs *wat*.

Second, *een* can be focused and function as the associate of the focus particle *man* 'only', whereas *wat* cannot:

(34) a. Fritz hett **man ENE-N** inloodt.
Fritz has only one-OBL invited
'Fritz invited just ONE person.' NOT: #'Fritz invited just SOMEBODY.'

b.#Fritz hett **man WAT** köfft.
Fritz has only something bought
#'Fritz bought just SOMETHING.'

The infelicity of (34b) and its English paraphrase shows that bare *wat* behaves on par with English *something*, which cannot be focused due to its nature as an indeterminate pronoun

(see e.g. Beaver & Clark 2008). This suggests that *wat*, too, is an indeterminate NP-proform, with no additional modifying use on which it would restrict an overt or covert NP. Conversely, the well-formedness of (34a) shows that bare *een* is not interpreted as an indeterminate pronoun, as also evidenced by the infelicity of the second paraphrase. But then the same should hold for the variant of (34a) in (35) without the focus particle *man*:

(35) Fritz hett **ENE-N** inloodt.
Fritz has one-OBL invited
'Fritz invited one person.'

Third, (36a) shows even more clearly that *wat* and *nix* cannot occur in an adnominal position, unlike *een*, which can on a cardinal or plain indefinite use, cf. (36b).[21] Again, the different distribution follows directly if *wat* is an NP-proform, whereas *een* is a functional head in Num.

(36) a.*Gerd hett **wat** / **nix** **Melk** köfft.
Gerd has something nothing milk bought
INTENDED: 'Gerd bought some amount of / no amount of milk.'
b. Gerd hett **een** **Melk** / **een** **Brood** köfft.
Gerd has one milk one/a bread bought
'Gerd bought one (pack/bottle of) milk/ one bread.'

[21] Lindow et al. (1998: 182) observe that in certain varieties of LG *wat* can precede overt NPs, in which case it is interpreted as 'some, a little': *wat Holt* 'some/ a little wood.' It is possible that the NP *Holt* 'wood' derives historically from a postnominal genitive modifier, as evidenced by the fact that *wat* can be followed by (nominalized) adjectives carrying the old genitive case marker *–s*, as shown in (i) (Lindow et al. 1998: 182):
(i) **wat** Warm-s
something warm-GEN
'something warm'
In addition, the acceptance of prenominal *wat* may increase under the influence of the SHG expression *etwas* 'some', which freely combines with mass nouns.

Finally, *wat* can be modified by *'n beten* 'a little', cf. (37a), a property that it shares with mass nouns, cf. (37b), but not with *een*, cf. (37c). [22]

(37) a. Ik heff **'n beten** **wat** eten.
I have a little s.th. eaten

b. Ik heff **'n beten** **Brood** eten
I have a little bread eaten
'I have eaten a little something/ bread.'

c.*Ik heff **'n beten** **een** anropen
I have a little one called

Taken together, the data in (33) to (37) strongly suggests that *wat* is an indeterminate NP-proform with the syntactic status of a (singular) mass noun. Like mass nouns, we analyze *wat*-DPs as headed by a covert determiner:

(38) $[_{DP}\ \varnothing\ [_{NumP}\ \varnothing\ [_{NP}$ wat / Brood]]]

Conversely, indefinite *een* should not be analyzed as an NP-proform. Rather, the different behavior of *een* suggests that it is always a functional head in NumP, as illustrated in (30a), even when it occurs on its own.

[22] The editors of JCGL point out, correctly, that the difference between (37a) and (37c) does not constitute conclusive evidence for a different structural status of *wat* vs *een*, as the ungrammaticality of (37c) may simply be due to an incompatibility of *een* [-LATT] and *n'paar*, which appears to require a [+LATT]-complement. Still, the observed parallelism between *wat* and mass nouns in (37ab) is fully compatible with the data in (33) to (36), which suggest that *wat* is indeed an indeterminate NP-proform.

In section 4, I present yet more evidence in favor of the asymmetric analysis of *een* and *wat*. There, it will be shown that *wat*, but not *een*, can also occur as operators, namely as *relative pronoun* and *interrogative pronoun*. It will be argued that these different pronominal occurrences follow from an under-specification in the feature content of *wat*. Before we turn to the (semantic) feature content of *wat*, though, let us briefly look at the possible ways of anaphoric reference to indefinite antecedents in LG. The discussion will pave the way towards the formal analysis of *wat* in section 3.4.

3.3 Anaphoric reference to indefinite antecedents

Standard High German resembles English in displaying a two-way split when it comes to anaphoric reference to indefinite antecedents. While *ein-* 'one' is used to refer back to a singular count noun, the stem *welch-* 'some' must be used to refer back to singular mass nouns or plural nouns (Glaser 1993). The system is illustrated in (39):

(39) a. Hast Du 'ne Schaufel da? Im Schuppen ist **eine /*welche**. SG, count
Have you a shovel there in.the shed is one some
'Do you have a shovel? There is one in the shed.'

b. Möchtest Du Zucker? Im Schrank ist noch ***einer**/ **welcher$_{SG}$**. SG, mass
want you sugar in.the cupboard is still one some
'Would you like some sugar? There is still some in the cupboard.'

c. Magst du Erdbeeren? Im Garten sind ***eine**/ **welche$_{PL}$**. PL
like you strawberries in.the garden are one some
'Do you like strawberries? There are some in the garden.'

The two-way split in German can be accounted for if *ein-* is specified as [-LATT] and *welch-* as [+LATT]. Which of the two anaphoric options for *welch-* is realized is indicated by number marking on the stem. If *welch-* refers back to a mass noun, it must inflect for singular number: [+LATT, SG]. If it refers back to an indefinite plural noun, it occurs in the plural form: [+LATT, PL].

The anaphoric system of Low German is quite different in that the feature [+LATT] is not realized on a unique morphological stem. Unlike in High German, there is no single form that would allow for anaphoric reference to indefinite mass nouns and indefinite plural expressions alike. Instead, the anaphoric system of Low German exhibits a three-way split, illustrated in (40a-c). Anaphoric reference to singular count NPs is indicated by *een(e)* 'one', cf. (40a). Anaphoric reference to mass nouns is indicated by *wat* 'some', cf. (40b). And anaphoric reference to plural expressions is indicated by *welk(e)* 'some', cf. (40c):

(40) a. Hes(t) Du 'n Schüffel dor? Dor inne Schüün staat **een**. **SG, count: *een-***
Have you a shovel there there in.the shed stands one
'Do you have a shovel? There is *one* in the shed.'

b. Ik müch noch mehr Beer. Dor inne Buddel is noch **wat**. **SG, mass: *wat***
I want still more beer there in.the bottle is still some
'I would like more beer. There is still *some* in the bottle.'

c. Magst du Eerdberen? In`n Goorn sünd **welk(e)**. **PL: *welk(e)***
like you strawberries in.the garden are some
'Do you like strawberries? There are *some* in the garden.'

The system of anaphoric reference to indefinite expressions in LG thus shows the same three-way split between reference to singular discrete entities, mass and plural entities as the

system of PQEs. Furthermore, the anaphoric expressions used are identical to the expressions occurring in the PQE-paradigm: Reference to antecedents denoting singular discrete entities is indicated by *een*. Reference to antecedents denoting mass entities is indicated by *wat*. And reference to antecedents denoting plural entities is indicated by *welk(e)*, which also occurs as a simplex PQE, cf. (6).[23]

This empirical generalization would suggest the preliminary feature specification in (41) for the three functional elements *een*, *wat*, and *welk(e)*, respectively:

(41) Feature specification of *een, wat, and welk(e)* (**TO BE REVISED**):

a. *een*: [SG, -LATT] singular count NPs

b. *wat*: [SG, +LATT] singular mass NPs

c. *welk(e):* [PL, +LATT] plural NPs

On this account, LG would have two anaphoric expressions with a feature specification [+LATT], namely *wat* and *welk(e)*, and which of the two forms is chosen in a particular context would be subject to number agreement. Singular mass NPs trigger the presence of *wat*. Plural NPs trigger the choice of *welke*. The system in (41) seems to be complete in the sense that it expresses each of the three possible feature combinations of SG/PL and [+/-LATT]

[23] The system of anaphoric reference to indefinite NPs is subject to heavy variation across the dialects of German. Glaser (1993) discusses the systems of anaphoric reference to indefinites in two groups of Upper German dialects, which differ from LG and SHG in different ways. The dialects of *South East Palatian* and *Badish* display a two-way split between count and non-count NPs like SHG. But while reference to SG count NPs is expressed by the overt element *ɛn(s)* 'one', reference to mass and plural antecedents involves a zero element ∅ (Glaser: 104f.). Here, ∅ seems to function as the covert counterpart of SHG *welch-*, and can be assumed to carry the feature specification [+LATT]. In the other group of dialects, consisting of *Suabian* and *Bavarian*, there is no split all. The same expression, namely the dialectal variant of SHG *ein* 'one', which is formally identical to the indefinite article, shows up with all kinds of indefinite antecedents, be they SG count nouns, mass nouns or plural nouns (Glaser 1993: 106). A promising way of accounting for the across-the-board occurrence of the Suabian/ Bavarian variants of *ein* 'one' would be to assume that their lattice feature is not specified, or valued. Such an analysis receives additional support from fact that these expression also occur as overt indefinite articles with mass nouns (but not with plural nouns) (Glaser 1993: 108). I leave this matter open for further research.

by means of one natural language expression, while the fourth combination [PL, -LATT] is excluded on principled grounds. Moreover, the feature system in (41) would directly extend to the system of PQEs in Low German, which were shown to be sensitive to exactly the same semantic and grammatical distinctions in section 2.

However, even though the system in (41) is conceptually attractive, it turns out to be empirically inadequate in that it does not account for all the semantic properties of the simplex PQE *wat*. In the next subsection, we will encounter a complication in the data that forces us to adopt a revised version of (41). As a result, the simplex PQE *wat* can no longer be analyzed as having a positively valued lattice feature [+LATT]. Instead, *wat* is argued to be underspecified, with its lattice feature coming unvalued from the lexicon.

3.4 The feature content of *wat*: [LATT, +THING]

The complicating factor for the analysis of the feature content and meaning of LG *wat* 'something' has to do with the fact that the Q-domain of the PQE *wat* can sometimes consist of singular discrete entities as well. Just like the English sentences with *something* in (8), (29a) with *wat*, repeated as (42a) for convenience, can be felicitously uttered even when Gerd bought a singular discrete entity that is denoted by a singular count noun, cf. (42b)

(42) a. Gerd hett **wat** köfft,
Gerd has something bought
'I have bought something.'

b. neemlich een Glas [+ count]
that is a glass

c. neemlich (*een) Melk[24] [- count]

[24] The presence of *een* in (42c) can be licensed by an additional classifier, as in *een Kan Melk* 'a can of milk'.

that is a milk

This finding casts some serious doubt on the feature specification of *wat* as [+LATT]. Instead, I would like to propose that *wat* has a lattice feature, but that this lattice feature is unvalued. That formal features can be lexically unvalued and are only valued later in the derivation, e.g. under agreement, has been proposed, among others, by Pesetsky & Torrego (2001, 2004ab) and Heycock & Zamparelli (2005).[25] On this account, which value the [LATT]-feature of *wat* will take depends on the latter's syntactic environment, more specifically on the feature specification of the c-commanding Num-head. The two interpretations of *wat* in (42) can then be derived as follows: On the count reading (42b), *wat* is selected by a covert [-LATT] Num-head and its lattice feature is assigned the negative value ([-LATT]) under agreement.[26] On the mass reading (42c), *wat* is selected by a [+LATT] Num-head and its lattice feature is assigned the positive value ([+LATT]) under agreement. In other words, the PQE *wat* in (42a) is structurally ambiguous and has the alternative structures in (43ab).[27]

[25] The analysis of LG *wat* in terms of unvalued features resembles claims in Jäger (2000) and Bayer (2002) to the effect that the feature content of High German *was* is underspecified. See section 4 for more discussion.

[26] The asymmetric analysis of *wat* and *een* makes the interesting prediction that unvalued *wat* shold be able to co-occur with the overt Num-head lexically specified as [-LATT], i.e. with *een*, which would set the lattice feature of *wat* to [-LATT]. We would thus expect to find occurrence of the complex phrase *een-wat*, meaning 'one thing', and ranging over singular discrete entities. Closer inspection shows that such *eenwat*-constructions are indeed widely attested in substandard varieties of Southeastern Germany (Thuringia, Saxony). A *google*-search delivers many examples of *einwas* 'one-something', cf. (i). Combinations of higher cardinals with *wat*, e.g. *zweiwas* 'two things', *dreiwas* 'three things' etc, are also readily found.

(i) Die agierenden Personen auf dem Foto unten haben **einwas** gemeinsam.
the acting persons on the picture below have one.thing in.common
'The acting persons in the picture below have one thing in common.'
uls.btstadler.org/content/view/8/26; 01-10-07

IThe *eenwat*-construction is also found in Afrikaans and Dutch, as illustrated in (ii):

(ii) Soms vind je nog **een wat** op en oude tape. [Dutch]
Sometimes find you still one thing on an old tape
'Sometimes one still finds something on an old tape.'
http://www.youtube.com/watch?v=wfynOe3WKkc; 16-05-11

In Low German, though, the construction does not seem to exist, as witnessed by the ungrammaticality of (iii):

(iii) * Ik wüll **een wat** to drinken.
I want one something to drink
INTENDED: 'I want one/something to drink.'

Unfortunately, a more systematic investigation of this intriguing phenomenon is beyond the limits of this article.

[27] It is conceivable that all mass nouns in LG come with an unvalued lattice feature. Combining them with a covert [+LATT] Num-head, as in (43a), would then give rise to a mass interpretation, whereas combining them

(43) a. $[_{DP}\ \varnothing \quad [_{NumP}\ \varnothing_{[\textbf{-LATT}]} \quad [_{NP}\ \text{wat}_{[\textbf{-LATT}, SG]}\ ]]]$ [+ count]

b. $[_{DP}\ \varnothing \quad [_{NumP}\ \varnothing_{[\textbf{+LATT}]} \quad [_{NP}\ \text{wat}_{[\textbf{+LATT}, SG]}\ ]]]$ [- count]

Looking closer at the semantic content of *wat* in LG, we need to add one more meaning component. As was shown for complex PQEs in (10) and for anaphoric expressions in (40a), *een* is unspecified for the feature [+/-HUMAN], or alternatively for the feature [PERSON], as it can range over persons and things alike. Things are different in the case of *wat*, which can never range over persons, as it is lexically specified to range over things: A sentence such as (44) can never be used for referring to the fact that the speaker has seen some person or other.

(44) Ik heff **wat** seihn**.**
I have something seen
'I saw something.' NOT: 'I saw somebody.'

This restriction to the domain of things leads us to add [+THING] to the feature specification of *wat*. Here, [+THING] is treated as a semantic feature that adds a presupposition to the effect

with the overt [-LATT] Num-head *een*, as in *een Brood* 'a/one bread', would yield the count interpretation in terms of individual units. A more radical solution, which would do away with empty heads without a PF-spellout altogether, would consist in assuming that any bare noun in LG comes specified as mass from the lexicon and that the ultimate semantic interpretation of the extended NP as [count, sg], [cont, pl] or [mass] will depend on the filling of the Num-head: (i.) the presence of *een* in Num would lead to a splitting up of the mass NP denotation into its atomic subparts (see Wilhelm 2008 on such an atomizing function for numerals in Dëne Sųłiné), cf. (ia); (ii.) if Num is filled with a plural head, overtly marked by plural morphology on the noun, the result will be a lattice structure built from a sublayer of atomic entities, cf. (ib); (iii.) if Num is empty/not projected, the extended NP will retain its mass interpretation.

(i) a. $[_{NumP}\ \text{een}_{[\text{-LATT}]}\ [\ NP]]$: count, SG
b. $[_{NumP}\ \text{PL}_{[\text{+LATT, PL}]}\ [\ NP]]$: count, PL
c. $[\ \varnothing\ [\ NP]]$: mass

that the Q-domain of *wat* contains non-human individuals only.[28] We thus arrive at the feature specification for *wat* in (45a), which replaces (41b) from above. This feature specification is different from the feature content of *een*, which is shown again in (45b).

(45) a. *wat*: [SG, +THING, LATT]

b. *een*: [SG, -LATT]

For concreteness, the full semantic representation of *wat* is given in (46), where *P* is a contextually bound property.

(46) $[\![\text{wat}]\!] = \lambda x \in D_{[e \cup e+]}$. P(x); defined iff $x \in [\![\text{thing}]\!]$

Later on in the derivation, the individual variable *x* is existentially bound. For simplicity, we assume that this existential closure is brought about by a covert existential quantifier in D.

Section 4 will see the addition of yet another feature to the feature matrix of *wat* in (45a). Before we go on, however, let us attend to a potential problem with the feature specification in (45). The alert reader may wonder why the bare PQE *een* must necessarily make reference to the domain of humans. After all, *een* is not specified for the feature [+/-HUMAN] in (45b). So, in full parallel to the count and mass uses of *wat* encountered in (42) above, we might expect sentence (47) to refer to a situation in which Gerd saw not someone, but something.

(47) Gerd hett **een** seihn

Gerd has one seen

[28] This treatment of LG *wat* crucially differs from Jäger's (2000) and Bayer's (2002) analysis of High German *was* as lacking a semantic feature [+THING]. The absence of a person interpretation for (44) strongly suggests, though, that LG *wat* is indeed specified as [+THING].

'Gerd saw somebody.' NOT: 'Gerd saw something (e.g. a house).'

This reading for (47) is indeed possible if *een* is used anaphorically, for instance, in an answer to the question *Wokeen hett een koteiker seehn?* 'Who saw a squirrel?'. Crucially, though, the thing-oriented reading is unavailable in out-of-the-blue contexts, where the PQE *een* must range over the domain of human individuals, see also (29b) and (32a) above. Why, then, is the thing-oriented reading not available for (47)? I would like to argue that the restriction follows from Heim's (1991) principle of *Maximize Presupposition*, which says that if one has the choice between two alternative expressions, here *wat* and *een*, for referring to a certain concept, here the domain of (contextually restricted) things, one should use the alternative that allows for the stronger presuppositions.[29] In the case at hand, this will be the variant *wat*, which is inherently specified as [+THING] and adds a presupposition to this effect. In other words, if one wants to make reference to the domain of singular discrete things by means of a simplex PQE in Low German, one must use the form that is lexically specified to do just that, which is *wat*. Notice, furthermore, that the [LATT]-feature of *wat* always ends up being valued in its syntactic context (i.e. under Num), as e.g. in (44), such that *een* does not allow for a stronger presupposition in the lattice-dimension either.[30] It follows that (47) cannot be felicitously used as an out-of-the blue report of a situation in which Gerd saw something.[31]

3.5 Micro-variation in the syntax and feature content of ONE

[29] Heim (1991) introduced the principle in order to account for the use of the definite expression *the NP* over the indefinite expression *a NP* in contexts where only one individual satisfies the NP-denotation. Since, *the* comes with a uniqueness presupposition, it must be used in these contexts.
[30] Thanks to an anonymous reviewer for bringing this point to my attention.
[31] Moreover, the proposed analysis explains why *een*, and not *wat*, must be used for anaphoric reference to singular [+THING] count DPs, such as *een schüffel* 'shovel' in (40a). Assume that anaphoric reference of NP-proforms to an antecedent DP is possible only under feature identity in the lexicon. This formal restriction on anaphor resolution would then block *wat*, with its unvalued lattice feature, from referring to the [SG, **-LATT**, +THING] count DP *een schüffel*. The form that must be used is [SG, -LATT] *een*, irrespective of *Maximize Presupposition*.

The analysis of Low German *een* NOT as a NP-proform, but as a [-LATT]-specified functional Num-head raises the question of whether this analysis extends to instances of 'indefinite numeral ONE' (Barbiers 2005) in other varieties of West Germanic, or whether functional elements based on the numeral expression *een/one* in noun ellipsis constructions exhibit cross-linguistic (micro)variation as to their syntactic status. In fact, when comparing *een* with its counterparts in complex DP-constructions without a lexical NP in Standard Dutch, in the Dutch varieties Northern Brabantish, Frisian and Groningen, as well as in English, the following similarities emerge. According to Barbiers (2005: 169), the indefinite numeral expression is a Num-head with the feature specification [indefinite], [quantity: singular], and [focus] in all these languages. The feature [indefinite] relates to the fact that indefinite numerals differ from genuine plural numerals, such as *two* and *three*, in that they do *not* impose a cardinality restriction on the NP-denotation. Crucially, the features [indefinite] and [quantitiy: singular] conspire to yield the [-LATT]-effect of Low German *een* by imposing a count-interpretation on the NP (Barbiers 2005: 167). In addition, as shown in (35) above, *een* can be focused, same as its West Germanic cousins in the noun ellipsis construction of interest to Barbiers (2005), which is exemplified in (48):

(48) Do bist **in** raren (**ien**) [Frisian; Barbiers 2005: 159, ex. (1d)]
2SG are a strange one
'You are a strange one.'

This suggests that in all varieties considered it is possible to have the Num-head filled with a [-LATT] indefinite numeral in the absence of a full lexical NP.

As shown in fn.12, though, English differs from Low German, Standard Dutch, and the Dutch dialects, in that the form *one* can also occur as a genuine NP-proform (Barbiers 2005:

178). Second, the Dutch dialectal varieties, but not Standard Dutch, allow for the co-occurrence of the focused indefinite numerals *inne* (Northern Brabantish), *ien* (Frisian), and *ain* (Groningen), respectively, with an unstressed indefinite determiner, as illustrated in (48). This is impossible in Low German and Dutch, where *een* cannot cooccur with additional indefinite determiners. The Low German facts receive a natural explanation on the assumption that the indefinite determiner *een*, as illustrated in (36b) and (42b) above, and in (2) in the introduction, is just another instantiation of the [-LATT]-marked Num-head *een* in the presence of a full lexical NP. From this, it would follow that Low German (and possibly SHG and Dutch) lack indefinite determiners from their inventory of functional adnominal expressions altogether.

3.6 Summary

Despite first appearances, the syntax, prosody and semantics of the two simplex PQEs *wat* 'something' and *een* 'somebody' are quite different. The observed differences follow from the different syntactic status and the different feature specification of the two elements. Bare *een* is a [-LATT]-specified Num-head selecting for a covert NP-complement. Its feature specification is [SG, -LATT]. *Wat* is an overt NP-proform that is selected by a (typcially abstract) Num-head. Its feature specification is [SG, +THING, LATT], which gives *wat* more semantic content than *een*. This analysis of *wat* in terms of underspecification will undergo a final modification in the next section, where we show that the expression also occurs in operator position in the left periphery of the clause.

4. Operator *wat* in the left clausal periphery

Looking at the syntactic distribution and function of *wat* in closer detail, it shows that this expression can occur in other syntactic environments as well. Next to its use as a PQE, there

are three options for *wat* to occur as an operator expression in the left clausal periphery. First, *wat* can optionally substitute for the neuter relative pronoun *dat* in relative clauses, cf. (49). Second, it can occur as a *wh*-expression in *wh*-questions, cf. (50). Third, it can occur as complementizer in embedded *yes/no*-questions, cf. (51).

(49) dat Glas **wat / dat** ik ~~dat~~ twei mookt heff
the glass which that I two made have
'the glass which I broke'

(50) **Wat** hett Gerd ~~wat~~ köfft ?
what has Gerd bought
'What did Gerd buy?'

(51) Ik weet nich, **wat** de Bodder al smolten is.
I know not if the butter already melted is
'I don't know if the butter has melted already.'
http://www.plattpartu.de/kuenst/lueske1_biller.htm; 12.02.07

This section discusses the additional left-peripheral occurrences of *wat*, together with their implications for the lexical feature specification of *wat*. The occurrence of *wat* in relative clauses and *wh*-questions is discussed in section 4.1, where relative and interrogative instances of *wat* are analyzed as special instances of the PQE *wat* discussed in section 3. This follows directly if we add a second unvalued feature to the feature specification of *wat*, in this case a formal operator feature [REL/WH]. Section 4.2 turns to occurrences of complementizer *wat* in embedded *yes/no*-questions, which do not follow directly from the basic PQE-interpretation. As a result, instances of complementizer *wat* must be considered as separate functional items, which are only diachronically related to the PQE *wat*. Section 4.3 concludes

with a short discussion of micro-variation in the expression of relative clauses and *wh*-questions in German(ic) dialects.

4.1 The analysis of operator *wat*

In Low German, *wat* can optionally occur as a relative pronoun with singular neuter head nouns (Goltz & Walker 1989). In (49), we saw an example with *wat* relativizing over the object position. In (52), *wat* relativizes over the subject position.

(52) dat **Peer** [**wat** mi beten hett]
the$_{NEUT}$ horse which$_{NEUT}$ 1 SG bitten has
'the horse that bit me.'

The relative pronoun *wat* is illicit if the head noun is non-neuter or plural:

(53) a. de **Koteiker** [**de** / ***wat** mi beten hett]
the$_{\neg NEUT}$ squirrel which$_{\neg NEUT}$ which$_{NEUT}$ 1SG bitten has
'the squirrel that bit me'

b. de **Kei** [**de** / ***wat** mi beten hebt]
the cow.PL which$_{PL}$ which$_{SG,NEUT}$ 1SG bitten have
'the cows that bit me'

Assuming that head noun and relative pronoun agree in gender and number, this distribution follows directly if *wat* carries the grammatical feature [NEUT]. This assumption is

uncontroversial in light of the formal similarity between *wat* and the neuter determiner *dat* (section 1.2).[32]

Turning to instances of interrogative *wat* in *wh*-questions, there are no restrictions in terms of syntactic position. *Wat* is a *wh*-object in (50) and a *wh*-subject in (54). Moreover, *wat* is not restricted to matrix wh-questions, but is licit in embedded wh-questions as well (55).

(54) **Wat** hett di steken?
What has you stung
'What has stung you?'

(55) Mareike will weten, **wat** in`n Feernsehn kummt.
Mareike wantsknow what in.theTV comes
'Mareike wants to know what's on TV.'

Semantically, *wat* occurs as a *wh*-expression whenever the question is about a non-human entity. It cannot be used in questions about persons. The question in (56) becomes distinctly odd when *(wo)keen* 'who' is replaced by *wat*:

(56) **(Wo)keen / #Wat** hett Gerd inloodt?
who what has Gerd invited

[32] It is worth pointing out that the analysis of *wat* as an NP-proform from section 3 has interesting consequences for the analysis of relative clauses in general. According to Kayne's (1994) movement analysis of relative clauses, English relative clauses that are introduced by *which*, e.g. *the book which Peter read*, are derived from the underlying order *the* $[_{CP}$ $[_{IP}$ *Peter read* $[_{DP}$ *which book]]* by movement of the DP *which book* to Spec,CP. In a second step, the head noun *book* moves to the leftmost position inside the embedded CP. The resulting surface structure is shown in (i).
(i) $[_{DP}$ the $[_{\mathbf{CP}}$ [book $[_{DP}$ which ~~book~~]] $[_{IP}$ Peter read ~~which book~~]]]
The movement analysis in (i) crucially hinges on the status of the (surface) relative pronoun as a determiner that selects for the (surface) head noun as its complement. In contrast to English *which*, though, Low German *wat* is not a determiner. Consequently, the sequence *wat Peer* 'something horse' is ungrammatical and cannot form the base for the derivation of (52) in (i). Relative constructions such as (52) thus provide evidence against the Kaynean approach to relative clauses.

‘Who/#what invited Gerd?’ / ‘Whom/ #what did Gerd invite?’

The semantic restriction on *wh-wat* is predicted by our analysis of *wat*, which assigns it the semantic feature [+THING]. This feature triggers a presupposition to the effect that the domain of *wat* will consist of non-human entities only, see section 3.4. Moreover, the fact that *wat* can ask for mass entities and singular atomic entities alike is also predicted by our analysis. Since the lattice feature of the PQE *wat* is unvalued, the expression is flexible enough to range over both kinds of entities on its interrogative use as well (see section 3.4).

The discussion of *wat* in relative clauses and *wh*-questions provides further support for the asymmetric analysis of *wat* and *een*. Unlike *wat, een* cannot occur as an operator in the left periphery of these clause types, cf. (57ab). Instead, one must use the relative pronoun *de(n)* ‘that’, as in (57a), and the *wh*-expression (wo)keen ‘who’, as in (56) above.

(57) a. de Hoot, **den** / ***een** du jümmer op hest.
the hat which one you always up has
‘the hat that you are always wearing’

b. **Een** hett Gerd inloodt?
one has Gerd invited
‘Somebody/ One person invited Gerd?’
NOT: ‘Who invited Gerd?/ ‘Whom did Gerd invite?’

Table 2 sums up the different distribution of *wat* and *een* (in brackets, the expression that must be used in place of *een*).

Tab. 2: Distribution of wat *and* een

	PQE	**relative clause**	**wh-question**
wat	✓	✓	✓
een	✓	NO (de)	NO ((wo)keen)

As for the reasons behind this asymmetric distribution of *een* and *wat*, I propose that it follows from a combination of the difference in syntactic status (functional head vs. NP-proform) and differences in their feature content. Let us assume – in the spirit of Reis (1991) and Borer (2005) – that *wat*, but not *een*, is underspecified and carries an unvalued operator-feature [REL/WH] (in addition to its unvalued [LATT]-feature). Let us further assume that this feature must be valued by a c-commanding abstract C-head with the relevant feature specification under the operation AGREE, cf. Chomsky (2001).[33] The three relevant configurations are shown in (58):

(58) a. relative clause: $[_{CP}\ C_{[+REL]}\ [\ldots wat_{[\mathbf{REL/WH}]}\ ]] \rightarrow [_{CP}\ C_{[+REL]}\ [\ldots wat_{[+\mathbf{REL}]}\ ]]$

b. *wh*-question: $[_{CP}\ C_{[+WH]}\ [\ldots wat_{[\mathbf{REL/WH}]}\ ]] \rightarrow [_{CP}\ C_{[+WH]}\ [\ldots wat_{[+\mathbf{WH}]}\ ]]$

c. PQE (declarative): $[_{CP}\ C_{[-OP]}\ [\ldots wat_{[\mathbf{REL/WH}]}\ ]] \rightarrow [_{CP}\ C_{[-OP]}\ [\ldots wat_{[-\mathbf{WH/-REL}]}\ ]]$

A positive valuation of the operator feature has the same effect as assigning an additional *wh*-feature to a lexically underspecified indefinite *wh*-expression (Reis 1991). That is, once its operator feature has been valued with a positive feature specification, *wat* behaves like other functional elements with this (lexical) feature specification. In particular, it will move to

[33] The mechanism of feature valuation sketched here is the exact opposite to the one presented in Pesetsky & Torrego (2004b: 4ff.): "An unvalued feature F (a *probe*) on a head H at syntactic location α (F_α) scans its c-command domain for another instance of F (a *goal*) at location β (F_β) with which to agree." According to Pesetsky & Torrego (2004b:6), it is the C-head of *wh*-questions and relative clauses that contains an unvalued [WH/REL]-feature, which must be valued against the feature of a *wh*-expression or relative pronoun. Interestingly, Pesetsky & Torrego's analysis of *wh*-questions and relative clauses rests on the observation that the expressions responsible for the valuation of the C-feature of both clause types are different. This is exactly the opposite of what we find with LG *wat*, which shows up in relative clauses and *wh*-questions alike.

Spec,CP in the left periphery, same as proto-typical relative pronouns and *wh*-expressions. Semantically, the moved constituent introduces a λ-operator that effects predicate abstraction over a variable in the relativized/ questioned argument position. At PF, interrogative *wat*$_{[+WH]}$ is prosodically spelt out with a focus accent, same as all other *wh*-expressions in LG. This focus accent ensures a formal disambiguation between the two functions of *wat* as a PQE and as a *wh*-expression, as witnessed by the minimal pair in (52). In (59a), *wat* is destressed and therefore interpreted as a PQE. In (59b), however, *wat* carries a focus accent and is therefore interpreted as an *in situ wh*-expression that forms part of a multiple question:

(59) a. KEEN hett wat köfft?
who has something bought
'WHO bought something?'

b. KEEN het WAT köfft?
who has what bought
'WHO bought WHAT?'

This leaves us with the question of why *wat* is the only expression in LG that can occur as a PQE, a relative operator, and a *wh*-operator, respectively. Why is this possibility excluded for *een*? And, vice versa, why are the relative operators *de* and *dat* and the *wh*-expression *(wo)keen* 'who' unable to function as PQEs?[34] Recall that the syntactic status of these expressions differs from that of *wat*. The latter is an NP-proform, whereas the former are functional heads in Num (*een*) or in D (*de*, *dat*). For instance, the inherently interrogative expression *(wo)keen* 'who', which derives historically from *welk-een* '(lit.) which one' (Lindow et al. 1998: 176), can be assigned the following structure and feature content:

(60) $[_{DP}$ wok$_{[+WH]}$ $[_{NumP}$ een$_{[-LATT]}$ $[_{NP}$ ∅]]]

[34] Notice that, unlike in SHG, no other LG expression has a double use as indefinite PQE and *wh*-interrogative (section 4.3). Other interrogative DPs in LG are the morphologically complex expressions *wo-(r)* 'where', *wan-ehr* 'when', *wo-(ans)* 'how', DPs headed by the determiner element *wecker/welker* 'which', and, finally, DPs built from an adjectival quantifier (*woveel(e)* 'how much/many') or a preposition (*wohen* 'whereto', *worför* 'what for', *worüm* 'why') (Lindow et al. 1998: 175, 216)

Crucially, the formal features of functional heads are fully specified; see also Borer (2005). Their feature content is inherently fixed in the lexicon once and for all, namely as [+REL] for *de/dat*, [+WH] for *wokeen*, and [-LATT] for *een*. It follows that these expressions must occur in a syntactic environment that is compatible with their feature specification, which accounts for their lack of syntactic and semantic flexibility. By contrast, the feature content of the lexical NP-proform *wat* is lexically underspecified, as it contains an unvalued operator feature [REL/WH] (and the lattice feature [LATT]). Because these features come unvalued from the lexicon, they must be set to a particular value, which can be done in various syntactic configurations. This accounts for the variable syntactic and semantic behaviour of *wat*. In sum, the double use of LG *wat* as a PQE and as an operator expression in the left periphery follows from its syntactic status as a lexical NP-proform, and in particular from the fact that its operator feature comes unvalued from the lexicon. See Bayer (2004) and Bayer & Brandner (2008) for arguments along the same lines.

4.2 The analysis of complementizer *wat*

As shown in (51), *wat* can also introduce embedded *yes/no*-questions in Low German.[35] This possibility is attested for various dialects all over the Low German language area. The additional examples in (61ab) are from Pomeranian (East Low German) and the Hamburg variety (North Saxon), respectively:

[35] Low German has a second interrogative complementizer, *of/ob* 'if'. I leave it open whether *wat* and *of/ob* occur in free variation, possibly under the influence of SHG, or whether there any interesting differences to be found in the use of these two elements within and across dialects. The following example from a 19th century text shows that the occurrence of *wat* in embedded *yes/no*-questions is not a recent innovation:

(i) ... frog mi, **wat** ik ein von de politischen Gefangen wir
asked me if I one of the political prisoners was
'…asked me **if** I was one of the political prisoners' [Fritz Reuter, Ut mine Festungstid, 1862: ch.9]

(61) a. Ik weet nich, **wat** Se dat Book „Lüttjepütt“ vun J. D. Bellmann kennt.
I know not if you the book Lüttkeput by J.D. Bellmann know
‘I don’t know whether you know the book „L.” by J.D. Bellmann.’
http://www.kirche-mv.de/Andacht-Jesaja-42-3.8723.0.html (12.02.07)

b. [...], **wat** he den Ünnerscheed twüschen en goden un en slechten Witz kennt.
if he the difference between a good and a bad joke knows
‘…, if he knows the difference between a good and a bad joke.’
http://www.abendblatt.de/daten/2004/06/08/304250.html

One could analyze such instances of *wat* in embedded *yes/no*-questions in two ways. First, *wat* could be a phrasal operator in Spec,CP, from where it licenses an empty C-head, as in (62a). Or else, it could be a syntactic head in C, as in (62b):

(62) a. $[_{CP}$ **wat$_{[+WH]}$** $[\ \varnothing_{C}$ $[_{TP}$ ...]]]
b. $[_{CP}\ \varnothing_{[+WH]}$ [**wat** $_{C}$ $[_{TP}$ ...]]]

The first option is in line with the phrasal DP-status of *wat* as a PQE, but it is not quite clear what the semantic contribution of *wat* should be in this construction. In particular, it is not quite clear what this instance of *wat*$_{[+WH]}$ would have in common with the other instances of *wat*$_{[+WH]}$ in complement questions discussed in section 4.1. Those expressions are syntactic arguments with a particular thematic interpretation (Agens, Theme), and they originate in a position inside the VP. None of this seems to apply to *wat* in (62a).[36]

[36] If at all, *wat* stands in an indirect thematic relation to the matrix predicate. Historically, it may have acted as a question word over the proposition selected by the matrix predicate. It would have thus been similar to instances of SHG *was* ‘what’ in scope-marking constructions on Dayal’s (1994) indirect dependency account.
(i) **Was$_i$** glaubst Du, $[_{CP}$ wen Peter getroffen hat$]_i$?
What believe you whom Peter met has
‘What do you think? Whom did Peter meet?’

Turning to the analysis in (62b), it is well known that expressions corresponding to *wat* can grammaticalize to become (declarative) complementizers, such as, for instance, French *que* and Italian *che* 'what > that' (Bayer & Brandner 2008). Moreover, it has been observed that expressions corresponding to *wat* DO occur as syntactic heads in interrogative C in some dialects of German and Norwegian. Bayer (2004) and Bayer & Brandner (2008) show that short word-like *wh*-expressions in Bavarian and Alemannic can occur as syntactic C-heads in embedded *wh*-interrogatives. The same is shown by Vangsnes & Westergaard (2005) for the North Norwegian dialect of Tromsø, where this phenomenon is also found in matrix clauses, at least with the *wh*-expression *ka* 'what'. In the Tromsø dialect, the presence of this expression in the left clausal periphery blocks head movement of the verb to V2, which is otherwise obligatory with phrasal *wh*-expressions. The blocking of verb movement is accounted for if the potential landing site of the verb, namely C, is in fact occupied by *ka*. As for Bavarian and Alemannic, phrasal *wh*-expressions, such as *wh*-PPs (*for what, until when*) and degree expressions (e.g., *wia lang* 'how long'), can co-ccour with an overt complementizer in C, whereas short word-like *wh*-expressions cannot (Bayer & Brandner 2008). This is shown in (63) for Alemannic (Bayer & Brandner 2008: 88. ex.(5b)):

(63) *I wett gern wisse, **wa** **dass** i do uusfülle muss [Alem.]
I would gladly know what that I there out-fill must
'I'd like to know what I have to fill out there.'

Short wordlike *wh*-expressions in Alemannic share another property with C-heads since they host certain pronominal clitics that typically cliticize on a functional head in C. On the base of this, Bayer & Brandner (2008) conclude that short *wh*-expressions in these dialects end up in the C-position by way of overt movement. This kind of movement is licit because the

expressions in question contain a *latent* category feature αC in addition to the operator feature [+WH] in their feature specification:

(64) wa (Alem.), wos (Bav.): [+WH, αC]

Latent here means that the C-feature of short *wh*-expressions can be activated in the syntactic derivation under certain structural conditions. Once the C-feature has been activated, it projects its own functional projection, namely a $CP_{[+WH]}$. This account of the syntactic flexibility of certain *wh*-expressions in Bavarian/ Alemannic is similar in spirit to the analysis of the flexible syntactic behavior of LG *wat* proposed section 4.1. *Wat* occurs in argument (A-) position when used as a PQE. And it occurs in an operator (A'-) position when used as a relative or interrogative pronoun. In general, its flexible syntactic behavior follows from an under-specification in the feature content of the *wh*-expression.

In light of these facts, I propose that the analysis in (62b), on which the initial *wat* in embedded *yes/no*-questions in Low German is complementizer in C, is essentially correct. Notice, however, that LG C-*wat* differs from the *wh*-complementizers discussed in Bayer & Brandner (2008) in an interesting way. In particular, C-*wat* in LG does not originate in an argument position elsewhere in the clause and it stands in no thematic relation to the predicate of the question; see fn.36. In fact, it has no apparent semantic effect except for typing the embedded clause as a *yes/no*-question. This means that the feature specification of C-*wat* is devoid of all content except for the two formal features [+WH] and [C]. Notice that the C-feature in this case cannot be a latent feature to be activated in the course of the derivation, as in Bavarian and Alemannic. Rather, the C-feature must be part of the inherent lexical specification of *wat*.

To conclude, there are two independent instances of *wat* in LG that come with a different feature specification and a different syntactic status: The PQE *wat* is an NP-proform with the feature specification [+THING], [NEUT], [SG], and the two unvalued features [LATT] and [WH/REL], which account for its flexible interpretation as [+/- count] and its flexible syntactic distribution. The complementizer *wat*, in contrast, is a functional head in C. It is specified as [+WH] and [C], but devoid of all semantic content.

As for their diachronic relationship, it seems fairly obvious that the two occurrences of *wat* in contemporary LG are diachronically related. There are two reasons for assuming that the functional C-*wat* derives historically from the phrasal PQE *wat*. First, grammaticalization typically turns phrasal content expressions into functional, head-like elements (see e.g. Hopper & Traugott 2003). Second, the PQE *wat* in LG is semantically underspecified, same as its SHG counterpart *was* (Jäger 2000, Bayer 2002), and therefore a good candidate for undergoing semantic bleaching, another process typically observed in the process of grammaticalization (Haspelmath 1997: 142). Conversely, C-*wat* is a functional element with no semantic content, but only formal features, which makes it a good output candidate for grammaticalization via semantic bleaching. In light of these considerations, LG differs from Bavarian and Alemannic in that the grammaticalization process of *wat* to a genuine complementizer has gone one step further than in these dialects, where *wh*-expressions in C still retain their original meaning. We conclude the article with a brief overview of other differences in the formal expression of relative clauses and embedded interrogatives in LG, on the one hand, and SHG and other German(ic) dialects, on the other.

4.3 Cross-dialectal Variation

There are three basic parameters of (micro-) variation in the formal expression of relative clauses and wh-questions. The first parameter concerns the question of how many overt

elements can occur in the left periphery of the clause. It is well known since Bayer (1984), that many of the German dialects and the colloquial varieties of Standard German allow for more than one expression in the left periphery of embedded questions and relative clauses, in violation of the *Doubly Filled Comp Filter* (*DFCF*).[37] The following example from Bayer (2004: 61, ex.6) shows this for Bavarian. The *wh*-expression *wia lang* 'how long' in Spec,CP occurs together with the complementizer *dass* 'that' in C:

(65) Frog's doch, **wia lang** **dass**'s no dobleim woin! [Bavarian]
ask-them PRT how long that-they still stay want
'Ask them how long they still want to stay!'

Similarly, relative clauses allow for two functional elements in their left periphery in Upper German dialects, such as Suabian and Bavarian (Bayer 1984). In certain varieties of Dutch it is even possible to have three elements in the left periphery of an embedded question (Hoekstra 1993).

The situation is different in Low German, which obeys the DFCF, same as SHG. Even though a systematic investigation is lacking so far, it seems that embedded questions in LG can only host a *wh*-expression (66a) or a complementizer (66b), but not both (66c), in the left periphery of the clause. This holds independently of whether the *wh*-expression is more wordlike (*wat, wokeen, wanneer* 'when') or phrasal (*wie foken* 'how often') in nature.

(66) a. Ik weet **wokeen** / **wanneer** / **wie** **foken** Gerd anropen hett.
I know whom when how often Gerd called has
'I know whom / when / how often Gerd called.'

[37] See e.g. Weiss (1997) on Bavarian, Bader & Penner (1988), Penner & Bader (1995), and Schönenberger (2006) on Swiss German, Bayer & Brandner (2008) on Alemannic, and Haegeman (1992) on West Flemish.

b. Ik weet **dat** Gerd Marie anropen hett.
I know that Gerd Marie called has
'I know that Gerd called Marie.'

c.*Ik weet **wokeen / wanneer / wie foken dat** Gerd anropen hett.
I know whom when how often that Gerd called has

The second parameter of variation concerns the question of how big the class of elements that can function both as a [+WH]/[+REL]-operator and as an indefinite PQE is in a given language. Based on the discussion in section 4.1, this question can be reformulated: How big is the class of underspecified indefinite expressions with an unvalued operator feature [WH/REL]? As was shown in fn.34 in 4.1, *wat* is the only expression with an unvalued operator feature in LG, giving it a somewhat special status. In this respect, LG contrasts sharply with colloquial High German, which has several expressions that function both as PQE and as [+WH]-operator., among them *wer* 'someone/ who', *wo* 'somewhere/ where', and *wohin* '(to) someplace/ whereto'. The double function is illustrated for *wer* 'who' in (67):

(67) a. *PQE:*
Gerade ist **wer** gekommen.
just is someone come
'Somebody just came.'

b. *wh-expression:*
Wer ist gerade gekommen?
who is just come
'Who has just come?

This suggests that the feature specification of *wh*-expressions in LG is quite different from that of *wh*-expressions in (colloquial) High German, where many more seem to have the syntactic status of an NP-proform with an unvalued operator feature [WH/REL]. It remains to be seen how the other dialects of German fit into this pattern.

The final parameter concerns the syntactic status of *wh*-expressions in the left periphery of interrogative clauses. In SHG, all *wh*-expressions are analyzed as phrasal constituents that move to Spec,CP, as befits their status as operator expressions. In some Upper German dialects (Bavarian, Alemannic), phrasal wh-expressions likewise move to Spec,CP, whereas word-like *wh*-expressions end up as syntactic heads in C in the course of the derivation. In LG, finally, all *wh*-expressions in embedded complement questions are phrasal and move to Spec,CP (as in SHG), while embedded *yes/no*-questions are introduced by the functional head *wat*, which is base-generated in C.

Summing up, LG differs from the Upper German dialects in that embedded *wh*-questions (same as relative clauses) contain only an operator expression, but no overt complementizer in C. Second, LG differs from (colloquial) High German in that it has only one element, namely *wat*, with an unvalued operator-feature and hence a double function as PQE and *wh*-expression. Third, LG differs from all other dialects investigated so far in that the expression *wat* 'what' has been grammaticalized as a functional C-head in embedded *yes/no*-questions.

5. Conclusion

The article investigates several quantificational phenomena in Low German from a theoretical perspective. The phenomena discussed are of immediate relevance to current theorizing about the left periphery of nominal (DPs) and clausal constituents (CPs). There are four main results. First, the existence of complex pronominal quantifiers in Low German motivates the assumption of an additional functional layer NumP, which is situated between NP and DP. Second, morphologically simplex indefinite pronouns, such as LG *een* 'someone' and *wat* 'something', can differ in syntactic status and feature specification, contrary to first appearances. Only a detailed investigation of their syntactic and semantic behavior could bring these differences to light. Third, the flexible syntactic distribution of the

pronominal expression *wat* in declaratives, relative clauses, and *wh*-questions follows on the assumption that certain formal features come unvalued from the lexicon and receive their values only in particular syntactic configurations. Fourth, the occurrence of *wat* 'what' as a complementizer in embedded *yes/no*-questions in LG cannot be reduced to a mere case of featural underspecification. Rather, it is the result of a grammaticalization process that takes an underspecified pronominal expression *wat* as its input, and delivers a homophonous complementizer *wat* as its output. There are many more questions about the syntax and semantics of Low German that remain unsolved. It is therefore hoped that this article will instigate further research on Low German from a formal syntactic and semantic perspective.

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