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Friday 9th July, 2021

Abstract

The present thesis investigates how West-Frisian expresses low quantities or amounts. The thesis provides evidence in favor of a claim made in Hoekstra, J. (2000) in a reaction to Doetjes (1998). This claim states that the West-Frisian quantity expression *in bytsje* 'a bit' is compatible with mass nouns as well as count plurals. This is due to an ambiguity inherent to this West-Frisian quantity expression such that it can have a meaning similar to *a bit* as well as *few/little*. Similar to counterparts of this quantity expression in related languages such as English, Dutch and German (resp.: *a bit*, *een beetje* and *ein bisschen*), the mass-only restriction applies to West-Frisian *in bytsje* in its reading similar to *a bit* as well. In the reading similar to *few/little* on the other hand, West-Frisian *in bytsje* does not adhere to the mass-only puzzle as proposed by Doetjes (1998), instead, *in bytsje* is compatible with count plurals as well as Hoekstra, J. (2000) states. In those cases, as Hoekstra, J. (2000) states and data collected for the present paper shows, the West-Frisian quantity expression *in bytsje* seems to range from being ambiguous between having a negative and a positive reading and having only a probable negative reading. This compatibility of *in bytsje* (*a bit*) with count plurals is hypothesized to be related with the disappearance of the simplex low-degree quantifier *min* (*few/little*) in contemporary West-Frisian. Furthermore, through comparing the properties of three distinct West-Frisian quantity expressions (*in bytsje*'a bit', *net folle*'not many/much' and*in pear* 'a few' the ambiguities for substituting *min* for *in bytsje* are laid bare. Based on these arguments, the present thesis claims that the simplex quantity expression *min* has been replaced not only by *in bytsje* and *not folle* as Hoekstra, J. (2000) proposes, but also by *in pear* to account for these ambiguities. A language analysis seems to indicate that each quantity expression in West-Frisian has its own distinct role in the quantity system of this language which provides evidence that while *in bytsje* is compatible with count plurals, this compatibility shows a highly limited distribution.

Contents

1 Introduction

Doetjes (1998) observes that quantity expressions such as: English *a bit*, German *ein bisschen* and Dutch *een beetje* only occur with mass nouns. In this squib, Doetjes notes that these expressions must pose selection restrictions, dubbing this restriction phenomenon the *mass-only puzzle*. This 'puzzle' is one example of how the mass-count distinction can manifest itself in languages of the world. In its most basic description, the mass-count distinction is a distinction between categories of nouns, namely: *mass-nouns* and *count nouns*. As Gathercole (1985) notes, mass nouns generally refer to homogeneous an non-individuated substances such as water while count nouns generally refer to non-homogeneous and individuated objects such as books. In a language such as West-Frisian, count nouns are generally marked for number by a plural marker (*-en* or *-s*, see: Tiersma (1985)), while mass nouns are not marked for number. Since the present thesis only deals with count nouns in their plural form, the term *count plurals* will be used to refer to this type of nouns. In addition, mass nouns in a language such as West-Frisian cannot pair with a numeral while count plurals can pair with a numeral, observe example (1a.-b.) below:

(1) a. *Ik ha twa jild.
*I have two money
b. Ik ha twa freonen.
'I have two friends.'

In a reaction to Doetjes (1998), Hoekstra, J. (2000) states that, at first sight, the 'mass-only' restriction on expressions such as *a bit* does not seem to apply to the West-Frisian *in bytsje* 'a bit'. According to Hoekstra, J. (2000), *in bytsje* can pair with both a mass noun such as West-Frisian *jild* 'money', as well as a count plural, such as West-Frisian *freonen* 'friends'. Observe example (2) below (from: Hoekstra, J. (2000:121)):

(2) in bytsje jild/freonen.
a bit of money; little money/few friends

A second statement made in Hoekstra, J. (2000) is that West-Frisian lacks a form similar to English *few/little*, German *wenig/wenige* and Dutch *weinig* (see also: Tiersma, 1985 and Hoekstra, E., 2011). These forms in related languages to West-Frisian, such as the languages listed above, have in common that they express a low quantity/amount. Older versions of West-Frisian, and the precursor language to West-Frisian (Old-Frisian) did include a quantity expression similar to the forms listed above, namely: *min* 'few/little'. But, as Hoekstra, J. states: in contemporary West-Frisian, *min* only has one quantificational context left: *te min* 'too few/little'. In all other contexts, its quantificational properties have disappeared, instead, bare *min* now has a meaning similar to *bad*. Hoekstra, J. (2000) surmises that West-Frisian *min* as a quantity expression has been replaced by nominal expressions, and for the majority of the cases *in bytsje* is used instead of *min*. Based on this observation, Hoekstra, J. hypothesizes that

West-Frisian *in bytsje* can be interpreted as having a meaning similar to English *a bit* as well as English *few/little*, depending on its context. The exact argumentation regarding the ambiguity of *in bytsje* as hypothesized by Hoekstra, J. (2000) will be elaborated on in section 3.3 below.
Another point raised by Hoekstra, J. (2000) is that a West-Frisian quantity expression for expressing high amounts/quantities, *folle* 'much/many', has lost its quantificational properties in bare form, similar to *min*. Moreover, bare *folle* never occurs in West-Frisian (cf.: Hoekstra, E. (2011), but also: Tiersma (1985)). Hoekstra, J. notes that this quantity expression has largely been replaced by nominal expressions, namely: *in soad* 'a lot' (or dialectal varieties: *in protte*, *in bulte* (resp.: 'a lot' and 'a bunch'). The construction *net folle* 'not much/many' on the other hand seems to be used often when expressing low amounts, this will be elaborated on in section 3.6.

Hoekstra, J. (2000) briefly notes that in environments where *in bytsje* 'a bit' cannot select for count plurals, it might be the case that in West-Frisian, only those expressions that inherently refer to number can deal with small number evaluation. In addition, such environments do not allow for the *few/little* reading of West-Frisian *in bytsje* as Hoekstra, J. hypothesizes. The present thesis will assume that 'small number evaluation' refers to a quantity expression that expresses low amounts/quantities and can select for count plurals. One example of such a quantity expression in West-Frisian, as noted by Hoekstra, J. (2000: 130), is *in pear* (lit.: 'a pair', but also 'a few'). The main objective for the present thesis is capturing how the West-Frisian language expresses low quantities/amounts. The thesis will make use of text analysis methods applied to various time-points within the West-Frisian temporal language continuum. In the end, a derivation will be proposed as to how and why *in bytsje* 'a bit', *net folle* 'not many/much' and *in pear* 'a few' together might fill the conceptual gap within the West-Frisian quantifier system. This analysis will serve as an approach to answer a broader question, namely:
'How are low amounts/quantities expressed in West-Frisian?'

2 Quantity expressions

In languages of the world, a variety of word categories that can express quantities or amounts exist, observe example (3) below:

(3) The groundsman saw that **most poplars** had fallen ill during the summer break.

In example (3) above, the quantifier *most* makes an evaluation available regarding the amount or quantity of, in this case, *poplars*, and as such, *most* expresses quantity. But, as for example Doetjes (1997) notes, it is not only quantifiers that can express quantity or amount.
Observe examples (4a-b.) below, (from: Doetjes, (1997:100)):

(4) a. We hebben een boel/ een hoop/ *een berg gepraat (*Dutch*)
we have a lot/ a pile/ a mountain talked
We talked a lot

b. Jan heeft een berg geld verdiend met zijn louche zaakjes. (*Dutch*)
Jan has a mountain money gained with his louche affairs
Jan gained a lot of money with his louche affairs

As Doetjes observes, the Dutch examples *een boel* and *een hoop* (both: 'a lot') seem to function like quantifiers, whereas *een berg* does not. An important distinction between *een boel* and *een hoop* on the one hand and *een berg* on the other hand, as Doetjes notes, is that the former two quantity expressions can be used adverbially (example (4a.)), whereas the latter expression cannot be used adverbially, i.e.: a quantifier does not impose categorial selection restriction. An expression such as *een berg* on the other hand, does impose categorial restrictions (compare example (4a.-b.)). At the same time, in example (4b.), *een berg* (lit.: *a mountain*) does not denote some concrete mountain, instead *een berg* means something similar to English *a lot*, as Doetjes (1997) states. This entails that an expression such as Dutch *een berg* does have quantifying properties and, following Doetjes, that means that Dutch *een berg* in example (4b.) is a quantity expression.

The distinction between quantity expressions stated above is of a morphosyntactic nature, in addition to compatibility with XP's, there exist more morphosyntactic differences between various types of quantity expressions, observe example (5.a-b.) below:

(5) a. I have **a bit** of money.
b. I have **little** money.

In examples (5a.-b.) above, both quantity expressions *a bit* and *little* express low quantity. The forms of the two quantity expressions however are fundamentally different. The expression *a bit* consists of a determiner (*a*) in combination with a nominal (*bit*). The expression *little* on the other hand contains no nominal. Rett (2018) states that it is a topic of debate as to how to treat words that are similar in form to *little* (e.g.: *few* and *much/many*). She continues by stating that in semantics, these words are treated as either quantifiers, adjectives or modifiers, depending on which context of such an expression is taken to be canonical. In morphosyntax on the other hand, categorizing quantity expressions such as *little* might be more straightforward. In this case, I will follow Doetjes (1997:104) in categorizing expressions such as *little* as being *simplex*, this however does not entail that an expressions such as *a bit* is complex.[1]

[1]Doetjes (1997:104) notes that these expressions are of the type *simplex/adjectival* within the overarching category of *degree* quantifiers. For the present purposes of classifying *many/much* and *few/little* however, including such use of *adjectival*, *degree* or *quantifiers* would entail implications that go beyond the scope of the present section.

By making this distinction between quantity expressions, it becomes possible to properly distinguish between *a bit* and *little*. Expressions such as *a bit* are *nominal quantity expressions* whereas expressions such as *little* are *simplex quantity expressions*.

Another difference between quantity expressions is visualized in example (6a.-b.) below:

(6) a. I have much/*few money.
b. I have *much/few friends.

Both *much* and *few* are quantity expressions. The main distinction between *much* on the one hand an *few* on the other is that *much* expresses a large quantity whereas *few* expresses a small quantity. In addition, a second distinction between these two quantity expressions can be observed in examples (6a.-b.) above. The quantity expression *few* is unable to pair with nouns similar to *money* in example (4a.), *mass nouns*. Instead of *few*, *little* is used to express low quantity when it comes to quantifying a mass noun. On the other hand, *much* is unable to pair with nouns similar to *friends* in example (4b.), *count plurals*. Instead, *many* is used to convey a similar meaning to *much* when it comes to quantifying a count noun. The distinction between *much/little* on the one hand and *many/few* on the other hand in English reflects the *mass-count distinction* (see also: Gathercole (1985) for more information regarding the mass-count distinction in relation to English quantifiers).[2]

Gathercole (1985) states that the mass-count distinction is a distinction imposed on the relation between quantifiers and nouns. Since some words that do not behave as quantity expressions outside of the nominal domain seem to do so within this domain (see: examples (4a.-b.)), the statement above might need to be modified slightly. The resulting statement, then is: the mass-count distinction is imposed on the relation between quantity expressions and nouns. The term quantity expressions is borrowed from Doetjes (to appear). Because of this modified statement the possibility to discuss a larger variety of word categories which might express quantities or amounts in relation to the mass-count distinction opens up than only the category of 'quantifiers' (e.g.: examples (4a.-b.)).

Another difference between quantity expressions was first stated in Ducrot (1973). According to Ducrot, in French, the quantity expressions *peu* 'little' and *un peu* 'a bit' belong to different semantic categories, the former expression

[2]In contemporary linguistics it seems to be the case that the grounding of the mass-count distinction remains a topic of debate. Moltmann (2020) notes that some studies approach the mass-count distinction as a morphosyntactic one (e.g.: Bale & Gillon (2014) and Rothstein (2010)) while other studies approach the mass-count distinction as one that involves semantics as well (e.g.: Champollion (2017) and Champollion & Krifka (2017)) While the reader should be aware of this debate, the present thesis will not attempt to solve the problem regarding what aspect of linguistics exactly is essential to the mass-count distinction.

belongs to the category of *restriction* while the latter belongs to the category of *affirmation*. This observation seems to generalize over languages, observe example (7a.-d.) below (translated & adapted from: Ducrot, (2005:110-111)):

(7) a. I ate little.
b. I did not eat little.
c. I ate a bit.
d. I did not eat a bit.

Between the quantity expressions (*little* and *a bit*) in examples (7a.-d.) above, a difference in interpretation can be observed, which can be explained following Ducrot (2005). Ducrot notes that expressions similar to French *peu* (*little*) change the expectations of a sentence as compared to a sentence without such an expression, similar to negation. Expressions such as French *un peu* on the other hand do not change the expectation of what comes in a sentence. Building on this difference, Ducrot (1991:205) states that *peu* lessens the effect of a negation whereas *un peu* lessens the effect of an affirmation. For the English examples (7a.-b.) this entails that including *little* yields an opposite reading as compared to the sentence without *little*, meaning that these sentences in multiple aspects behave as negative sentences (see: Ducrot, 2005). And for the English examples (7c.-d.), the reading is the same in terms of what comes as compared to the sentences without *a bit* which entails that in several aspects, these sentences still behave as positive sentences (Ducrot, 2005). Building on this disparity, Ducrot classifies expressions similar to *little* as being negative, or, in his terms: a member of the semantic category of restriction (other members include for example: *no* (cf.: Ducrot, 1973)). Expressions such as *a bit* on the other hand are categorized as being positive, or, in Ducrot's terms: a member of the semantic category of affirmation (other members include for example: *a lot* (cf.: Ducrot, 1973)).

Doetjes (1997) states that some quantity expressions do not refer to specific nominal referents, as such, the amount or quantity expressed by such an expression does not refer to some real-world object or entity. As Rett (2018) explains that the quantity expressions *much*, *little* and their counterparts (resp.: *many* and *few*) in individual use are underspecified. As Rett surmises, the evaluativity of such an expression must be supplied by some item external to the quantifier itself, observe example (8a.-b.) below:

(8) a. On Tuesday morning, there are many people that ride the 7:45 train to Rotterdam.
b. Around the world, there are many people concerned about climate change.

Between examples (8a.) and (8b.) above, the interpreted quantity of *people* as expressed by *many* is rather different. In example (8a.) the quantity expressed by *many* is probably somewhere in the high hundreds or low thousands whereas in example (8b.) *many* expresses a quantity of probably hundreds of

millions, if not billions of people. Rett (2018) states that quantity expressions such as *many/much*, but also, *few/little* are context sensitive in their interpretation. The external item that regulates such contexts is real-world knowledge, in example (8a.) this is knowledge about the capacity of the 7:45 train to Rotterdam, and in example (8b.) this is knowledge about the amount of people that are concerned about climate change. As Doetjes (1997) states, quantity expressions such as English *a lot* and *a bit* do not denote some specific amount either, observe example (9a.-b.) below:

(9) a. After paying the entry fee to the zoo, there was a bit of money left to buy popsicles.
b. After paying taxes, there was a bit of money left to spend on a new car.

Similar to *many* in examples (8a.-b.) above, *a bit* in examples (9a.-b.) above probably describes rather distinct quantities. Again, the interpretation regarding the quantity expressed by *a bit* is guided by real-world knowledge, regarding the price of an average popsicle in example (9a.) and the price of an average car in example (9b.). To conclude, the present section has given a variety of properties that can distinguish quantity expressions, ranging from morphosyntactic to semantic differences, quantity expressions within a single language can vary significantly and serve distinct purposes. The following section will elaborate on expressing quantities/amounts in West-Frisian.

3 Expressing Quantities in West-Frisian

3.1 West-Frisian

Old-Frisian was a language that was formerly spoken along the North Sea coast, more specifically: from the Dutch province of Noord-Holland to German Schleswig (see: Encyclopædia Britannica Online, 2020). The Frisian languages are members of the West-Germanic language family, and of all living languages they might be the closest relatives to English (see: Encyclopædia Britannica Online, 2020). Extra and Druk (2008) state that modern Frisian consists of three different languages, namely: West-Frisian, East-Frisian and North-Frisian. West-Frisian is predominantly used in the Dutch province of Fryslân, East-Frisian is spoken in the Oldenburg region (Germany) and North-Frisian is spoken in the western coastal area of Schleswig (Germany) (see: Encyclopædia Britannica Online, 2020). The subject of the present thesis is West-Frisian, a language which had about 325.000 living mother tongue speakers in the province of Fryslân in the year 2007 (see: Extra and Druk, 2008). While West-Frisian is usually described as an oral language, it has a well-documented history of written records.

3.2 The West-Frisian Quantifier System

The West-Frisian quantifier system encompasses a variety of quantity expressions. According to Tiersma (1985), when expressing a high quantity or amount, speakers of West-Frisian may opt for various constructions, including but not limited to constructions such as *in soad*, *in protte* and *in bulte* (first two: 'a lot', last: 'a bunch of'). These three quantity expressions share a similar set of properties and can be used in similar contexts. The choice between the two quantifiers *in soad* and *in protte* reflect a dialectal difference (see: Tiersma 1985). The present thesis however concerns expressing low quantity/amounts, for this type of quantification, speakers of West-Frisian may again choose between a variety of expressions. As Hoekstra, J. (2000) notes, the West-Frisian quantifier system for expressing low quantities/amounts mainly consists of the quantity expressions *in bytsje* as well as *net folle*. Observe example (10a.-b.) below ((10a.) (from: Hoekstra, J. (2000:121)):

(10) a. In bytsje jild/freonen (*West-Frisian*)
A bit money/friends
'A bit of money; little money/few friends'

b. Net folle jild/freonen (*West-Frisian*)
'Not much/many money/friends'

Example (10) above shows that both *in bytsje* as well as *net folle* are compatible with both mass nouns as well as count plurals (Hoekstra, J., (2000)). Following the conclusion of Hoekstra, J. (2000:130), there exist more quantity expressions that can express low quantities/amounts in West-Frisian, observe example (11a.-d.) below, (11b.-d., from: Hoekstra, J. (2000:130)):

(11) a. Ik ha in pear *jild/freonen. (*West-Frisian*)
I have a pair friends
'I have a few friends'

b. Net in krom jild/*sinten. (*West-Frisian*)
Not a crumb money/*cents
'Not a bit of money/*cents'

c. Net in drip iten/mûzen. (*West-Frisian*)
Not a drop food/*mice
'Not a bit of food/*mice'

d. Net in sprút rein/*fûgels. (*West-Frisian*)
Not a sprout rain/*birds
'Not bit of rain/*birds'

In example (11a.-d.) above, some West-Frisian quantity expressions that express low quantity other than *in bytsje* and *net folle* are given.

Hoekstra, J. (2000) notes that for expressions such as *in krom* and *in drip*, the mass-only restriction as proposed in Doetjes (1998) holds without any peculiarities. This entails that these quantity expressions can only pair with mass nouns such as *jild* 'money' or *iten* 'food'. The West-Frisian expression *in pear* on the other hand, as Tiersma (1985) and Hoekstra, J. (2000) note, is only compatible with count plurals such as *freonen* 'friends'. The present thesis will elaborate on these quantity expressions further in section 3.4, for now, it suffices for the reader to be aware of these low-degree quantity expressions other than *in bytsje* and *net folle*.

3.3 The West-Frisian Low-Degree Shift & *in bytsje*

In the introduction of the present thesis it was stated that the contemporary West-Frisian quantifier system does not include a simplex quantity expression that expresses low quantity/amount, but that a remnant from older West-Frisian is retained within this system, *te min* ('too few/little', or: 'not sufficiently'). Observe example (12) below:

(12) Hy wie te min krêftich *(West-Frisian)*
He was too few/little powerful
'He was not (sufficiently) powerful enough'

In all other contexts *min* has lost its quantifying properties, instead, it has fully been incorporated in West-Frisian grammar as an adjective translating to *bad* (see: Hoekstra, J., 2000). Hoekstra, J. (2000) describes that this change did not happen overnight, instead, *min* was gradually replaced over the course of roughly a century by *in bytsje* in all constructions including a degree marker, except in the case of the West-Frisian degree marker: *te* 'too', as illustrated in examples (13.a.-b.) below:

(13) a. sa min → sa'n bytsje *(West-Frisian)*
'so few/little'

b. hoe min → hoe'n bytsje (*West-Frisian*)
'how few/little'

Examples (13.a.-b.) above display the substitution of the West-Frisian expression *min* with *('n) bytsje* when combined with a West-Frisian degree-marker other than *te* as noted by Hoekstra, J. (2000). When combined with a degree-marker, *in bytsje* can only have a relative reading, in which it means something similar to *few/little* rather than *a bit* (see: Hoekstra, J., 2000). However, Hoekstra, J. continues, similar to Dutch, in contemporary West-Frisian *min* can still occur in combination with the degree-markers *hoe* 'how' and *sa* 'so' in fixed expressions including (quantificational) *min*, observe table 1 below (from: Hoekstra, J., (2000:128):

Dutch	West-Frisian	English
zo min mogelijk	sa min mooglik	'as few/little as' possible
evenmin	likemin	'likewise not'
minder/minst	minder/minst	'less/least'

Table 1: Dutch & West-Frisian *min* and degree markers, including English translations.

For Hoekstra, J. (2000), the observation that *in bytsje* can be used with degree markers such as *hoe* and *sa* is evidence that this West-Frisian quantity expression can be used as a relative (i.e.: gradable) adjective, in contrast to Dutch *een beetje* 'a bit', observe examples (14a.-b.) below (from: Hoekstra, J. (2000:122)):

(14) a. It is alderraarst hoe'n bytsje reinwetter oft wy fan.'t.simmer! (*West-Frisian*)
it is astonishing how-a-bit-of rainwater if we had have this-summer
'It is astonishing how little rainwater we had this summer!'

b. Der wienen fan.t.jier sa'n bytsje flinters! (*West-Frisian*)
The were this-year so-a-bit-of butterflies
'There were so few butterlies!'

The compatibility with degree markers as illustrated in examples (14a.-b.) above displays that West-Frisian *in bytsje* seems to have properties that align with the properties of simplex quantity expressions such as *few/little* (Hoekstra, J., (2000)). In other contexts however, the West-Frisian expression *in bytsje* seems to function similar to quantity expressions such as *a bit*. Doetjes (1997) states that these types of quantity expressions, that are derived from an indefinite article and a measure word, can function as a quantity expressions. For this function to be available however, the meaning of the measure word has to disappear, and instead, is replaced with a meaning similar to either ' a small quantity' (*a bit*) or 'a large quantity' (*a lot*) (see: (Doetjes, 1997). Often, it can be observed that these types of quantity expressions then lose their restriction to the nominal system (see also: section 2), observe example (15) below:

(15) Ik ha in bytsje sliept (*West-Frisian*)
I have a bit slept
'I slept a (little) bit.'

Example (15) above illustrates that West-Frisian *in bytsje* can express quantity outside of the nominal domain, as confirmed by my Frisian informants and stated in Hoekstra, J. (2000). It seems to be the case that in some contexts, *in bytsje* can mean something similar to *a bit* while in other cases this West-Frisian quantity expression means something similar to *few/little* (see: Hoekstra, J.,

2000).

As mentioned in the introduction of the present thesis, Doetjes (1998) observes that nominal quantity expressions that express low quantity can only combine with mass nouns, and not with count plurals, observe example (16.a.-c.) below:

(16) a. Ik heb een beetje water/*mensen gezien *(Dutch)*
b. Ich hatte ein bisschen Wasser/*Menschen gesehen. *(German)*
c. I saw a bit of water/*people.

Hoekstra, J. (2000) on the other hand states that *in bytsje* has replaced *min* in its quantifying contexts. Despite *in bytsje* being a nominal quantity expression that expresses low quantity, Hoekstra, J. proposes that this quantity expression can combine with count plurals. This compatibility then can only occur if *in bytsje* has the meaning similar to *few/little*, and not the meaning similar to *a bit*, observe examples (17a.-b.) below (from: Hoekstra, J. (2000:121)):

(17) a. Ik ha in bytsje jild (*West-Frisian*)
I have a bit money
'I have a bit of money'

b. Ik ha in bytsje freonen (*West-Frisian*)
I have a bit friends
'I have few friends'

Hoekstra, J. notes that there is a difference in stress in the nominal component of *in bytsje* (*bytsje* 'bit') between the two readings. In the reading similar to *a bit*, *bytsje* is stressed as a noun and has absolute meaning, and in the reading similar to *few/little*, *bytsje* is stressed as an adjective, observe examples (18a.-b.) below (from: Hoekstra, J. (2000:131)) (upper case denotes stressed segment):

(18) a. in bytsje JILD (*West-Frisian*)
a bit money
'some money'

b. in BYTSJE JILD (*West-Frisian*)
a bit money
'a bit of/little money'

A problem with this proposal is that, as stated in section 2, quantity expressions such as *a bit* on the one hand and *few/little* on the other, are members of different semantic categories. If West-Frisian *in bytsje* can express both a meaning similar to *a bit* as well as *few/little*, then this quantity expression is ambiguous between being a positive expression (*a bit*) and being a negative expression (*few/little*).
In addition, as Doetjes (1998) proposes, for a quantity expression such as Dutch *een beetje* 'a bit' to be compatible with both mass nouns as well as count plurals, it would have to be lexically ambiguous. Hoekstra, J. (2000) notes that this

then entails that Dutch *een beetje* would need to evaluate both for low amounts as well as low number. Instead, this ambiguity in Dutch is avoided by the lexicalization of two distinct items, respectively: Dutch *een beetje* and Dutch *een paar* 'a few' (Doetjes, (1998) as cited by Hoekstra, J. (2000)). In the end, as Hoekstra, J. observes, such a distinction based on evaluating over number or amounts does not explain why high-degree quantifiers Dutch *een hoop* does not seem to bear similar lexical ambiguity, observe example (19) below:

(19) Ik heb een hoop geld/vrienden (*Dutch*)
I have a pile money/friends
'I have a lot of money/friends'

Another explanation regarding the substitution of *min* by *in bytsje* as proposed by Hoekstra, J. (2000) is that the mass-only restriction is a conceptual semantic restriction. For Hoekstra, J. the mass-only puzzle is not due to absolute meaning of a nominal, as *in bytsje* is proposed to be ambiguous between absolute (*a bit*) and relative *few/little*. Instead, the mass-only puzzle is imposed due to the small quantity that is expressed by quantity expressions such as *a bit* (Hoekstra, J., (2000)). In the words of Hoekstra, J. (2000:130): the smaller a quantity, the smaller the things it may comprise and the bigger the probability that the quantified 'thing' will be interpreted as being part of some 'stuff' rather than being a 'container' or 'thing' in and of itself. This surmounts to a distinction between 'quantity properties' on the one hand, and 'quantity things' on the other hand (see: Hoekstra, J., 2000).

In the end, Hoekstra, J. concludes that if the above line of reasoning is why nominal quantity expressions that express low amount are 'mass-only', only special absolute quantifiers denoting a specific number may combine with count plurals (e.g.: West-Frisian: *in pear* ('few/little', lit.: 'a pair' → *two*). The quantity expression *in bytsje*, in neither reading of *a bit* nor *few/little* inherently refers to number. Following Hoekstra, J. (2000), West-Frisian *in bytsje* is ambiguous between Dutch *weinig* 'few/little' and Dutch *een beetje* 'a bit'. In the former reading, *in bytsje* is compatible with count plurals, while in the latter case *in bytsje* abides to a modified version of the mass-only puzzle proposed by Doetjes (1998) ((see: Hoekstra, J., 2000)).

In the present thesis the use of this relative *in bytsje* 'few/little' is viewed as a last resort, given the semantic ambiguity (negative versus positive expressions, cf: hat underlies the lexical ambiguity described by Hoekstra (2000). This entails that the 'gap' left in the West-Frisian quantifier system by the meaning shift of *min* (*few/little* → *bad*) has only been partially filled by the quantity expression *in bytsje*. In most contexts, the ambiguity supplied by *in bytsje* can be avoided. For example, the quantity expression *in pear* 'a few' seems specialized in selecting for count plurals, as such, this quantity expression is preferred when evaluating over low number. This is in direct agreement with the 'inherent number referral' as proposed by Hoekstra, J. (2000). In contexts without a

degree marker where a negative expression is necessary, the quantity expression *net folle* 'not many/much' is preferred over *in bytsje*. The properties of these quantity expressions will be elaborated on in the following section.

3.4 Low Quantities And West-Frisian Nominals

The 'quantity property' and 'quantity thing' distinction, as proposed by Hoekstra, J. (2000) and discussed in section 3.3 above, might be encoded explicitly within West-Frisian. Within this language an abundance of expressions exists which besides denoting some aspect (e.g.: form or substance) of the modified noun also seem to express the quantity of such a noun. Observe Example (20a.-c.) below (adapted from:Hoekstra, J. (2000:130)):

(20) a. Ik ha **in krom** jild/*sinten *West-Frisian*
I have a crumb money/*cents
'I have a bit of money/*cents'

b. Ik ha **in drip** iten/*mûzen *West-Frisian*
I have a drop food/*mice
'I have a bit of food/*mice'

c. Ik seach **in sprút** rein/*fûgels *West-Frisian*
I saw a sprout rain/*birds
'I saw a bit of rain/*birds"

All of the quantity expressions (*in krom*, *in drip* and *in sprút*) in examples (20a.-c.) above can be substituted with the West-Frisian quantity expression *in bytsje* and retain grammaticality when paired with a mass noun, observe examples (21a.-c.) below:

(21) a. Ik ha in bytsje jild (*West-Frisian*)
I have a bit money
'I have a bit of money'

b. Ik ha in bytsje iten (*West-Frisian*)
I have a bit food
'I have a bit of food'

c. Ik seach in bytsje rein (*West-Frisian*)
I saw a bit rain
'I saw a bit of rain'

While West-Frisian *in bytsje* does not impose any lexical restrictions, an expression such as *in sprút* 'a sprout' does seem to pose lexical restrictions, this is illustrated in examples (22a.-b.) below:

(22) a. Ik seach in sprút rein. *West-Frisian*
I saw a sprout rain
'I saw a bit of rain'
b. *Ik seach in sprút jild.
I saw a sprout money

This might entail, following Doetjes (1997), that these quantity expressions have not fully lost their meaning, in contrast to the expression *in bytsje* (e.g.: examples (21a.-c.) above). Another piece of evidence that might confirm this notion is what happens when pluralizing these type of West-Frisian expressions, observe examples (22a.-c.) below:

(23) a. twa kromkes (*West-Frisian*)
'two (small) crumbs'
b. twa drippen (*West-Frisian*)
'two drops'
c. twa sprúten (*West-Frisian*)
'two sprouts'

As confirmed by my Frisian informants, these expressions are associated with small items, not necessarily with low amounts. As such, the pluralized forms would always be interpreted as that which the noun originally denotes. The plural forms of these expressions thus always have a lexical reading, rather than a quantificational reading. At the same time, pluralizing *in bytsje* seems to be extremely rare if accepted at all.

Similar to West-Frisian *in bytsje*, the quantity expressions such as *in sprút* seem to be derived from an indefinite article (*in* 'a') and a measure word (*sprút* 'sprout'). But, as noted, quantity expressions such as *in sprút* have not lost their lexical meaning to an extent where they only denote something similar to *a small quantity*. As a result, these expressions are not expected to express quantity outside of the nominal domain. Following a query in the Frisian Corpora Search (see: section 4.1 below for information regarding this framework), it seems to be the case that expressions such as *in krom* (lit.: 'a crumb', but also: 'a bit'), do not express quantity in the context of a VP. Observing example (24) below (from: the Frisian Corpora Search, (2020)) , one might interpret *neitinken* 'memory/afterthought' as a verb, meaning *to think*. However, as my Frisian informants state, the most likely interpretation of this West-Frisian expression is *memory*, which is a noun. In addition, *in kromke* in this context more likely translates to *crooked*, as noted by my Frisian informants.

(24) a. Dat wie doe foar dy man wol in greate toloarstelling, mar nei **in kromke** neitinken... (*West-Frisian*)
That was then for that man surely a big disappointment but not a crumb/crooked afterthought
'That was surely a big disappointment for that man, but not a bad memory...'

The remainder of query results did illustrate any sentence in which either *in drip*, *in krom* or *in sprút* expresses quantity in the context of a VP.[3]

The quantity expressions such as *in krom*, *in drip* and *in sprút* have a limited distribution when compared to West-Frisian *in bytsje*, this might explain why these quantity expressions are not qualified for replacing *min*. And given the limited distribution of the former type of quantity expressions as opposed to the latter type of quantity expressions, it makes sense to distinguish the two types from one another. Since the nominal part of the expressions such as *in krom* and *in drip* are typically associated with denoting measures, they might be treated as measure constructions, or more specifically: *mass selecting measure constructions* (MSMC) (see: Doetjes (to appear) for more information about measure constructions in quantity systems). This is different from *in bytsje*, which, similar to a 'traditional' quantifier (see: section 2) no longer bears any lexical meaning other than 'small quantity'. Building on this, following Hoekstra, J. (2000), the nominal part of *in bytsje* (*bytsje*), in the reading similar to *few/little* no longer functions as a measure noun, but instead functions similar to an adjective. Therefore, West-Frisian *in bytsje* is proposed to be a *mass selecting measure construction turned quantifier* (MSMC-Q).

3.5 West-Frisian *in pear*

The introduction of the present thesis mentioned another type of quantity expression in West-Frisian, namely: low number evaluation through the West-Frisian quantity expression *in pear* 'a few'. Tiersma (1985) notes that the West-Frisian quantity expression *in pear* can only pair with count plurals, as illustrated by example (25) below:

(25) Ik ha in pear freonen/*jild (*West-Frisian*)
I have a pair friends/*money
'I have a few friends/*money'

Example (25) above is based on the *in bytsje* example from Hoekstra, J. (2000):121, drawing on the properties of *in pear* as described in Tiersma (1985). This quantity expression can only pair with count plurals, this entails that it can never occur outside of the nominal domain Doetjes (1997:172). This is illustrated in examples (26a.-b.) below:

[3]Interestingly enough, in the context of AP's on the other hand, the West-Frisian expression *in krom* is attested, albeit in rare cases, following the Frisian Language Corpora Search, observe example (i.) below:

(i) a....,in krom wyslik glimkjend en lykwols ûnforskillich wei,... (*West-Frisian*)
a crumb wisely smiling and yet indifferent way
'...,smiling in a bit wisely yet indifferent way,...'

(26) *Ik ha in pear sliept
I have a pair slept

The Dutch equivalent of *in pear*, *een paar* can express both a collective reading as well as a quantificational reading (see: van Riemsdijk, 1998). Observe example (27.a.-b.) below (from: van Riemsdijk, (1998:17)):

(27) a. Er staat een paar schoenen in de gang. (*Dutch*)
There stands a pair shoes in the hall
'There is a pair of shoes in the hall.'

b. Er staan een paar schoenen in de gang. (*Dutch*)
There stand a pair shoes in the hall
'There are a few shoes in the hall'

As van Riemsdijk (1998) states, in examples (27a.-b.) above, Dutch *een paar* triggers different readings. In example (27a.), the collective reading prevails in which *een paar* conveys a similar meaning to *a pair* in English (i.e.: **two** items that belong together/function as one). In example (27b.) on the other hand, the quantificational reading prevails, in which *een paar* is interpreted to convey a meaning similar to *a few* (see: van Riemsdijk, 1998).

The difference between the two readings in the cases of (27a.) and (27b.) above, as stated by van Riemsdijk (1998), lies in verb-noun agreement. In (27a.) the verb *staat* (*stands*) the verb agrees with the singular noun *paar* (N1) whereas in (27b.) the verb *staan* (*stand*) agrees with the plural noun *schoenen* (*shoes*) (N2) (see: van Riemsdijk, 1998). Broekhuis and den Dikken (2018) observe that the ambiguity of Dutch *een paar* arises due to descriptive content still salient within the quantifier noun, if this is the case for such a noun, it is able to refer to an entity. The result of being able to refer to an entity for a quantificational noun is, as concluded by Broekhuis and den Dikken (2018), that it can yield a quantificational reading (27b.) as well as a collective noun reading (27a.). My Frisian informants note that a similar distinction between the quantificational and collective reading of Dutch *een paar* is salient in West-Frisian *in pear*, observe example (28a.-b.) below:

(28) a. Der stiet in pear skuon yn de gong (*West-Frisian*)
There stand a pair shoes in the hall
'There is a pair of shoes in the hallway.'

b. Der stean in pear skuon yn de gong (*West-Frisian*)
There stands a pair shoes in the hall
'There are several/a few shoes in the hallway'

While there are more similarities between Dutch *een paar* and West-Frisian *in pear*, these are deemed irrelevant for the present thesis.[4]

Summing up, West-Frisian *in pear* can only express quantity in the context of a count plural. In addition, West-Frisian *in pear*, similar to Dutch *een paar*, can have both a collective as well as a quantificational reading, in the former reading, *in pear* retains a descriptive meaning similar to English *a pair*. In the latter reading on the other hand, *in pear* seems to denote some unspecific number, similar to English *a few*. In many cases, West-Frisian quantificational *in pear* seems to follow a similar distribution to expressions to the West-Frisian mass-selecting measure constructions (e.g.: *in krom* lit.: 'a crumb', but also: 'a bit'). The big difference between West-Frisian *in pear* and these types of quantity expressions is that *in pear* only selects for count plurals. Quantity expressions that are limited to selecting count plurals can only combine with mass-nouns through the use of a measure word such as *kilo* (cf.: Doetjes, (to appear)). This entails that a quantity expression such as West-Frisian *in pear* can resemble a measure construction, and as such, this expression can be referred to as a *count-selecting measure construction* (CSMC).

3.6 Negative Polarity Items: WF Net folle

As has been stated in the introduction of the present thesis, in West-Frisian, no simplex quantity expression exists, or at least: is able to form a grammatical utterance when posited as a bare NP, this is true for both expressing high as well as low amounts (see for example: Hoekstra, J., 2000, Tiersma, 1985 & Hoekstra, E., 2011). Tiersma (1985) states that high amount in West-Frisian is expressed only through nominal constructions such as: *in soad* (and its equivalents in West-Frisian dialects: *in protte* and *in bulte*) or *te folle* (resp.: 'a lot' and

[4]In Dutch, a difference between quantity expressions such as *een paar* and *een beetje* is that the former type of quantity expressions cannot be modified by scalar adjectives (e.g.: *klein* (*small*)), observe example (i.a.-b.) below:

(i) a. Ik heb een klein beetje geld uitgegeven (*Dutch*)
I have a small bit money spent
'I spent a small bit of money'
b. *Ik heb een klein paar centen uitgegeven
I have a small pair money spent

My Frisian informants state that for West-Frisian, the disparity regarding the applicability of scalar adjectives is similar in West-Frisian, observe examples (iia.-b.) below:

(ii) a. Ik ha in lyts bytsje jild (*West-Frisian*)
I have a small little bit money
'I have a little bit of money'
b. *Ik seach in lyts pear freonen
I saw a small pair friends

The interpretation of the two pairs of expressions (Dutch and West-Frisian) is then significantly different, for *in bytsje* it seems to be the case that the quantity is modified by *lyts* whereas for *in pear*, this is impossible.

'too much'). This lies in stark contrast with the closely related language Dutch, which includes a simplex quantity expression for high quantities/amounts within their quantifier system, namely: *veel* 'a lot' (see: Doetjes, 1997). The scalar adjective *folle* might seem a suitable equivalent to this simplex quantity expression in Dutch. West-Frisian *folle* however, never occurs alone before a noun Tiersma, (1985). In fact *folle* never occurs outside of a negative context, unless its modified by a degree marker such as *te* or *hoe*, which makes *folle* a negative polarity item as opposed to Dutch *veel*, as noted by Hoekstra, E. (2011). Observe Examples (29.a.-d.) below, ((29c.) and (29c.) adapted from: Hoekstra, J. (2000:126)):

(29) a. *Ik ha folle freonen (*West-Frisian*)
I have many/much friends
'I have a lot of friends'

b. Ik ha net folle freonen (*West-Frisian*)
I have not many/much friends
'I do not have a lot of friends'

c. *Ik kin leauwe, dat er folle Arabysk ken (*West-Frisian*)
I can believe, that he many/much Arabic knows
'I think that he knows many/much Arabic.'

d. Ik kin net leauwe, dat er folle Arabysk ken'(*West-Frisian*, Dubitative)
I cannot believe, that he many/much Arabic knows
'I cannot believe that he knows much Arabic.'

(30) a. Ik heb veel vrienden (*Dutch*)
I have many/much friends
'I have a lot of friends'

b. Ik heb niet veel vrienden (*Dutch*)
I have not many/much friends
'I do not have a lot of friends'

c. Ik kan geloven dat hij veel Arabisch kent (*Dutch*)
I can believe that he many/much Arabic knows
'I think that he knows much Arabic'

d. Ik kan niet geloven dat hij veel Arabisch kent (*Dutch*, Dubitative)
I cannot believe that he many/much Arabic knows
'I do not think that he knows much Arabic'

A second property that sets West-Frisian *folle* apart from Dutch *veel* is that *folle* never occurs as the left-peripheral part in compounds (Tamminga, (1974) as cited by Hoeksta, E., (2011)). Note that in rare cases, *folle* does surface as a left-hand part in a compound, these cases are extremely rare, and, according to the

West-Frisian Dictionary limited to three specific environments (see: Hoekstra, E., 2011). In spoken language, these words are very uncommon, only a handful of Frisian writers attested these compounds leading Hoekstra, E. to conclude that the majority of these compounds are unaccepted loan-words from Dutch. Observe Example (31a.-c.) below, (from: Hoekstra, E. (2011:25)):

(31) a. foller-hanne (*West-Frisian*)
much-hands
'of many kinds'
b. foller-lei (*West-Frisian*)
much-kind
'of many kinds'
c. follen-tiids (*West-Frisian*)
many-times
'many-times/often'

As Hoekstra, E. (2011) states, according to the West-Frisian dictionary, it is only these three compounds in which *folle* acts as left-hand member. Upon closer inspection however, Hoekstra, E. notes that (31a.) and (31b.) above have respectively three and six instances within the Frisian Language Corpus. Example (31c.). occurs 36 times within the Frisian Language corpus, which furthermore includes nineteen instances of isolated compounds including *folle* as left-hand member (Hoekstra, E., (2011)). Based on the notion that in spoken language these compounds never occur, their limited use in written language leads Hoekstra, E. (2011) to hypothesize that all compounds including *folle* as left-hand member are unaccepted loan-words from Dutch, besides perhaps *follentiids* ('often') which might have been an accepted loan-word at some point in time. The notion that these compounds are loaned from Dutch is supported by the argument that in Dutch *veel* ('much/many') is used in a large variety of compounds, making it a very progressive linguistic element when it comes to word-forming in Dutch, observe Examples (32.a.-c.) below (adapted from: Hoekstra, J. (2000:26-27)):

(32) a. follefâld (*West-Frisian*) → veelvoud (*Dutch*)
'multiple'
b. follesidich (*West-Frisian*) → veelzijdig (*Dutch*)
'many-sided'
c. follesizzend (*West-Frisian*) → veelzeggend (*Dutch*)
'significant'

To conclude the comparison between Dutch *veel* and West-Frisian *folle*, both words are similar in meaning, yet, *folle* carries distinct properties than its Dutch 'counterpart' (both i.) and ii.) below, based on: Hoekstra, E. (2011)):

i.) West-Frisian *folle* is a negative polarity item, unless modified by a degree marker such as *te* or *hoe* (resp.: *too*, *how*) .

ii.) West-Frisian *folle* is not a productive left-hand element in the word-

forming process.

Argument i.) above displays why *folle* cannot be used as a simplex quantity expression that expresses high amount/quantity. Argument ii.) above serves to further denote that *folle* is distinct from its counterparts in related languages. Furthermore, the elaborate argumentative line on the (unaccepted) loaned compounds from Dutch shows one of the pitfalls in comparing seemingly similar items in (closely) related languages.

The present thesis assumes that bare *folle* is an impossibility within the West-Frisian quantifier system. Instead, the expressions *net folle* and *te folle* serve as (respectively a low-, and high-degree) quantifier within the West-Frisian quantifier system (consistent with, e.g.: Hoekstra, J., 2000, Tiersma, 1985 and Hoekstra, E., 2011). Since the present thesis deals with expressing low quantity, only *net folle* will be taken into account for the remainder of the present section. As example (29b.) above shows, West-Frisian *net folle* is compatible with NPs. Furthermore, *net folle* occurs outside of the nominal domain, as examples (33a.-b.) ((33a.) from: Hoekstra, E. (2010:62)) below illustrate:

(33) a. Hy praat net folle (*West-Frisian*)
He talks not much
'He does not talk much'
b. Dat wurdt net folle dúdliker (*West-Frisian*)
That becomes not much clearer
'That does not become much clearer'

Example (33b.) above, as confirmed by my Frisian informants, shows that *net folle* is compatible with AP's as well. Following this, it can safely be concluded that *net folle* poses no categorial selection restrictions, similar to *in bytsje*. Furthermore, example (29b.) above shows that *net folle* is compatible with count nouns (*freonen* 'friends'), example (34.) below illustrates that this West-Frisian quantity expression is compatible with mass-nouns as well:

(34) Ik ha net folle wetter (*West-Frisian*)
I have not much water
'I don't have much water'

Hoekstra, J. (2000) notes that *net folle*, due to the presence of *net* 'not', is incompatible with degree-markers. Because of this, West-Frisian needs *in bytsje* to express low quantity in the environment of a degree-marker, and in these cases, *in bytsje* express a meaning similar to *few/little* rather than *a bit*. In addition, *in bytsje* is compatible with count plurals in such an environment Hoekstra, J., (2000).

3.7 Expressing Low Quantity in West-Frisian

In the introduction section of the present thesis it was proposed that the properties of West-Frisian quantificational *min*, meaning something similar to *few/little*

have been replaced by the quantity expressions *in bytsje*, *in pear* and *net folle*. Section 3.4, section 3.5 and section 3.6 respectively have discussed the properties of the West-Frisian quantity expressions listed above. Table 2 below summarizes the properties discussed in the present thesis:

Quantity Expression	*in pear*	*in bytsje*	*net folle*
Quantity	Unspecified	Unspecified	Unspecified
Purely Quantificational	×	✓	✓
VP-compatible	×	✓	✓
AP-compatible	×	✓	✓
Count	✓	✓	✓
Mass	×	✓	✓
Degree-Marker Allowed	×	✓	×

Table 2: *Properties of West-Frisian quantity expressions*

4 Experimental Design and Rational

Hoekstra, J. (2000) noted that the use of *min* with a meaning similar to *few/little* has decreased over a relative short time span, namely: over the course of the past century. For the present analysis I adopted this assumption made by Hoekstra, J., as such, a concise overview of the quantificational use of *in bytsje* 'a bit', *in pear* 'a few' and *net folle* 'not much/many' has been composed.

4.1 Data Extraction

Thanks to Evelyn Bosma (Universiteit Leiden) and Eric Hoekstra (Fryske Akademy), access to a large corpus of West-Frisian texts was provided. All texts subject to the present analysis were accessed via *Frisian Language Corpora Search* (FLCS). The queries used for the present analysis follow the syntax of the *Corpus Query Language* (CQL), a pruned version of SQL such that it functions mainly as a *Data Query Language* (DQL), in this case, specifically for the querying of large corpora of textual data. A greedy search encompassing both a lemma-query and a word-query for the target quantity expressions has been implemented in order to extract documents relevant to the present topic (i.e.: those that include at least one instance of a target expression). The target expressions consist of: *in bytsje*, *in pear* and *net folle*. Observe Example 35. below for an example of each query-type following CQL syntax:

(35) a. [word='in'][word='bytsje']
b. [lemma='in'][lemma='bytsje']

For each query, both the *hit* data as well as the *document* data (following FCLS nomenclature) were downloaded as a tsv-file. The *hit* data roughly corresponds to data relevant to the actual analysis. This data encompasses variables such as

the direct environment surrounding the target expressions, amounting to exactly five tokens preceding the target expression and exactly five tokens following the target expression. The *document* data roughly corresponds to metadata relevant for distinguishing the various documents pulled from FCLS (e.g.: the year a document was originally composed and the amount of tokens a document comprises). At this point, all data relevant to the present study has been pulled from FCLS. In total, the pulled corpus consisted of 29126 tokens. The next section will describe the methods used for pre-processing of the data-set.

4.2 Pre-processing the Data

The goal for the steps described in the present section were first to combine the lemma and word query-results (described in the previous section) per quantity expression. The second goal was to split data in three separate time-periods using the datestamp which indicates when some document was originally composed, the chosen time-periods will be elaborated on later in this section.

Using Python version 3.7.1, and especially the pandas module data-structure of DataFrames, all tsv-files were loaded in separate frames. For each of the lemma and word combinations, (e.g.: examples (35a.-b.)) an inner join on the document identification number (DocPiD) as supplied in both types of data files (*hit* and *document)* was implemented. The reason for implementing an inner join rather than an outer join for this step was that an inner join results in the intersection of two selected DataFrames (i.e.: SQL tables), whereas an outer join results in the union of both DataFrames (the pandas development team, (2020)). This entails that an inner join on the DocPiD effectively deletes rows that are equal in both of the DataFrames, whereas a full outer join would include both copies of a duplicate row in the resulting DataFrame (see Appendix A. for a visual representation of the difference between outer joins and inner joins). A second inner join on the variable DocPid made sure the metadata was aligned with the data relevant to the analysis (i.e.: the correct instances of the quantity expressions and their environments). These two joins for each of the quantity expressions yielded three separate corpora (DataFrames), one for each of the quantity expressions.

A filter based on token length was placed on each corpus, the token length for a document should be equal to or bigger than 50.000 tokens. The reasoning behind this was that the present thesis assumes that an average novel comprises at least 50.000 tokens. This greedy approach was chosen to get data from similar text-genres.

After this filtering operation, 143 documents were left, spread over the three distinct corpora. Observe example (36a.-c.) below for examples of document titles included in the corpora:

(36) a. *Frânsk op syn Frysk*, by: Magda van Ommen (1983)
b. *Bisten en Boargers*, by: Jo Smit (1959)
c. *It Heechhôf*, by: Reinder Brolsma (1926)

Note that the vast majority of documents, including the three documents listed above, contain at least one instance of all three of the target expressions. The remaining documents were subjected to a split once again, this time, on the time-period they were composed originally. The time-periods selected for the present thesis are listed below:

(i.): 1900-1940
(ii.): 1950-1970
(iii.): 1980-2000.

Time period (i.) spans over a larger amount of time than the other two periods since textual data from the early 20th century was of a much smaller quantity than the data from the mid-to-late 20th century in the FCLS. While counterbalancing this with doubling the time-period still could not account for the full disparity in data-quantity with respect to the later two periods, it at least approaches a similar amount.[5]
Observe Table 3. below for the composition of the resulting 9 corpora (DataFrames):

	1900-1940	1950-1970	1980 - 2000	Total
in pear	1356	2520	2060	5936
in bytsje	557	949	897	2403
net folle	764	1418	669	2851
Total Per Period	2677	4887	3626	11190

Table 3: Amount of instances per corpus

After the composing of these corpora, the environments surrounding the target expressions were cleaned for the purposes of a smooth part-of-speech tagging (PoS) process. First, all punctuation was omitted from the collected textual data using the simple regex pattern displayed in Example (37.) below:

(37) [^\w\s]

The string above roughly translates to: *match each character that is not a whitespace nor a word.* This matching pattern was chosen over the more standard *string method*: *string.punctuation.* All characters found were filtered out subsequently. The reasoning behind this is that the string method matches a

[5]Completely leveling the amount of data collected for each period beforehand would not be justified in any case. The reasoning behind this is that it might be the case that the three expressions relevant to the present thesis are used more often in the time-periods after 1940, which might be a consequence or cause of the disappearance of simplex *min.*

symbol regardless of it being inside a token, which poses a problem for a couple of West-Frisian expressions including clitics such as the common West-Frisian construction *dy't* (*who*), replacing it with either *dy(whitespace)t* and thus making it two tokens, or replacing it as *dyt*, which is a word that does not exist in West-Frisian, would have posed problems in the remaining sub-processes of data pre-processing.

The standard step of tokenization for each sentence (i.e.: translating each word in a sentence to separate tokens as elements in a list) was skipped, compare example (38a.-b.) below, brackets denote the list data-structure:

(38) a. ['An untokenized sentence']
b. ['A','tokenized','sentence']

Instead, all resulting (sentence) lists from the regex patterns were kept intact. The reasoning behind this was that the PoS-tagger used for the present analysis is not native to a Python environment, as such, the PoS-tagger does not recognize Pythonic lists. Instead, all sentences were written to a csv-file, and subsequently cleaned through deleting the brackets and parenthesis by hand.

The PoS-tagging service used for the present analysis is the *UDPipe Frysk*, as constructed in a collaboration effort between Rijksuniversiteit Groningen (RUG) and the Fryske Akademy. The environment relevant to the present study first and foremost are those tokens directly following our target expression. Since the present thesis focuses mostly on quantifying nominal expressions, a concise error estimation was performed for the noun-tags. In this estimation, for 10% of the cases per per corpus the token directly following a target expression was pulled. The tokens pulled were manually checked to see whether the tagged nouns were indeed nouns, and vice-versa, whether tokens that were tagged as something other than a noun were indeed not nouns.
After analogously noting each error made by the PoS-tagger, the amount of wrongly tagged nouns and wrongly tagged non-nouns were subtracted from one another. Overall, the PoS-tagger tends to tag a token as something other than a noun more likely than as a noun.[6] The result of the subtraction was subsequently transformed to represent a percentage of each corpus split by time-period, with the underlying assumption that the error estimation generalizes over the time-period. In the end, this resulted in the following error estimations:

(i.) For the period 1900-1940: *1,87%* more nouns than tagged.

(ii.) For the period 1950-1970: *8,19%* more nouns than tagged.

(iii.) For the period 1980-2000: *5,24%* more nouns than tagged.

[6] This makes sense given te working of the average classifier algorithm; classifying something as a noun is just one option, whereas anything that is not a noun consists of multiple categories. In any deterministic classifying algorithm, this would result in a tendency towards the category that contains more classes.

This error rating has been adjusted for in further calculations. Keep in mind that for the present thesis it is not an objective to train the PoS-tagger. The reason for noting this is that filtering out each and every error made by this algorithm, the only West-Frisian PoS-tagger readily available (and yielding decent results), would have been too time-consuming for the present purposes.

In the next step, all PoS-tagged environments were mapped to their respective target expression within the corpora. The last sub-component of data preprocessing taken was the splitting of each PoS-sequence as a separate element within a list-structure. In addition to this being the last step for handling the PoS-tagged sequences, it was also the last step necessary for constructing the corpora, observe Figure 1. below for an example-snippet of a resulting corpus corpus:

docPid	left_context	context	right_context	word	title	length	year	pos_right
7951	by to pas br	in pear	ljue in lytse poppe krije	in pear	Om e wivedei hinne	53525	1984	['NOUN', 'DET', 'ADJ', 'NOUN', 'VERB']
7951	Hja hie dêrfo	in pear	goede hannen mar ek in	in pear	Om e wivedei hinne	53525	1984	['ADJ', 'NOUN', 'CCONJ', 'ADV', 'DET']
7951	krús It lêst M	in pear	minuten nei de poppe it	in pear	Om e wivedei hinne	53525	1984	['NOUN', 'ADP', 'DET', 'NOUN', 'DET']
7951	fjûrplaet yn	in pear	buorfroulju der by Dy hiene	in pear	Om e wivedei hinne	53525	1984	['NOUN', 'ADV', 'ADP', 'PRON', 'VERB']

Figure 1: Example from: *in pear* 1980-2000 corpus.

4.3 Visualizing the Data

At this point, all data has been preprocessed. The next step taken was the filtering of all quantificational use of the respective target expressions. The categories selected as relevant to the present thesis are:

(i.): Count plurals
(ii.): Mass nouns
(iii.): All categories not nominal (e.g.: verbs and adjectives)

The first step necessary for data-visualization relevant to the present thesis was filtering the regular plural marked count nouns out of the larger body of nouns. Given that West-Frisian generally uses two regular plural suffixes (namely: *-en* and *-s* (cf: Tiersma (1985) [25]), the following pattern was used as filter, observe example (39) below:

(39) $'en\$||s\$'$

The regular expression (regex) pattern displayed above roughly translates to: *each word ending with the character(s) 'en' or 's'*.

The pattern was then applied to the first, and, subsequently second element of each PoS tagged list for each row of each corpus. Combining the pattern and the target element position was captured by the regex function: *findall(pattern, target)*. All nouns not captured by the proposed pattern were assumed to be *mass nouns*, this will be elaborated on at a later point in this section. The

regex function was included in a nested loop-structure containing several if-statements roughly translating to the pseudo-code snippet written in verbatim below, indentation displays control flow:

```
For item1,item2 in position1,position2:
    if pattern == True and (item1 == noun):
        append item to count list
    else if pattern and (item1 == adjective and item2 == noun):
        append item to count list
    else if pattern == False and (item1 == noun):
        append item to mass list
    else if pattern == False and (item1 == adjective and item2 == noun):
        append item to mass list
    else:
        append item to not nominal list
```

The three separate categories listed in the beginning of the present section are now accounted for. The length of the count list and the list containing everything but nominals can now be adjusted using the calculated average error estimation denoted in section 4.2.

At this point, each of the target expressions can be visualized, based on their use in combination with the two categories of nominals (mass nouns and count plurals), and the not-nominal category. The not-nominal category includes everything that is not a noun, including those tokens that were wrongly tagged by the PoS-tagger. The visualization is expected to give a rough estimation of how West-Frisian expresses low quantity/amount with respect to the mass-count distinction. Keep in mind that this approach might not be a 100% accurate as splitting on the pattern displayed in example (39) above also filters out those mass nouns that end in *-en* or *-s*.

The expectations regarding the distribution of the three West-Frisian quantity expressions (*in pear*, *net folle* and *in bytsje*) are different. For *in pear* it is expected that it is for one a positive expression, furthermore, this expression is expected to only be compatible with count plurals. The quantity expression *net folle* on the other hand is expected to be a negative expression, that furthermore is compatible with both mass nouns as well as count plurals, but not in the context of degree-markers. And finally, West-Frisian *in bytsje* is expected to be compatible with mass nouns in the majority of the cases. In this reading, this quantity expression has a positive reading and a meaning similar to *a bit*. In contexts where *in bytsje* is compatible with count plurals, it is expected, following Hoekstra, J. (2000), to have a meaning similar to *few*. In this reading, *in bytsje* functions as a negative expression.

4.3.1 West-Frisian *in pear*

For the present thesis it has been hypothesized that *in pear* is the preferred positive quantity expression when it comes to evaluating over low number (i.e.: expressing quantities of count plurals). Observe Figure 2 below for the absolute distribution of West-Frisian *in pear* over the three separate time-periods:

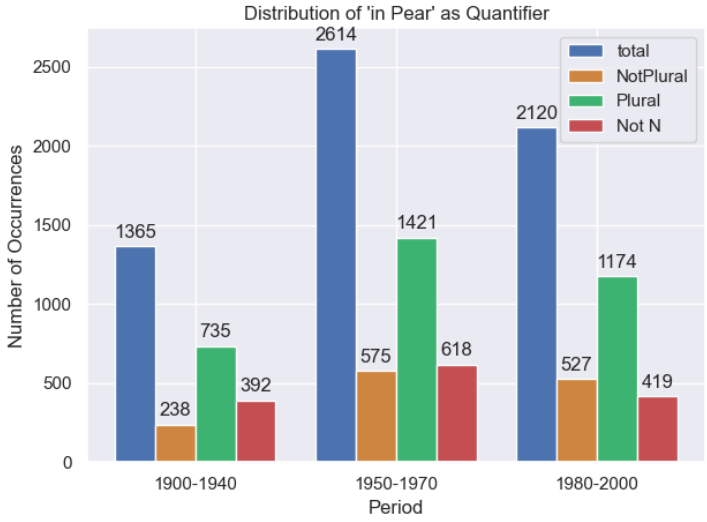

Figure 2: Absolute use of West-Frisian *in pear* in three separate time-periods across a time-span of 100 years.

Figure 2 above displays that for the majority of the cases in which *in pear* is paired with a noun, this noun is a count plural. Given that the time-period of 1900-1940 encompasses a smaller number of unique documents, a relative distribution of *in pear* in combination with a noun is given as well. To obtain this relative distribution of the target expression *in pear*, the adjusted number of occurrences for each time-period was divided by the amount of unique documents in each corpus.

Since the present thesis is interested in the behavior of West-Frisian quantity expressions in the context of nouns, the not-nominal category was excluded from the relative distribution. Resulting from these operations was a relative distribution of West-Frisian *in pear* which is visualized in Figure 3. below.

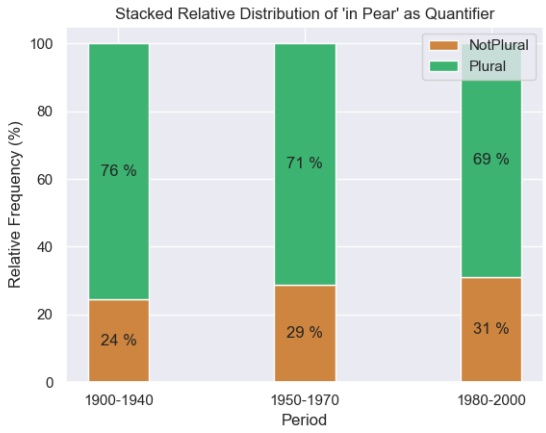

Figure 3: Relative distribution of West-Frisian *in pear* in three separate time-periods across a time-span of 100 years.

What follows from observing Figure 3. above is that it seems to be the case that while West-Frisian *in pear* in the majority of cases, occurs with a count plural, a rather large portion of the cases in which this quantity expression occurs with a noun seem to comprise nouns that do not follow regular plural marking, however, this does not entail that these nouns are mass-nouns, observe Figure 4. below:

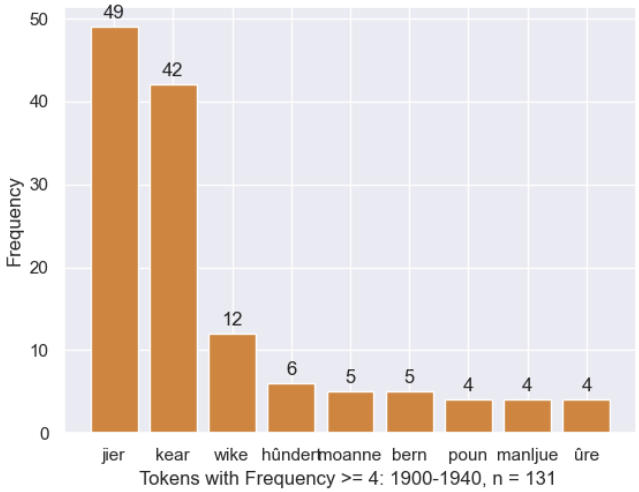

Figure 4: Tokens Paired with *in pear* not Following Regular Plural Morphology

All tokens displayed in figure 4. above are nouns that do not follow regular plural marking in West-Frisian. Tiersma (1985:58) notes that in West-Frisian, expressions that denote some measure never bear an overt plural marker. This applies to measure words such as *poun* (lemma : pûn: (*pound*)). This furthermore extends to words used as a metric to denote some time-period such as *jier* (*years*), *wike*(*weeks*), *moanne* (*months*) and *ûre* (*hours*), which all display some frequency in Figure 4. above.

Tiersma (1985:92) furhermore notes that West-Frisian multiplicatives such as English *once* and *twice* are formed through pairing a numeral plus *kear* ('times'), a form that is represented in figure 4. above as well. Since *in pear* is a count-selecting quantity expression (cf.: section 3.5), it makes sense that, similar to a numeral, *in pear* can express multiplicatives when paired with *kear* as well. The description for West-Frisian *in pear kear* ('a few times') extends to the expression *in pear hûndert* ('a few hundreds'). This follows from Zweig (2005), which stated that English *a few hundred* is a multiplicative that has a meaning similar to *hundred multiplied by a few*, my Frisian informants note that a similar interpretation applies for *in pear hûndert*. As for the noun *bern* 'child(ren)', as Tiersma (1985:56) notes: this is a noun that is 'simply irregular'. And lastly, the noun *manljue* ('men') is a special case of irregular plural inflection according to Tiersma (1985:57), which concludes that this form triggers 'a collective sense' over an 'individual sense', which is triggered by the plural: *mannen* ('men'). Since both measure words as well as multiplicatives can be treated as count plurals (cf.: Doetjes, (to appear)), it can safely be assumed that all tokens in figure 4. are West-Frisian count plurals. In other words, the notion that *in pear* can pair with mass nouns, as Figure 3. might imply, is false. In addition, it seems to be the case that these observations built on the corpus of time-period 1900-1940 generalizes towards the later two time-periods (see Appendix C), in fact, (almost) exactly the same count plurals occur in this category for their respective time-period, observe Appendix C for the graphs supporting this claim.

To conclude this subsection, it seems to be the case that, West-Frisian *in pear* can indeed only pair with count plurals.

4.3.2 West-Frisian *net folle*

For the present thesis, it has been hypothesized that the West-Frisian quantity expression *net folle* is a quantity expression that selects for both mass nouns as well as count plurals. In addition, *net folle* is hypothesized to be the preferred negative (low) quantity expression in West-Frisian, at least if this expression is not blocked by a degree-marker such as *te* 'too', *hoe* 'how' or *sa* 'so' (cf.:section 3.6). Figure 5. below illustrates the absolute distribution of *net folle*:

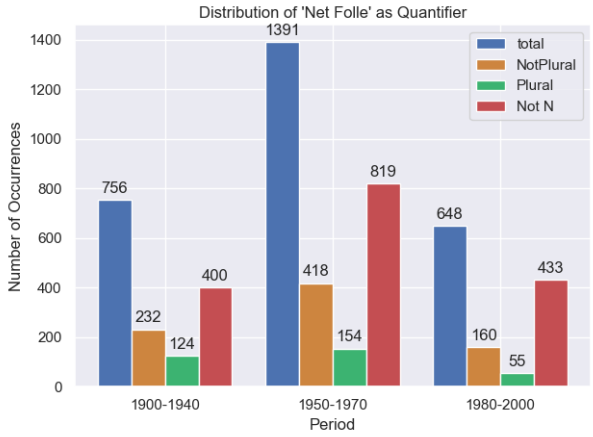

Figure 5: Absolute use of West-Frisian *net folle* in three separate time-periods across a time-span of 100 years.

In comparison with *in pear* (see: Figure 2.), it seems to be the case that *net folle* has a lower number of occurrences in the investigated corpora. Similar to the relative distribution of *in pear* (Figure 3.), a relative distribution of *net folle* in the context of nominals has been composed, see Figure 6. below:

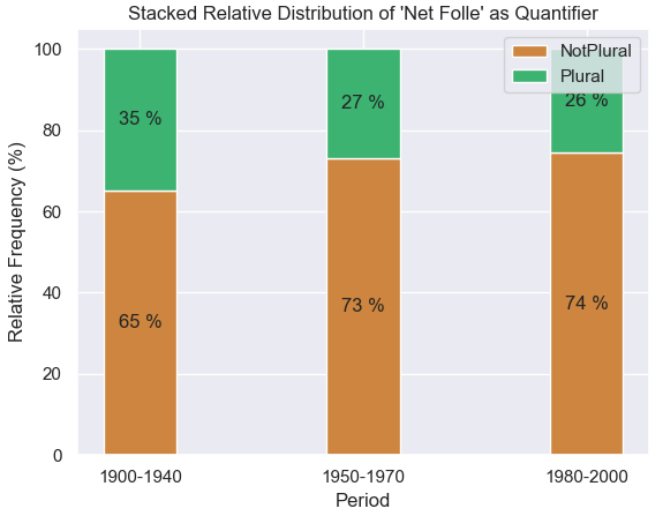

Figure 6: Relative distribution of West-Frisian *in pear* in three separate time-periods across a time-span of 100 years.

Through observing figure 6. above, it might be concluded that the West-Frisian quantity expression *net folle* is used more often in a context where there is no regular plural marking in West-Frisian than contexts where there is regular plural marking. This seems counter-intuitive, given that the present thesis hypothesizes that *net folle* is used primarily as a quantity expression that besides low quantity/amount also triggers a negative reading rather than a positive reading. If *net folle* is compatible with both mass nouns as well as count plurals, it is expected that the distribution of *net folle* in the contexts of these types of nominals is similar. This however is not what the data as visualized in both nd Figure 6. shows. The data might imply is that, while *net folle* is compatible with a count plural, *in pear* seems to be preferred in the majority of the contexts.

Another hypothesis proposed in the present thesis is that *net folle* is used in those count plural contexts where *in pear* would not convey an intended negative reading. And while the quantity expression *in bytsje* can have such a negative reading (*few*), *in bytsje* is ambiguous between a positive and a negative reading (cf.: Section 3.3). To avoid this ambiguity, it is hypothesized that West-Frisian *net folle* is preferred in those contexts where, in theory, *in bytsje* might provide a negative reading as well. Observe examples (40a.-b.) below:

(40) a. Net det trelit fen krektsa pleaget him it meast, hy wit wol det er net folle frjeonen hat yn de neiste krite, mar det fen it spoar, det elts dêr nou fen op'e tekst is.

Not that tumult from just.now bothered him the most, he knows well that he not many friends had in the nearest area, but that of the track , that every there now of on'the text is.

'Not the tumult from just now bothered him the most, as he knows that he has few friends in the direct area, but that of the railroad, of which everyone of them is busy talking about.'

b. Hwat nou it foarste part oanbilanget fan dit (dûbelde) fraechstik, - en wy kinne om de romte allinne de iene kant mar bisjen-, it leit yn'e reden, dat wy net folle ynfloed fan Fryske literatuer op de sêgefoarming fan it folk forwachtsje meije

What now the first part concerns of this (double) question.piece, - and we could around the space alone the one side but consider-, it lays in'the reason, that we not much influence of Frisian literature on the saga.formation of the people expect may

'What concerns the first part of this (double) question,- and because of the space we can only consider this one side-, it lies in reason that we can expect little influence of Frisian literature on the creation of folktales.'

In examples (40a.-b.) above, the West-Frisian expression *net folle* seems to express a negative reading. Substituting this expression with a positive expression such as *in pear* or *in bytsje* might yield entirely different readings. For (40a.) this might mean that instead of emphasizing the low amount of *freonen* ('friends'), the presence of a low amount of *freonen* is emphasized. If this is the case, use of West-Frisian *net folle* is radically different from use of West-Frisian *in pear* and/or *in bytsje* in its positive reading. It might be the case that in examples such as (40a.-b.) above, *net folle* is preferred over *in bytsje* as the former quantity expression does not bear the ambiguity as observed for *in bytsje* in section 3.3. However, to be able to confirm this notion, further research towards the precise use of *net folle* and *in bytsje*/*in pear* should be conducted, one that reaches beyond the mass-count distinction. See appendix C. for the absolute distribution of *net folle*.

4.3.3 West-Frisian *in bytsje*

For the present thesis it is hypothesized that *in bytsje* is the preferred positive quantity expression when it comes to expressing low amounts in the context of mass nouns. In addition, *in bytsje* is hypothesized to occur rarely in the context of count plurals, in this context, *in bytsje* has a negative reading, similar to *net folle*. This second use of *in bytsje* is proposed to occur in very limited contexts, namely: in those environments where *net folle* is blocked by for example a degree marker (cf.: section 3.6). Observe Figure 7. below for the use of *in bytsje* 'a bit':

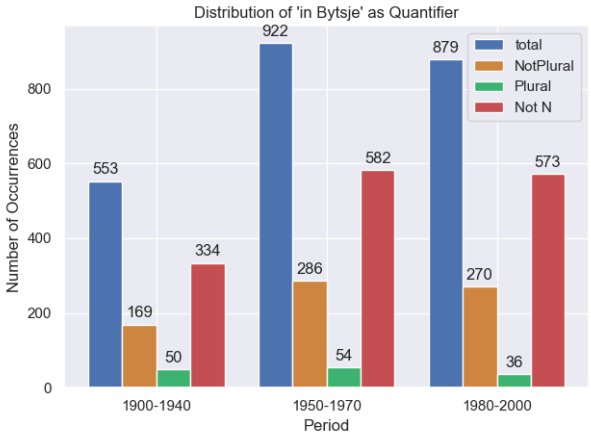

Figure 7: Absolute use of West-Frisian *in bytsje* in three separate time-periods across a time-span of 100 years.

Similar to West-Frisian *net folle* (see: Figure 5. above), the quantity expression

in bytsje seems to occur less than *in pear* (see: Figure 2. above). However, when comparing the absolute distribution of *net folle* with Figure 7. above, it seems to be the case that where *net folle* occurs more often in the time-periods 1900-1940 and 1950-1970, it is *in bytsje* that occurs more often in the time-period 1980-2000. As noted in the introduction section of the present thesis, Hoekstra, J. (2000) notes that the disappearance of *min* in its quantificational context has happened fairly recently and quite fast, namely: over the course of the past century (20th century). As Hoekstra, J. claims that in the majority of the cases, *in bytsje* has replaced *min*, the increase in the use of *in bytsje* might be explained by this shift. In turn, it might be the case that with the availability of this quantity expression as both a negative element as well as a positive element, *in bytsje* has progressively replaced *net folle* as well. This however does not explain why there are so few cases in which *in bytsje* expresses quantity in the context of a count plural.

Similar to the quantity expressions *in pear* and *net folle* a relative distribution is more informative towards the purpose of the present thesis. Observe Figure 8. below for a relative distribution of *in bytsje*:

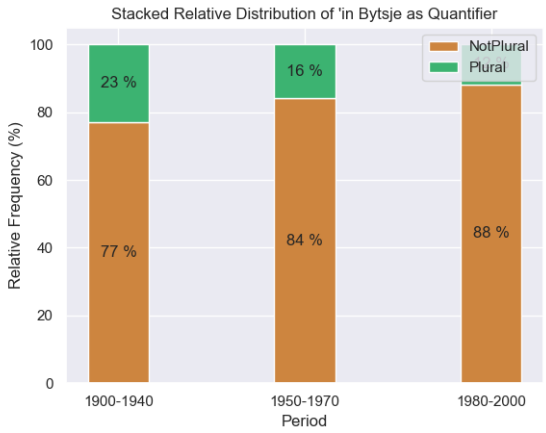

Figure 8: Use of West-Frisian *in bytsje* relative to amount of documents in three separate time-periods across a time-span of 100 years.

As expected given the hypothesis surrounding *in bytsje* in the present thesis, *in bytsje* seems to occur more often in the context of a mass noun than in the context of a count plural. In addition, it is hypothesized by Hoekstra, J. (2000) that the supersession of *min* by *in bytsje* happened in a time-span of roughly a few decades in the past century. Building on this, the present thesis expects to find cases of the quantity expression *in bytsje* paired with a count plural in the middle time-period (1950-1970) as well as in the late time-period (1980-2000),

but not in the earliest time-period (1900-1940). However, through observing Figure 8. above it seems to be the case that in the time-period 1900-1940 the share of nouns that follow plural morphology is bigger than the share of these types of nouns in the latter two time-periods. Similar to what was observed for the quantity expression *in pear*, it might be the case that the PoS-tagger has wrongly tagged some tokens as nouns. While the effect of such a mistake is to an extent accounted for by transforming the data to a relative distribution, a mistake in the earlier time-period still has a larger impact on this distribution than for the latter two time-periods, given that the 1900-1940 time-period comprises less tokens.

In order to investigate whether the collected data reflects this proposal, a process similar to the non-count marked analysis of West-Frisian *in pear* in section 4.3.1. As such, for each time-period, the tokens that bear plural marking (*-s* or *-en*) that occur more than once have been pulled and subsequently visualized. Observe Figure 9. below for the time-period 1900-1940:

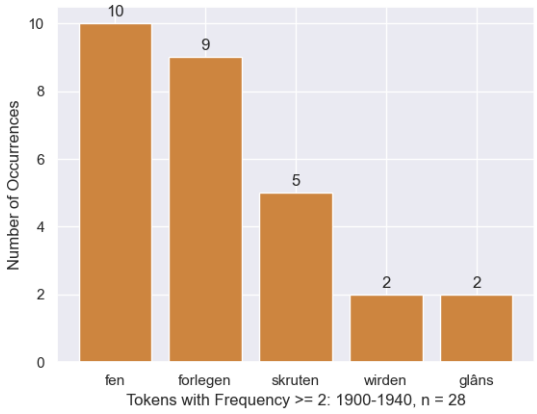

Figure 9: 'Plural' tokens in the distribution of *in bytsje* (1900-1940)

Figure 9. above displays the tokens that follow count plural morphology in the *in bytsje*-corpus for the time-period 1900-1940 (see Appendix A for all results). However, none of the tokens *fen* 'of', *forlegen* 'shy', *skruten* 'to screw', *wirden* 'to become' can be treated as nouns. The token *glans* 'shine', might be treated as a noun, if this token however is a noun, then it is a mass noun and not a count plural. Upon inspection of the tokens that occur only once in the context of *in bytsje*, there is are some forms in which *in bytsje* seems to express quantity for a count plural, observe example (41) below:

(41) Scoe der sims in staech twa oerhinne gean moatte, foar't der wer in bytsje toanbere minsken foart 't ljocht komme?

Should the cord a step two over.to go must, before'it there were a bit showable people before the light come.

'Should the cord go over in two steps, before somewhat showable people step into the light?'

In example (41) above, it seems to be the case that *in bytsje* does not express a quantity of *minsken*, but rather quantifies over the adjetive *toanbare* to generate a meaning similar to *somewhat showable*. In two other contexts, it seems to be the case that *in bytsje* definitely expresses quantity for a count plural, observe examples (42a.-b.) below:

(42) a. Mar wol de bitrouwensmannen fen de noch jonge en in bytsje leden tellende faksbounen , de fervers, de timmerljue, de drukkers, de bakkers.

But will the trustees of the still young and a bit members counting labor unions, the painters, the carpenters, the printers, the bakers.

'But, as wanted by the trustees of the still young and of few members comprising labor unions, the painters, the carpenters, the printers, the bakers. '

b. De blêdtsjes waerden brûkt by it sieden fen sealjemâlke; dit wier in feestdrinken, lyk as ek thémâlke, mâlke mei in bytsje théblêdtsjes deryn.

The leaves were used in the sowing of sealmilk; that where a festive.drink, like as also teamilk, milk with a bit tea.leaves there.in

'The leaves were use for making sealmilk, which was a festive drink, similar to teamilk, milk with a few tea leaves in it. '

In example (42a.) it seems to be the case that *in bytsje* can have a negative meaning. This is due to the logic that if a labor union is young, it probably comprises of *few members* rather than *a few members*. In example (42b.) on the other hand, a negative reading seems to be impossible to ascribe to *in bytsje*, yet the quantity expression is paired with a count plural. This might be an indication that the process of *in bytsje* as a replacement of *min* has started somewhere during this time-period.

See Figure 10. below for the nouns that seem to bear plural marking in the 1950-1970 time-period:

Figure 10: 'Plural' tokens in the distribution of *in bytsje* (1950-1970)

Figure 10. above displays tokens that show regular West-Frisian plural marking and are attested more than once in the context of *in bytsje* in the corpus for the 1950-1970 time-period (see Appendix A for all results). The token *fan* ('of') seems to be wrongly tagged by the PoS-tagger as this word is not a noun. The expression *skruten* 'to screw' is not a noun either. The tokens *sinten* ('cents'), *feiten* ('facts') and *minsken* ('humans') on the other hand, are definitely count plurals.

The expression *wurden*, might denote a verb that means *become*, but might also denote a noun, as such it behaves as a count plural with a meaning similar to *words*. The expression *oars* ('different') seems to be a wrongly tagged token by the PoS-tagger as well. Given that some of the tokens displayed in figure 9. are count plurals (*sinten* has even been used as an example for count plurals in the present thesis) it seems to be the case that West-Frisian *in bytsje* is compatible with count plurals. The sentences in which *sinten* occured after the quantity expression *in bytsje* were all attested in different documents, written by different authors. The question now is whether these sentences in which *in bytsje* is compatible with a count plural are sentences in which *in bytsje* is used in a restrictive context, similar to the sentences observed for *net folle* in section 4.3.2 above. Observe examples (43a.-c.) below for the excerpts of West-Frisian *in bytsje* in combination with *sinten* ('cents'):

(43) a. In mantsje, dat foar in bytsje sinten in protte út'e (*West-Frisian*)
A man that for a bit cents a lot out.it
'A man who, for few cents, got a lot out of it.'

b. Hy waerd boer, beide hiene se in bytsje sinten doe hat er hiel Jobbegea ôfflein om holpen to wurden, jounen en jounen hat er fuort west en hy rêdde´doe rekken, se nei Lippenhuizen, seis bisten op, wit hoe djûr. (*West-Frisian*)

He became farmer both them had a bit cents then had he whole Jobbegea over.flew about helped to become evening and evening had he towards west and he saved then bill, they towards Lippenhuizen six beasts on, know how expensive.

'He became farmer, both of them had few cents, then he flew all over Jobbegea to be helped, night after night he went away and he cleared up the credit for the purchase of six animals near Lippenhuizen, which were expensive.'

c. Né in bytsje sinten wiene samar weislynd en nou yn'e neisimmer bigoun it krap om to kommen; ja, it stie faei. (*West-Frisian*)

No a bit cents were just devoured and well in'the late.summer began it scarce about to come, yes it stays hard

'No, few cents were wasted for no reason and now, in the late summer, it is hard to come by, yes it remains hard.'

Note that all three instances of *in bytsje sinten* were attested in the 1950s, more specifically (43a.) and (43c.) are from documents written in 1952, and (43b.) is from a document written in 1950. Despite this, for example (43a.) the context surrounding *in bytsje sinten* makes it such that a reading similar to *a bit*/*a few* can not be ruled out. Example (43b.) on the other hand hints at *in bytsje* in its restrictive reading; given that the subject in the sentence has little money (*few cents*) and has to receive help from all around the area to clear up some debt left for purchasing the animals he needs for his job (to be a farmer). Following this context, it seems to be the case that *in bytsje sinten* in this context conveys a meaning similar to *few cents* rather than *a few cents*. This entails that in the context of example (43b.) it seems to be the case that *in bytsje* is a negative expression rather than a positive one. What is interesting in example (43c.) above is that the quantity expression *in bytsje* follows a negation (*né* 'no'). In addition, the most probable reading of example (43c.) above is that, despite that only few cents were spent careless/wasted, the financial situation at the moment is dire since, for some reason, it is hard to earn money in the late summer. Given this probable interpretation of example (43c.) the negative reading of *in bytsje* seems to be active here as well. However, in contrast to

example (43b.) the status of this example is harder to confirm. A selection of remaining environments West-Frisian *in bytsje* paired with a count noun are illustrated in examples (44a.-c.) below:

(44) a. Opsterlâns diken forliest har yn de dize fan de foartiiden en der binne navenant mar in bytsje feiten en jiertallen bikend. (*West-Frisian*)

Opsterlâns dikes lost has in the fog of the earlier.times and there are correspondingly but a bit facts and year-amounts known

'The dikes of Opsterlân are lost in the fog of history and correspondingly, only few facts and dates are known'

b. It wie in man fan in bytsje wurden de auto ried al wer. (*West-Frisian*)
It was a man of a bit words the car rode all again.
'It was a man of few words, the car was already riding again.'

c. Mar der wie noch in kant oan dizze kwesje en dat woech him noch swierder: as der mar in bytsje minsken bihâlden waerden de fromsten en de bêsten allinne, wie hy der dan sels wol by (*West-Frisian*)

But there were still a side to this matter and that weighed him still heavier: as there but a bit humans preserved were the most devout and the best alone, will he there then self well at

'But, there was a side to this matter that weighed even heavier for him: if only few humans were saved, it were only the devoutest and the best, would he even belong there?'

Both examples (44a.) and (44c.) seem to carry some negative load, given that *the dikes of Opsterlân are lost in the fog of history*, it makes sense that any quantity judgment on facts and dates regarding these dikes are inherently negative, *navenant* even links the loss of knowledge about the dikes to a low quantity of known facts and dates, which points to a negative use of the quantity expression *in bytsje* in example (44a.) above. Example (44c.) has to do with something that only the most devout and/or best humans will not have to deal with, as such, it makes sense that the reading of *in bytsje minsken* in example (44c.) might have a negative reading, since only few humans would belong to such a highly specified category of people. However, for both (44a.) and (44c.), the reading of *in bytsje* denoting something similar to *a few* rather than *few* can not be eliminated completely, which is an observation that might point at the ambiguity of West-Frisian *in bytsje* as pointed out in section 3.3 of the present thesis. As for example (44b.), the related languages Dutch and English both have an idiom similar to the *man fan in bytsje wurden*, namely,

respectively: *een man van weinig woorden*, and: *a man of few words*. It seems to be the case that for West-Frisian, *in bytsje* can take the position of the negative quantity expressions *weinig* and *few* and form a similar idiom. The remaining environments of *wurden* is the verb which means something similar to *to become*. As for *minsken* 'humans', this expression is used twice in the same document, in a similar environment. The second occurrence of *feiten* was in the same document as the first occurrence as well the environment however, was different as opposed to example (44a.), observe example (45.) below (note that this is an expression made by a character in a novel, the character repeats something he heard prior to his utterance):

(45) In bytsje feiten it is tige spijtig , dat Opsterlân, hwat in sa wichtich tiidrek as dat fan de Herfoarming oanbilanget, sa'n bytsje materiael opsmyt. (*West-Frisian*)

A bit facts it is very regrettable, that Opsterlân, what in so importand time-span as that of the Reformation applies, so.a bit material up.throw

'Few facts, it is very regrettable, that Opsterlân, about an important period such as the Reformation, yields so little material.'

In example (45) above, it seems to be the case that similar to example (44a.), *in bytsje* can have a restrictive reading, again the more probable reading of this example is one in which there is an absence of a large quantity of *feiten*, rather than positively noting that there are *feiten*.

In addition, example (45) above includes the form *sa'n bytsje* 'so few'. This form displays what Hoekstra, J. (2000) proposed for the reading of *in bytsje* paired with a degree marker (see: section 3.3). In this context, *in bytsje* always has the reading of *fewlittle*, in addition, *in bytsje* in such a context is compatible with a count plural. While it seems to be the case that in example (45) *materiael* does not have a count reading, but instead has a mass reading. What follows from this is that while it might be that if the quantity expression *in bytsje* is paired with a degree-marker it can select for count plurals, this example only shows that the quantity expression is compatible with a degree-marker, and in such an environment, it might have a negative reading similar to *little*. Observe Figure 11. below for the most recent time-period taken into account for the present thesis:

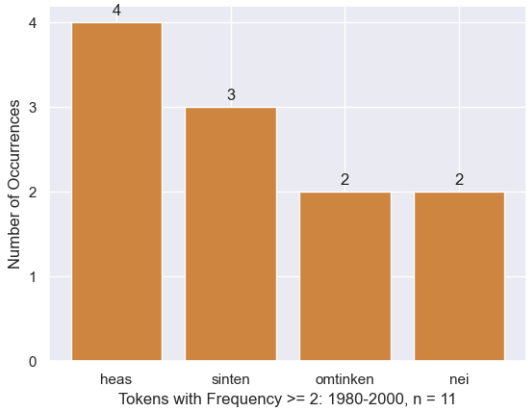

Figure 11: 'Plural' tokens in the distribution of *in bytsje* (1980-2000)

Figure 11. above displays tokens that are paired with *in bytsje*, follow plural morphology and occur more than once in the corpus (see Appendix A for all results). First of all, the expression *heas* means something similar to *hoarse*, this is a wrongly tagged token. The expression *nei* is wrongly tagged as well, this means something similar to *no*. The expression *omtinken* can be used as both a noun as well as an adverb and respectively has a meaning similar to *attention* and *attentive*. Again, it seems that *in bytsje* is compatible with the count plural *sinten* (*cents*), observe example (46):

(46) Hidde hie koart nei sin trouwen in dûbele wente foar in bytsje sinten kocht. (*West-Frisian*)
Hidde had short after his wedding a double home for a bit cents bought
'Hidde had bought a dual house for few cents shortly after his wedding.'

In example (46) above, the quantity expression *in bytsje* expresses quantity *sinten*. The context surrounding *in bytsje* however seems inconclusive, as it could have both a positive *a few cents* as well as a negative reading *few cents*. Given the proposal by Hoekstra, J. (2000) there is reason to state that *in bytsje* in a context such as example (46) above has a meaning that is similar to *few* rather than *a few*. Two other count plurals that seem compatible with *in bytsje* in the latest time-period are: *minsken* 'humans' and *foarstanders* 'proponents', observe example (47.) below:

(47) a. Dy seit dat der mar in bytsje minsken út de fryske biweging aktyf forsetswurk dien ha.

Those said that there but a bit humans out the Frisian movement active resistance.work did have

'Who said that only few people of the Frisian movement did active work for the resistance.'

b. Dan rûnen wy fêst op it feit dat yn 'e Dongeradielen nei ferhâlding in bytsje foarstanders fan iepenbier ûnderwiis wenje.

Then walk we stuck on the fact that in the Dongeradielen to relation a bit proponents of public education living.

'Then we get stuck on the fact that relatively few proponents of public education live in the Dongeradielen.'

In both example (47a.) as well as (47b.) a reading such that the quantity expression *in bytsje* expresses negativity seems to be available. For (47a.) this is because it would make less sense to denote that it is positive that *in bytsje minsken* did active work for the resistance (during World War II). Whereas it is noteworthy that *only few people* out of some subgroup participated in the resistance. For example (47b.), the context seems to clearly signal that *in bytsje* is used as a negative expression. Given that the subject of the sentence in example (47b.) (*wy* 'we') gets stuck due to the low amount of proponents for their proposal, it makes sense that negativity is stressed rather than the positive interpretation of the quantity expression *in bytsje*. Despite these two examples of count plurals other than *sinten* in the 1980-2000 corpus, there are no other cases found in which *in bytsje* is compatible with a count plural. To conclude, in the time-period 1900-1940 there seems to be no case of *in bytsje* in the context of a count plural. This is consistent with the claim made by Hoekstra, J. (2000) that West-Frisian *min* was replaced with *in bytsje* in some contexts during a relatively short period in the 20th century. Following this switch, the quantity expression *in bytsje* became compatible with count plurals in those contexts were this quantity expression has a meaning similar to *few* rather than *a bit*. This proposed mechanism seems consistent with the data for the time-period 1950-1970 as well as the time-period 1980-2000 as displayed in the present section. In rare cases, West-Frisian *in bytsje* seems to be compatible with count plurals, and in those cases, this quantity expression ranges from being ambiguous between being a positive or negative expression to being inherently negative.

5 Conclusion & Discussion

5.1 Conclusion

The present thesis has approached a variety of quantity expressions in West-Frisian. First, it was described how *min* might have been replaced by a few West-Frisian quantity expressions that express low quantity/amount. Starting out with the proposal as composed in Hoekstra, J. (2000), regarding the compatibility of West-Frisian *in bytsje* with count plurals, the present paper built

a case in accordance with this proposal. As such, the present thesis proposed a three-way split between the expressions *in bytsje*, *in pear* and *net folle* to account as replacing all quantificational properties of *min*. Subsequently, the present thesis gave a comprehensive analysis on each of the quantity expressions listed above, this lead to a classification that can capture the differences between the three types of quantity expressions in West-Frisian. A main difference between the quantity expressions such as *in pear* and *in krom* and the quantity expression *in bytsje* was that the latter can occur inside a VP, indicating that this measure construction no longer functions as a measure construction. The main distinction observed in the expression *net folle* compared to all other West-Frisian expressions mentioned in the present thesis is that *net folle* seems to be a (weakly) negative expression as opposed to the positive polarity ascribed to *in pear* and *in bytsje*. On the other hand, data exploration on the quantity expression *in bytsje* (section: Section 4.3.3) seemed to confirm that in some cases, *in bytsje* can occur as a negative expression. In these sentences, *in bytsje* seems to have a meaning similar to *few* rather than *a bit*. And in addition, this use of *in bytsje* enables compatibility with count plurals, consistent with the claims made by Hoekstra, J. (2000). Another interesting observation made in the present thesis was that it seems to be the case that some count plurals seem to occur often in the context of *in bytsje*, examples of such cases are *sinten* 'cents' and to a lesser extent *minsken* 'humans'. Why this is the case however remains an open question.

Regarding the mass-count distinction, it was surmised that *in pear* only selects for count plurals and *in bytsje* only select for mass nouns in the vast majority of the cases. And finally, the quantity expression *net folle* can select for both mass nouns and count plurals, but, as Hoekstra, J. (2000) states *net folle* is blocked in some environments and in those environments, *in bytsje* is taken as placeholder for an expression similar to *min* 'few/little'. That the quantity expression *in bytsje* in the context of a count plural is so rare can be explained. West-Frisian *in bytsje* needs to adopt a negative connotation and allow compatibility with count plurals, which both are properties that *in bytsje* does not have if used outside of this context. Furthermore, West-Frisian expression *in bytsje* outside of such rare contexts adheres to the 'mass-only puzzle' as proposed in Doetjes (1998). Together, *net folle* and *in bytsje* seem to replace all properties of old West-Frisian quantificational *min*, and in addition, in positive contexts with a count plural, an expression such as West-Frisian *in pear* can be used, which seems to be preferred by the data discussed in section 4.3.1. While future research on in particular *in bytsje* in the context of a degree-marker might prove fruitful, the data collected in the present thesis seems to agree with Hoekstra, J. (2000) in the observation that *in bytsje* has a negative reading similar to *fewlittle* in which it is possible for this West-Frisian quantity expression to be compatible with count plurals.

5.2 Discussion

The observations that West-Frisian *in bytsje* is ambiguous is interesting and introduces a valid question for future research. For West-Frisian, an immediate question arising would be to investigate the contexts of *in bytsje* with a degree-marker such as *sa* or *hoe* (resp.: 'so', 'how'). In those cases, as Hoekstra, J. (2000) notes, *net folle* is never an option. Therefore, in such an environment, it is expected that *in bytsje* occurs more often in combination with a count plural then only in those rare cases found in the present thesis. Another question that is worthwhile to investigate in future research encompasses the distribution of positive quantity expressions (e.g.: *in pear*) as opposed to the distribution negative quantity expressions (e.g.: *net folle*) in West-Frisian, but also across the various languages of the world. And then especially, how and why polarity of these expressions might shift. At the same time, it should be examined in exactly which contexts *min* 'few'/'little' in older West-Frisian was applicable as opposed to the quantity expressions mentioned in the present thesis, assuming that at one point, all of these expressions were available. Answering these questions might serve as stepping stones towards capturing the flexibility in quantity expressions and their variety in the languages of the world.[7]

References

[1] Anonymous, 2020. Frisian language. Encyclopædia Britannica Online, pp.Encyclopædia Britannica Online, 2020–07-02.

[2] Bale, A., Gillon, B., Tovena, & Moltmann, F. (2014). Re-examining the mass-count distinction. In: Moltmann, F. (ed.), (2020) *Mass and Count in linguistics, philosophy and cognitive science.*

[3] Broekhuis, Hans, & Den Dikken, Marcel. (2018). Projection Of Noun Phrases Iii: Binominal Constructions. In Syntax of Dutch (pp. 573-672). Amsterdam: Amsterdam University Press.

[4] Champollion, L. (2017). *Parts of a whole.* Oxford: Oxford University Press.https://doi.org/10.1093/oso/9780198755128.001.0001

[5] Champollion, L., & Krifka, M. (2017). Mereology. In Dekker, P. & Aloni, M. (Eds), *Cambridge handbook of semantics.* Cambridge: Cambridge University Press.

[6] Doetjes, Jenny Sandra. (1997). Quantifiers and Selection. On the Distribution of quantity expressions in French, Dutch and English.

[7] Doetjes, Jenny (1998) 'Een beetje or the "mass only" puzzle', in: Sjef Barbiers, Johan Rooryck, Jeroen van de Weijer (eds.), Small words in

[7] Since this is the end of the thesis, I would like to express my gratitude towards Hanna de Vries for all her help and extremely useful input during the composing of this thesis.

the big picture. Squibs for Hans Bennis. HIL Occasional Papers 2. HIL, Leiden.

[8] Doetjes, J. (to appear), Quantity Systems and the Count/Mass Distinction, in: Filip, H. (ed.): *Counting and Measuring in Natural Language.* Cambridge: CUP

[9] Ducrot O. (1973) French 'PEU' and 'UN PEU'. A Semantic Study. In: Kiefer F., Ruwet N. (eds) Generative Grammar in Europe. Foundations of Language (Supplementary Series), vol 13. Springer, Dordrecht. https://doi.org/10.1007/978-94-010-2503-4_9

[10] Ducrot, O, 2005. De l'intérêt de choisir entre peu et un peu. Bulletin hispanique (Bordeaux), 107(1), pp.109–117.

[11] Ducrot, O. (1991). Dire et ne pas dire : Principes de sémantique linguistique (3e éd. corr. et augm. ed., Collection savoir . Sciences). Paris: Hermann.

[12] Extra, Guus & Gorter, Durk, 2008. Frisian in the Netherlands. In: *Multilingual Europe. Contributions to the Sociology of Language [CSL].* Berlin, New York: Mouton de Gruyter, pp. Multilingual Europe, 2008–08-19, Vol.96.

[13] Fryske Akademy, Frisian Corpora search, 2019, retrieved: April 2021. `https://frisian.eu/corpus-frontend/frysk/search/`.

[14] Gathercole, Virginia C. (1985). 'He has too much hard questions': The acquisition of the linguistic mass–count distinction in much and many. Journal of Child Language, 12(2), 395-415.

[15] Hoekstra, E. (2010). Oer FOLLE en 'WEINICH'yn it Nijfrysk en it Midfrysk. It Beaken, 72(3-4), 55-68.

[16] Hoekstra, E. (2011). Negative polarity in morphology: The case of Frisian FOLLE 'much, many' as compared to Dutch VEEL. Linguistics in the Netherlands, 28, 25-37.

[17] Hoekstra, J. (2000). The West Frisian quantifier system and the mass only puzzle. Linguistics in the Netherlands, 17(1), 119-131.

[18] Moltmann, Friederike. (2020). Mass and Count in Linguistics, Philosophy, and Cognitive Science (Language Faculty and Beyond). Amsterdam/Philadelphia: John Benjamins Publishing Company.

[19] Rett, Jessica. (2018). The semantics of many, much, few, and little. Language and Linguistics Compass, 12(1), N/a.

[20] van Riemsdijk, H.. (1998). Categorial feature magnetism: The endocentricity and distribution of projections. The Journal of Comparative Germanic Linguistics, 2(1), 1-48.

[21] Rothstein, S. (2010). Counting and the mass/count distinction. Journal of Semantics, 27, 343–397.https://doi.org/10.1093/jos/ffq007

[22] Tamminga, Douwe A. 1973. “Folle net genôch”. Op ‘e taelhelling II. Boalsert: Osinga, 12–15

[23] The pandas development team, 2020, *pandas-dev/pandas:pandas*,1.1.4, Zenodo, doi: 10.5281/zenodo.3509134, url: `https://doi.org/10.5281/zenodo.3509134`.

[24] The pandas development team, 2020, Merge, join, concatenate and compare, in The pandas development team (eds.): *User Guide*, `https://pandas.pydata.org/pandas-docs/stable/user_guide/merging.html`.

[25] Tiersma, P. (1985). Frisian reference grammar (Fryske Akademy ; nr. 644 821936794). Dordrecht [etc.]: Foris.

[26] van de Velde, H., Heeringa, W. Bouma, G., Hofman, M., Drenth, E., Sijens, H. 2020, UDPipe Frysk, Fryske Akademy / University of Groningen / Clariah, April 2021, `https://fryske-akademy.nl/fa-apps/udpipe/`.

[27] Zweig, E. (2005, July). Nouns and adjectives in numeral NPs. In PROCEEDINGS-NELS (Vol. 35, No. 2, p. 663).

Appendices

Appendix A. This appendix displays all results in which West-Frisian *in bytsje* is paired with a token that is tagged as a plural noun. Note that some tokens have been included by the pattern described in Section 4.3 which should have been ignored by this pattern, this might be due to differences in lemmatization and the actual word form in a text. The fact that the totals displayed below are not equivalent to the totals as displayed in section 4.3.3 is due to the error adjustments as described in Section 4.3.

.1 Period 1900-1940

.1.1 Wrongly Tagged

Token	Frequency	Translation	Word Category
fen	10	'of'	Preposition
forlegen	9	'shy/timid'	Adjective
fensels	1	'by itself'	Pronoun
skruten	5	'to screw'	Verb
greats	1	'pride'	Adjective
libben	1	'to live'	Verb
wirden	2	'to become'	Verb
biwesten	1	'to (the) west'	Preposition/Adjective
tsjokkens	1	'thickness'	Adjective
glâns	2	'shine'	Adjective
eigenwiis	1	'conceited'	Adjective
tajaen	1	'to admit'	Verb
smel	1	'narrow'	Adjective
wyld	1	'wild'	Adjective
Fryske	1	'Frisian	Adjective
mei	1	'with'	Preposition
*dominys**	1	'dominance'	Adjective
*les**	1	'lesson'	Count Noun (Singular)
Total	41		

Table 4: Wrongly Tagged Tokens *in bytsje* 1900-1940

The expression *les* 'lesson' is a count noun, however, in this case this noun is not pluralized and therefore not a count plural and irrelevant to the present thesis. The expression *dominys* 'dominance' can also be interpreted as 'pastors', given the context in which I found this example however, this seems highly unlikely.

.1.2 Mass Nouns

Token	Frequency	Translation	Word Category
skurvens	1	'scurvy'	Mass Noun
iten	1	'food'	Mass Noun
Total	2		

Table 5: Mass Nouns Ending in *-en* or *-s in bytsje* 1900-1940

.1.3 Count Plurals

Token	Frequency	Translation	Word Category
*théblêdtsjes**	1	'tea leaves'	Count Plural
*minsken**	1	'humans'	Count Plural
*leden**	1	'members'	Count Plural
Total	3		

Table 6: Count Plurals *in bytsje* 1900-1940

All examples listed above have been discussed in section 4.3.3.

.2 Period 1950-1970

.2.1 Wrongly Tagged

Token	Frequency	Translation	Word Category
fan	6	'of'	Preposition
wizen	1	'wise'	Adjective
tin	1	'thin'	Adjective
nijs	1	'new'	Adjective
skruten	3	'to screw'	Verb
better	1	'better'	Adjective
knoffeligens	1	'woodiness'	Adjective
foldien	1	'satisfied'	Adjective
frjemd	1	'strange'	Adjective
oars	2	'different'	Adjective
fatsoenliks	1	'decent'	Adjective
ûnwis	1	'uncertain'	Adjective
koarsichtichs	1	'short-sighted'	Adjective
greatens	1	'pride'	Adjective
forheven	1	'exalted/sublime'	Adjective
wyts	1	'white'	Adjective
bitsjutten	1	'to mean'	Verb
bûgen	1	'to bend'	Verb
sûntjes	1	'healthy'	Adjective
*wurden**	1	'to become'	Verb
*baes**	1	'boss'	Count Noun
*lins**	1	'lens'	Count Noun
weakens	1	'weakly'	Adjective
Total	31		

Table 7: Wrongly Tagged Tokens *in bytsje 1950-1970*

For *wurden*, see: Section 4.3.3. While *baes* 'boss' and *lins* can be used as count nouns, in these cases these nouns are not pluralized and therefore not relevant for the present thesis.

.2.2 Mass Nouns

Token	Frequency	Translation	Word Category
gers	1	'grass'	Mass Noun
iten	1	'food'	Mass Noun
thús	1	'home'	Mass Noun
Total	3		

Table 8: Mass Nouns Ending in *-en* or *-s in bytsje* 1950-1970

.2.3 Count Plurals

Token	Frequency	Translation	Word Category
keatsers	1	'handballers'***	Count Plural
*wurden**	1	'words'	Count Plural
*sinten**	3	'cents'	Count Plural
*feiten**	2	'facts'	Count Plural
roomsken	1	'catholics'	Count Plural
flaters	1	'errors'	Count Plural
*binammen***	1	'nicknames'	Count Plural
*kealleprizen***	1	'calf prices'	Count Plural
*minsken**	2	'humans'	Count Plural
Total	13		

Table 9: Count Plurals *in bytsje* 1950-1970

All examples marked with the asterisk (*) have been discussed in section 4.3.3. The examples marked with the double asterisks occured after *in bytsje* when *in bytsje* was part of a sentence prior to these count plurals. The translation *handballers* is marked with triple asterisks since it is viewed to be the closest approach towards translating those people that participate in the Frisian sport of *keatsen*, a one-on-one translation does not exist. As for the environments of the remaning count plurals, observe examples (48a.-c.) below:

(48) a. Soms sjocht men dan ek, dat der mar in bytsje keatsers dielnimme , mar it komt ek wol foar dat der ynienen mear as dielnimmers opsetten komme.
Sometimes sees one then also, that there only a bit handballers participate, but it comes also well before that there in.once more as participators up.set come
'Therefore, sometimes one sees that only few handballers participate, but it also occurs that for some reason more participators show up. '

b. Op in oar plak seit dizze warbere strider foar de hillige tsjerke, hy moat yn de plakken, dy't it fierst fan it Fean ôflizze en dêr't mar in bytsje roomsken wenje , tige hoeden to wurk gean en him oeral biskûl hâlde.
On a other place said this diligent warrior before the holy church, he must in the places, that it furthers of the Fean off.lay and there but a a bit catholics live, very careful to work go and him everywhere hidden keep
'In another place, said this dilligent warrior before the holy church, in those places that are the furthest away from Fean where only few catholics live, he must work very careful and keep himself hidden everywhere'.

c. Ik kin der nou gâns tiid oan spandearje en sadwaende meitsje ik mar in bytsje flaters mear.
I can there now a lot time on spending and thus make I but a bit mistakes more.
'I can spend a lot of time on that now and therefore I only make few mistakes anymore.'

For all examples above (48a.-c.) it seems to be the case that *in bytsje* can have a negative meaning, based on the context surrounding this quantity expression.

.3 Period: 1980-2000

.3.1 Wrongly Tagged

Token	Frequency	Translation	Word Category
*baas**	1	'boss'	Adjective*
byholpen	1	'assisted'	Verb
heas	4	'hoarse'	Adjective
holpen	2	'helped'	Verb
tuskenbeiden	1	'in between'	Adjective
omtinken	2	'attentive'	Adjective
weiwiis	1	'knows the way'	Adjective
nimmen	1	'to take'	Verb
ûnwis	1	'uncertain'	Adjective
oerdwers	1	'across/in opposite direction'	Adjective
oanhellen	1	'to tighten'	Verb
betrouwen	1	'to trust'	Verb
ûndogens	1	'mischievous'	Adjective
oars	1	'different'	Adjective
*taps**	1	'tapered'	Adjective
bang	1	'afraid'	Verb
nei	2	'no'	Adjective
yn	1	'in'	Preposition
Total	24		

Table 10: Wrongly Tagged Tokens *in bytsje* 1980-2000

The tokens *heas*, *holpen* and *omtinken* have been discussed in As for the tokens *baas* and *taps* these tokens can be interpreted as nouns in some cases, however, in the context that these occurrences were found this seems an impossibility, observe example (49a.-b.) below:

(49) a. Hy wie in byt-sje - heitich, in bytsje baas, autoritair, hoe moat ik it neame.
He was a bit - fatherly, a bit boss, authoritarian, how must I it call
'He was a bit fatherly, a bit bossy, authoritarian how should I call it.'

b. De wichten fan foar Napoleon hiene fan ûnderen net in gat en hja wiene in bytsje taps tarinnend makke.
The weights of before Napoleon had of below not in hole they were a bit tapered take.inside made
The weights from before Napoleon had no holes from below, they were a bit tapered from the inside out.

Due to the context in which *baas* is used as illustrated in example (49), I assume that in this case *baas* is used as an adjective rather than a count plural. And as for *taps*, this seems to have a meaning of *tapered* rather than *taps* in example (49b.).

.3.2 Mass Nouns

Token	Frequency	Translation	Word Category
thûs	1	'home'	Mass Noun
saffraen	1	'saffron'	Mass Noun
iten	1	'food'	Mass Noun
Total	3		

Table 11: Mass Nouns Ending in *-en* or *-s in bytsje* 1980-2000

.3.3 Count Plurals

Token	Frequency	Translation	Word Category
*minskerêders**	1	'human rescuers'	Count Plural
sinten	3	'cents'	Count Plural
minsken	1	'humans'	Count Plural
foarstanders	1	'proponents'	Count Plural
Total	5		

Table 12: Count Plurals and *in bytsje* 1980-2000

The expression *minskerêders* has not been discussed in Observe examples (50) below:

(50) a. Dan docht er in siden sjaaltsje om'e hals en set ôf mei in bytsje minskerêders - air ek noch.
Then does he a silk scarf around'the neck and sets off with a bit human.rescuers - allure also still
'Then he wraps a silk scarf around the neck and sets off with (a) few human rescuers - also with allure.'

In example (50) above, it seems to be the case that it is not straightforward that *in bytsje* has a negative meaning, a positive meaning on the other hand can not be constituted on basis of context either however. Perhaps, in a larger context, this ambiguity would be resolved, for now however, example (48) can not serve as evidence for *in bytsje* as a negative expression.

Appendix B. This appendix displays some examples of the quantity expression *net folle* in West-Frisian. Examples (51a.-f.) below are randomly selected from the three corpora of *net folle* split by time-period.

(51) a. Then wier it doarp in slettene mienskip, dat, as it hwet lyts wier en op in úthoekje laei , faken net folle punten fen oanreitsing hie mei it wrâldbarren.

Then was the village a closed community, that, as it what small were and on a corner lay, often not many points of touch had with the world.events.

'Then the village was a closed community, that, because it was somewhat small and lay in a remote corner, often had not many notice of world events.'

b. Ek om it lân skjin to krijen fen woarteltúch det tige oansette, do't men gâns noat boude en net folle ierappels en biten.

Also around the land clean to get of roots that very accelerate, then men a.lot grains cultivate and not many potatoes and beets.

'Also to clean the land from increasing roots, because people cultivated a lot of grain and not may potatoes and beets.'

c. Hy wist tige goed. dat er fan de side fan de Pipegael, net folle goeds to wachtsjen hie en ynwindich hie er wol faek mei ûnrêst yn it herte tocht oan de mûglike gefolgen.

He knew very good, that he of the side of the Pipegael, not much good to wait had and internally had he well often with unrest in the heart thought on the possible consequences

'He knew very well, that from the side of the Pipegael, he should expect not much good and internally he had often thought about the possible consequences with troubled heart.'

d. Ek al net folle pretinsjes, wol Braeksma?

Also already not many pretensions, well Brakesma?

'Also not many pretensions, right Braeksma?'

e. En ik tink, snierde Robert, dat it selskip ek net folle reden hie om fan syn hâlden en dragen sa ûnder de yndruk te wêzen astó likest.

And I think, sneered Robert, that the company also not many reason has to of his hold and carry so below the impression to be as.you like.

'And I think, sneered Robert, that the company has not many reason either to be impressed by his attitude and demeanor if you will .'

f. Der besteane net folle lju mei de namme Dellema , faaks wiene sy wol de iennich-sten - te wrˆâld.

There exist not many people with the name Dellema, perhaps were they well the only.ones - on.the world

'There exist not many people with the name Dellema, perhaps there were even the only ones - in the world.'

Upon observing example (51a.-f.) above, it seems to be the case that for all examples in which West-Frisian *net folle* is paired with a nominal, the quantity expression displays a (weak) negative reading. For example, in (51b.) reasons are given why roots are prevalent on the land, this is due to the limited cultivation of potatoes and beets, what follows is that the quantity of *ierappels* 'potatoes' and *biten* 'beets' as expressed by *net folle* has an inherently negative reading. In examples (51e.-f.) I would even argue that *net folle* can be translated as *few* as well, given the extremely limited amounts of respectively *reasons* and *people with the name Dellema* expressed given the surrounding context of *net folle*. To conclude, in expressions such as (51a.-f.) above, *net folle* serves as an expression that seems to be primarily used in (weak) negative contexts, which might explain its suitability towards replacing West-Frisian *min*.

Appendix C. This appendix displays the nouns not following plural morphology for West-Frisian *in pear* in the time-periods 1950-1970 and 1980-2000 respectively.

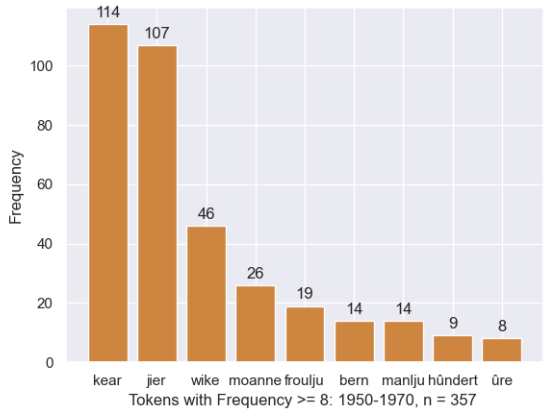

Figure 12: Tokens Paired with *in pear* not Following Regular Plural Morphology (1950-1970)

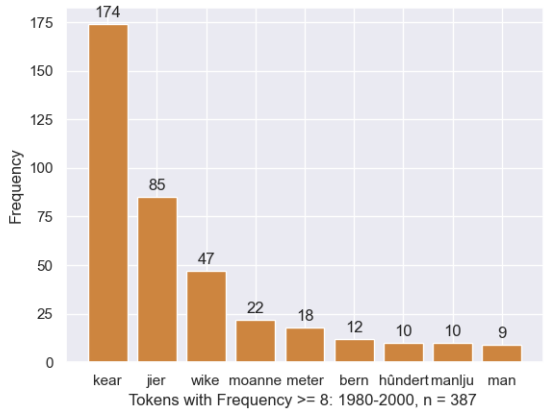

Figure 13: Tokens Paired with *in pear* not Following Regular Plural Morphology (1980-2000)