

Shit-cool and Giant-interesting Words

*A study of noun+adjective compounds in
Norwegian*

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Abstract

This thesis explores the topic of noun+adjective (N+A) compounds in Norwegian, which is a category of compounds that has not been studied before. 656 compounds are analyzed. The data include 420 different first elements (FE) and 111 different second elements (SE). 11 semantic groups are described, some with subgroups. The semantic groups are defined by the semantic relation between their elements. It is shown that analyzing N+A compounds by the adjective class of the second element leads to a very different result, which does not take semantic relations into account. It is also shown that the FE slot is much more open than the SE slot, and that there are certain limitations on what kinds of adjectives can occur in an N+A compound.

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1 Introduction

1.1 The object of study

In this thesis, I will be describing and discussing a category of Norwegian compounds, in which the first element (FE) is a noun, and the second element (SE) is an adjective; cf. (1)–(4).

(1) *vin-raud* wine-red

(2) *bil-sjuk* car-sick

(3) *kalori-rik* calorie-rich

(4) *kjempe-snill* giant-kind "very kind"

I will call these N+A compounds. The whole compound is an adjective – the general rule in Norwegian is that the SE determines the word class of the compound. This type of compound has not been studied before within Norwegian.

My goal with this thesis is to discover a network of semantic relations that can describe and account for this category of compounds. I aim to show that the semantic groups are types of *constructions* (see 5.2).

We will see that it is possible to define several semantic groups that are productive to differing extents – some of them very much so. These groups are not reducible to groups of particular SEs or particular kinds of adjectives, but are based on semantic relations between the compounds' elements.

1.2 Why I have chosen this topic

Norwegian compounds share a problem with compounds in many other languages, in that they do not get as much attention as they should. They are an interesting phenomenon in the languages in which they occur, particularly where they are as highly productive as they are in Norwegian.

Most of the research that has been done on Norwegian compounds, comes from the University of Oslo. So in submitting this thesis, I am contributing to a project of sorts (albeit an unofficial one). We need to know more about all the types of Norwegian compounds, and all of the various semantic things they can do. Discovering new kinds of relations can help develop our understanding of semantics and its complexity. Seeing what kinds of compounds arise can tell us a lot about what sorts of concepts Norwegian speakers feel a need to name – if only for a short-term, ad hoc purpose, like the infamous *oskefast* "ash-stuck".

1.3 What I am studying, and what I am not

I have said that I am studying N+A compounds. This is true, but there is a need to clarify what I have included in this, and what I have not.

I have included data where the following criteria are met:

1. The FE is recognizable as a noun, and I know what it means.
2. The SE is recognizable as an adjective, and I know what it means.
3. I know what the compound means.

"Knowing" what an element or compound means is essential to being able to analyze the data. For this reason, and to save time, if I did not already know the meaning, or it was not defined in the dictionary entry, I did not include it.

The above criteria exclude data where:

1. The FE could be a noun, but it could also belong to a different word class (for instance, it has a homonymous verb, and I can not be sure whether I am dealing with the noun or the verb). For instance, the verb *reise*- "travel" and the noun *reise*- "travel" are homonymous and impossible to tell apart as the first element of a compound.
2. The SE is a participle, which can be used adjectivally, but is different from "real" adjectives. Compounds with participles as SEs are *synthetic compounds*, and are really a phenomenon of their own.
3. I am (nearly) sure that I am looking at an N+A compound, but I am not sure of its meaning.

Faarlund et al (1997: 66) say that "Compounds with a perfect participle as an SE and a noun or an adjective as an FE can usually be considered adjectives." Their argument is that these compounds do not inflect like verbs, c.f. (5).

(5) *mening.s-fylt* meaning-filled "meaningful"

**mening.s-fylle* meaning-fill

**mening.s-fyller* meaning-fills

Perhaps it is not wrong to consider words like this to be N+A compounds, but they differ from other N+A compounds in their structure. When the SE is a participle, that is, really a form of a verb, the FE fulfills one of the semantic roles that the verb takes. This gives the compound a type of semantic relation that is different from what we find in the "real" N+A compounds.

So I have decided to exclude them for the purpose of this thesis, and leave them in the hands of any researcher who wants to take them on.

The fylkeskommunal problem

Another type of data I have not included, are words that look very similar to N+A compounds, but are actually derived from an N+N compound, c.f. (6) and (7).

(6) *fylke.s-kommunal* county-municipal "regarding county administration"

derived from *fylke.s-kommune* county-municipality

(7) *kultur-politisk* culture-political "regarding cultural politics"

derived from *kultur-politikk* culture-politics

These can not be analyzed in the same way as the rest of the data. They are not "headed", and it is difficult to describe a relation between the "elements". (An analysis or description of the N+N compound they are derived from is possible, but that is outside of the scope of this thesis.) The meaning of these compounds is not anything like "A in a way that relates to N", but rather "regarding N+N". This makes it clear that we are not dealing with actual N+A compounds here.

1.4 Glossing and translation

When providing examples of compounds, I will show them in the following format:

(8) *drit-pen* shit-pretty "very pretty"

In italics is the Norwegian compound, with the elements divided by a hyphen. Immediately after is a gloss of each element, to show their literal meanings. Finally, in quotation marks, I translate the meaning of the whole compound, wherever it is useful (that is, wherever the gloss does not accurately translate the meaning of the whole compound – which is very common!).

If there is a "linking element" (I will discuss this term in 4.2.4) in the compound, that is, an *-s-* or *-e-* between the two elements, they will have a period sign in front of them, like this:

(9) *gut.e-galen*

1.5 Orthography

According to recommendations from The Language Council of Norway (Språkrådet 2015), Norwegian compounds should be written as one word (in some cases, hyphens are accepted). Splitting compounds in writing is becoming increasingly common, despite strong aversion towards this within certain communities, and a significant amount of attention being paid to this phenomenon. The development may be due to influences from English, where the orthographic conventions are not as consistent. Many Norwegians read almost as much English as Norwegian, especially digital texts (see for instance Finstad and Staude 2013), and this can influence trends within Norwegian writing.

It is worth noting, however, that Norwegian speakers retain their mastery of the phonology and semantics of compounds regardless of their knowledge of orthographic conventions, and so there is no imminent danger of the compound becoming impossible to define.

As mentioned above, I will reproduce all of my data with hyphens between the two elements. This is mainly to show clearly where one element ends and the next begins, and to maintain a consistent representation of the data.

I have also reproduced all the data and examples in Norwegian (Nynorsk) orthography, again for the sake of consistency. This means that some phonological features are ignored, but as it is the semantics I am focusing on, it is easier to deal with orthographic representations.

1.6 An outline of this thesis

I have introduced the topic of this thesis in the current chapter, which is noun+adjective (N+A) compounds.

Chapter 2 and 3 discuss the adjective and the noun. I will give a semantic, a morphological and a syntactical definition of each word class, particularly as they are used in Norwegian.

Chapter 4 attempts to define the process of compounding, argue its status as a word-formation process and describe the structures of compounds. I will also go through the existing research on Norwegian compounding.

In chapter 5, I will briefly present the theoretical frameworks of Cognitive Grammar and Construction Grammar and how these frameworks can inform semantic studies.

In chapter 6, I explain my process for obtaining data for this study, and discuss advantages and disadvantages to the methods I used.

Chapters 7 and 8 are the analysis of my data. In chapter 7, I present the semantic groups that I have found, and attempt to define their semantic relations and other aspects of how they behave. Chapter 8 brings up other questions related to the study, and importantly, makes a comparison to Dixon's adjective classification.

In chapter 9, I give a brief summary of the thesis, draw conclusions on the findings, and sum up the most central insights of this thesis.

In chapter 10, I will provide suggestions for topics for further research on Norwegian compounding.

2 The adjective

In this chapter, I will define and discuss the adjective from semantic, morphological and syntactical perspectives and criteria. The compounds I am studying are adjectives, and have adjectives as their second element, so it is important to have an understanding of what the adjective is and how it behaves.

2.1 An open word class

Adjectives are not a universal word class across the world's languages. In some languages, the semantic function of the prototypical adjective is served by verbs and/or nouns instead. However, the adjective word class is very common typologically. It also tends to be an open class where it exists.

The adjective is an open word class in Norwegian. We have adjectives from all of Dixon's classes (Dixon 2010), and new adjectives are constantly arising in the language or being borrowed from other languages. In Norwegian, defining the adjective as its own word class is unproblematic. It has several features that distinguish it from the other word classes, as we will see.

2.2 The semantics of the adjective

The prototypical semantics of an adjective is a property (Langacker 2008: 95). It elaborates or limits the semantics of the noun that it modifies. A term that Langacker uses for the adjective is ATEMPORAL RELATION. Relational expressions have a *trajector* that is "the entity being located, evaluated, or otherwise described" (Langacker 2008: 113), and an optional *landmark* that is a "secondary focal participant". An adjective places its trajector, which is a THING (see 3.2), on a scale, or in a region of "space", representing a property. There is no secondary participant in the adjective.

2.2.1 Degree and modification

Adjectives are traditionally classified as being either gradable or ungradable. This depends on their semantics, and whether they refer to relative or absolute properties. Adjectives that denote relative properties can take degree inflections in Norwegian.

Relative and absolute adjectives also behave differently with regards to negation and antonyms. A relative adjective can negate its antonym, but a negated relative adjective does not entail its antonym.

(10) A person who is tall, is not short.

A person who is short, is not tall.

* A person who is not short, is tall.

* A person who is not tall, is short.

We see that it is possible to negate in one direction, but not the other. This is because relative adjectives denote placements on a scale, where there is "middle ground" between the ends of the scale. Thus, it is possible for an entity to exist close to one end of the scale, or somewhere between. There may even exist a word for this middle ground. So negating one end of the scale does not imply the other. We understand that there exist people who are neither short nor tall per se, and that we can speak of height in relative terms, making comparisons and qualifications.

Absolute adjectives, however, have meanings that are not scalable, they either *are* or *are not*, and so an absolute adjective and its antonym are mutually exclusive. We can also say that "the positive of one item implies the negative of the other, and vice versa" (Frawley 1992: 444).

(11) A statement that is true, is not false.

A statement that is false, is not true.

A statement that is not false, is true.

A statement that is not true, is false.

"True" and "false" are, at least in terms of logic, not gradable. It is, strictly speaking, illogical to grade the "trueness" of a statement, or the "deadness" of something that once lived, on a scale. The same goes for making comparisons when it comes to these properties. However, we still see instances of ungradable adjectives being graded or modified by adverbs:

(12) *Det er veldig sant!* "That is very true!"

(13) *Svaret hans var ganske feil.* "His answer was quite wrong."

(14) *Dette er det mest unike kunstverket eg har sett.* "This is the most unique piece of art I have seen."

(15) She's not only merely dead, she's really most sincerely dead.

These examples show that the language user does not let herself be limited by absolutes or by logic. We know that non-literal usage of the language is extremely common, and this seems to be another example of that.

It is tempting to think that a stronger limitation on gradability and modifiability is the complexity of the semantics. So perhaps a compound would be less likely to take degree inflection if its semantics already contained something similar to these aspects, such as comparisons, or indeed, degree-related elements. More on this in chapter 7.

2.2.2 Types of adjectives

Dixon (2010) lists the adjective classes that account for the world's lexicon of adjectives, and shows their hierarchy of "universality" – that is, he shows that any given language is *most* likely to have certain classes of adjectives, such as those denoting age, dimension and color. The following is a list of Dixon's adjective classes.

1. Dimension
2. Age
3. Value
4. Color
5. Physical property
6. Human propensity
7. Speed

8. Difficulty
9. Similarity
10. Qualification
11. Quantification
12. Position
13. Cardinal numbers

In Norwegian, we have adjectives for "everything" – except cardinal numbers are not adjectives in Norwegian (but ordinal numbers are). Most of these adjective classes are represented in the data for this thesis, as we will see in chapter 8.

2.3 Norwegian adjective morphology

Table 1 shows the inflectional paradigm for two Norwegian adjectives, one irregular and one regular.

Table 1. ADJECTIVE PARADIGMS

POS					COMP	SUP	
SG			DEF	PL		INDEF	DEF
INDEF							
M	F	N					
Liten	lita	lite	vesle	små	mindre	minst	minste
Raud		raudt	raude		raudare	raudast	raudaste

We recognize adjectives morphologically by their ability to take these forms. Faarlund et al (1997: 27) list several criteria or characteristics for adjectives, and the morphological criteria they give is degree inflection. Adjectives also take inflections for number, definiteness and gender (in some cases). The reason Faarlund et al mention degree is perhaps because the adjective is the only word class we most associate with degree inflection – but some adverbs can take degree inflections as well, and not all adjectives can, as mentioned in 2.2.1.

Faarlund et al (1997: 345) distinguish between *real* adjectives and adjectives that are derived from perfect participles. Their criterion for calling a participle an adjective is agreement. An adjective takes definiteness or number agreement inflections, whereas a participle does not – in Norwegian (Bokmål). In Norwegian (Nynorsk), this distinction is not particularly meaningful because perfect participles also take agreement inflections.

2.4 Syntactical roles

Syntactically, the adjective is the head of the adjective phrase. It has two main syntactical roles or uses:

1. Predicative. This means that the adjective is part of the predicate of the sentence, often following a copula. This usage is the most common (Frawley 1992: 440), where the adjective *delimits* "a domain that is old information".

(16) *Dei er kreative.* / *They are creative.*

2. Attributive. This means that the adjective is modifying a noun in a noun phrase. The attributive role is used to "assign property concepts to new (though not brand new) discourse participants" (Frawley 1992: 440).

(17) *Vi møtte ein snill mann.* / *We met a kind man.*

(18) *Artikkelen inneheldt lange avsnitt om leksikalsk semantikk.* / *The article contained long paragraphs on lexical semantics.*

The adjective can be used in other ways as well, but these two usages, predicative and attributive, are very frequent and reliable ways to recognize adjectives in a Norwegian or English sentence.

Being the head of an adjective phrase, the adjective itself can of course take modifiers, most commonly adverbs.

(19) Vi møtte ein *særs snill* mann. / We met a *very kind* man.

(20) Artikkelen inneheldt *unødvendig lange* avsnitt om leksikalsk semantikk. / The article contained *unnecessarily long* paragraphs on lexical semantics.

(21) Dei er *overraskande kreative*. / They are *surprisingly creative*.

2.5 Summary

The adjective is an open word class in Norwegian, and we have adjectives in all of Dixon's classes. Norwegian adjectives inflect by number, definiteness and degree – and sometimes gender. Though there are theoretical limitations on the gradability of adjectives, language users are often more creative than these "rules" indicate. Adjectives are mainly used predicatively and attributively, and these possibilities are important characteristics of the word class, as well as them being modifiers in noun phrases, and heads in adjective phrases.

3 The noun

In this chapter, I will attempt to define the noun semantically, morphologically and syntactically. The compounds I am studying have nouns as their first elements, or in the modifier position. So it is useful to define what the noun is before we study it as a compound element.

3.1 The largest word class

Nouns make up the largest word class in Norwegian. It is, unsurprisingly, a very open word class, meaning that new words arise very frequently. Nouns are also the most commonly found element in compounds, and new compound nouns are constantly being formed.

3.2 The semantics of nouns

Nouns prototypically denote "objects" – or "things". Langacker uses *THING* as a technical term, to include not only the prototype of physical objects, but any "product of grouping and reification" (Langacker 2008: 105). Grouping means that we have a concept of units being grouped either because of their similarity or their spatial proximity. Reification refers to the "capacity to manipulate a group as a unitary entity for higher-order cognitive purposes", such as perceiving two groups as connected to one another in some way – becoming a unified structure.

We have traditionally distinguished between concrete and abstract entities, though this can also be a spectrum. Some nouns seem to approach the semantics of a verb or an adjective, such as *skrivning* "writing" or *trøyttheit* "tiredness", being derived from the verb *skrive* "write" and the adjective *trøytt* "tired". Langacker argues that these nouns do not have the same meaning as their verb or adjective equivalents. In his definition, *skrivning* and *trøyttheit* are also *THINGS*.

3.3 Norwegian noun morphology

Norwegian nouns can have three genders: feminine, masculine, and neuter. The feminine gender does not exist in all dialects; for instance, the Bergen dialect has only masculine and neuter. For a lot of urban speakers, only a very few words take the feminine inflectional pattern (commonly such words as: *jente* "girl" and *hytte* "cabin"). In my dialect, which comes from the southwest coast, the feminine gender is alive and well.

The paradigm of a Norwegian noun includes inflections for number and definiteness. We have singular and plural forms, and indefinite and definite forms. Some nouns, such as mass nouns like *mjølke* "milk", are uncountable and do not have plural forms – though in many cases they are listed with plural forms in the dictionary!

The inflectional paradigms look different for each gender. There are also "irregular" nouns that have vowel modifications instead of (or as well as) inflectional suffixes – such as *foot* – *føter* "foot – feet" and *broor* – *brøer* "brother – brothers".

I will show examples of inflectional paradigms for Norwegian (Nynorsk) nouns in Table 2. The patterns are very similar in my own dialect.

Faarlund et al (1997: 27) state as a morphological criterion for the noun, that it can take a definite article. But a definite article, as a separate word, would be a syntactical criterion, and not a morphological one. They are probably really referring to the definite inflectional suffixes.

Table 2: NOUN PARADIGMS

	masculine	feminine	neuter
sg indef	ein bil	ei bru	eit blad
sg def	bil-en	bru-a	blad-et
pl indef	bil-ar	bru-er	blad
pl def	bil-ane	bru-ene	blad-a

3.4 Syntactical roles

Norwegian nouns are not much different syntactically from English nouns. They are the head of noun phrases, which can be modified by determiners, adjectives et cetera. These noun phrases can, most commonly, act as subjects or objects in a sentence. The typical word order of a noun phrase is determiner – adverb – adjective – noun.

(22) *ein snill mann* a kind man

(23) *dei utruleg flinke elevane* the incredibly clever students

3.5 Summary

Nouns make up the largest and most open word class in Norwegian, and are also the most commonly found compound element. Nouns denote THINGS in the sense in which it is used in Cognitive Grammar, which is a schematic definition that includes more than the prototypical meaning of "object". Norwegian nouns can have three genders, and take inflections for number and definiteness. Syntactically, they are the head of the noun phrase, which can be the subject or an object of a sentence.

4 Compounding

In this chapter, I will describe the word-formation process of compounding, and what compounds look like. In 4.1, I discuss some definitions of compounding in general, and then in 4.2 I give a more specific definition of Norwegian compounds, and describe their semantic, phonological and supposed syntactical structures. I will argue that a syntactical structure does not seem to exist.

I will attempt to define the elements of the compound, and give some arguments for the compound as its own type of word formation process, differentiated from the derivation. As we will see, there are some cases that are difficult to classify as derivations or compounds, but nonetheless we can see a clear distinction between the *prototypical* compounds and prototypical derivations.

In 4.4, I will give a brief summary of some existing research on Norwegian (or Scandinavian) compounding.

4.1 General definitions

"A compound is a word which consists of two or more words" is a simple definition (Fabb 1998: 66) that seems to be more or less echoed in the literature. Booij (2005) says that "in compounding the constituents of a word are themselves lexemes" (p. 5), and that the compound's "defining property is that it consists of the combination of lexemes into larger words. In simple cases, compounding consists of the combination of two words, in which one word modifies the meaning of the other, the head". These are perhaps rather descriptions of the *prototypical* compound, but within my study they seem to be fine to work with.

The editors of the *Oxford Handbook of Compounding* (Lieber and Štekauer 2009) state their mission to "give a variety of pictures of compounding that both complicate and deepen our understanding of this important means of extending the lexicon of a language. Our intention is to complicate our view both theoretically and descriptively" (p. 3). And as we find on the next page, it is indeed complicated.

The authors compare two radically different views of compounding, where one (Bauer 2003) agrees more or less with the definitions given above (a compound is a lexeme formed from

two or more lexemes), while the other (Marchand 1967) only distinguishes between expansion and derivation, where compounds and prefixed words would be classed as expansions and suffixed words as derivations. Thus, he does not consider compounds to be distinct from what would traditionally be viewed as prefixed derivations – in other words, compounding is not a separate kind of word formation.

Marchand's view, considering compounds and prefixed words to be instances of the same word-formation process, conflicts with definitions of derivation that include the concept of affixation as a necessary characteristic. But *is* this actually necessary? The definition from the Lingua Links Library (SIL International 2004) is: "Derivation is the formation of a new word or inflectable stem from another word or stem. It typically occurs by the addition of an affix." So it does not *necessarily* occur by the addition of an affix. We know of conversions and modifications, where no affix is added, and yet a "new word" in a new word class is formed. So could another option be adding another *word* rather than an affix? Would this still be derivation?

Marchand's view is also problematic in a typological perspective. The first problem is languages that use infixes and circumfixes. In his binary view of expansion versus derivation, which one do these other kinds of affixes belong to? Secondly, some languages have prefixes but lack compounds, such as the Romance languages; and others have compounds but lack prefixes, such as Sami. This should indicate that prefixing and compounding are two different phenomena.

The more common view remains that derivation is one thing, and compounding another. There are some cases that make a clear distinction difficult to make, but the more prototypical cases are possible to separate.

4.2 Norwegian compounds

4.2.1 Defining Norwegian compounds

Faarlund et al (1997) define and explain compounding a few times in different chapters. In the introduction to the chapter on word formation, it is explained with the example of *hus-båt* "house boat", saying that this word is built from two independent words (p. 53). Thus it is simply the combining of two words into one, which is consistent with the definitions in the

previous subchapter. Later (p. 61), they describe compounding as such (translations are mine): "A compound consists of two parts or elements. (...) The second element usually determines which word class the compound belongs to". It is not stated explicitly that the elements in question are words or lexemes, and so without any examples it would be hard to tell this apart from any other word-formation process which involves more than one "part". Only by looking at the examples and understanding how these are different from examples of derivation, can the reader grasp what kind of word-formation is being described.

4.2.2 The phonology of Norwegian compounds

One of the ways we recognize compounds in Norwegian is by their phonology. This is what separates the compound *ananasbiter* "pineapple chunks" from the phrase *ananas biter* "pineapple bites" - in speech, that is. (Orthographically, the difference is in the dividing of the words. *Ananas biter* is an infamous example of the humorous "misunderstandings" that can occur when one does not follow the orthographic convention of writing compounds as one word.)

Theil (2016) lists a number of phonological features of the prototypical Norwegian compound. A few important criteria he lists are the following:

- The compound is made up of two phonological words.
- The first phonological word has an accented syllable.
- The second phonological word has a stressed, unaccented syllable.

In Norwegian, we have two realizations of accent, called Accent 1 and Accent 2. As we can see from the criteria above, a recognizable feature of the Norwegian compound is that there is accent realization in the FE. Frequently, an FE will have a different accent realization than the equivalent independent word. For instance, *drit-* is pronounced with Accent 2 as the FE of a compound, whereas it has Accent 1 as an independent word.

For more on the phonology of Norwegian compounds, see also Kristoffersen (2000), chapters 7.3 and 9.5, which discuss stress and accent in compounds.

4.2.3 The semantics of Norwegian compounds

Faarlund et al (1997) give a brief description of the semantics of compounds (p. 62). They claim that most compounds are *determinative*, meaning that the first element modifies the second element, which is the head of the compound (p. 63). Though the authors do not use the term "hyponymy" here, that seems to be more or less what it is describing. The examples include *fjell-hytte* "mountain cabin", *olje-boring* "oil-drilling", and *fri-tenker* "free-thinker". These are clear examples of hyponymy: *fjellhytte* is a hyponym of *hytte*, *oljeboring* is a hyponym of *boring*, and *fritenker* is a hyponym of *tenker*.

Next, Faarlund et al mention the *possessive* group. These look similar to one of the groups I found in my data, which I called "Possession Descriptions" (where *hår-fager* hair-fair "having beautiful hair" is an example). A noticeable difference is that their examples are all compound nouns, such as *krøll-topp* curl-top "curly-head" and *tusen-bein* thousand-leg 'centipede/millipede'. Many of the words denote entities from the "natural world", such as birds and plants. Another way to describe these data is that they are metonymous determinative compounds. The animals and plants, for instance, are named after traits associated with them, such as having lots of legs, in the case of the *tusen-bein*.

The grammar also mentions *copulative* compounds, which are described as compounds in which the meaning is the sum of the meanings of each element; e.g. *sur-søt* (gloss: sour-sweet) "sweet and sour". It is stated that most compounds of this kind are adjectives, and the examples are mostly adjective+adjective compounds. It would be unexpected to find any noun+adjective compounds of this kind.

The semantics of a compound can be more or less "transparent" (see for instance Enger and Kristoffersen 2000: 128), and it is tempting to imagine that especially compound nouns with a clear hyponym relation tend to be on the more transparent side, whereas perhaps compound adjectives are more variable in this area. It is also interesting to note that many well-known and commonly-used (lexicalized) compounds have a less transparent meaning, such as *løve-tann* lion-tooth "dandelion", *auge-blink* eye-blink (or possibly eye-glimpse) "moment", et cetera.

4.2.4 The syntax of Norwegian compounds?

In some literature on compounding, there seems to be an underlying idea of a third structure in compounds, namely a syntactical structure. Attributing this structure to compounds comes from the idea that combining words into new words is a syntax-like process (e.g. Enger and Kristoffersen 2000: 124), given the theoretical possibility of endless recursion, the occurrence of phrases as compound elements, and other features.

Within Cognitive Grammar, we do not assume that there is any autonomous syntax, and neither do we see any evidence of one. There are phonological structures and semantic structures – that is, there are rules for how we produce sounds, and rules for what those sounds mean. If there exists a third structure, it needs to be proven.

What is this "linking element"?

I have previously (briefly) mentioned a letter or sound that sometimes appears "between" the elements of a compound as a "linking element" - at least, that is how it is commonly described. Faarlund et al discuss this question briefly, mentioning that "not seldom the first element gets an addition, usually -s or -e (...). These are originally genitive suffixes, but in modern Norwegian they have more of a binding function." They then go on to say that although they will call it a linking element, they consider it to be part of the first element. In an answer to a question about this element and when to use it, Tor Guttu (2014) calls it, among other things, a "compound link" (*sammensetningsfuge*). The online dictionary service Ordboknett ("Bindebokstaver", n.d.) calls it a "binding letter" (*bindebokstav*) in their mini grammar.

Interpreting this object as a linking element relies upon the compound having a syntactical structure as well as the phonological and semantic structures I have described above. I will attempt to explain why this is the case, and make an argument against the "linking element" analysis.

Phonologically, this sound is a part of the FE. In a word such as *regjeringsparti* "governing party", the /s/ is part of the coda of the last syllable in *regjerings-*. The /p/ sound is aspirated, where it would not be (as much) in a word such as *kontroll-spørsmål* "control question". This shows that there is a word boundary after the /s/ sound.

Semantically, this sound does not seem to have any meaning. If it were not there, the word would have the exact same meaning. There are indeed examples of compounds that can include or exclude it and retain the exact same meaning, such as *sommar-beite* and *sommar.s-beite* "summer grazing". Thus, there is no evidence that this sound serves any semantic purpose.

So if we are to define it as a "linking element", this must be from the perspective of syntax. But I can not see any good reason to attribute a syntactical structure to the compound, giving the "linking element" a syntactical purpose, rather than going with the following analysis: Perhaps this sound is simply a suffix on the FE. We could call it a compounding suffix, to show that it is added to the FE when the compound is formed.

What this element is, is a theoretical question that could use some more thought in later research. However, my description of the semantic groups that I have found is not significantly affected by the answer to this question. So I will tentatively conclude that it is a suffix, and move on.

4.2.5 What are the elements of the compound?

There are different definitions of compounding that say different things about what they are made up of. The following are a few possible definitions:

- A compound is made up of two words.
- A compound is made up of two lexemes.
- A compound is made up of two stems.
- A compound is made up of two roots.
- A compound is made up of two elements. (Again, what are these elements?)

In English, this is not much of a problem. A compound such as *birthday* or *post office* is made up of two words, or lexemes, or stems – it does not really matter what we call them, because they all look the same. In Norwegian, however, it is a little more complicated.

Faarlund et al (1997) say that compounds are made up of words, and that the first element is usually an uninflected word (p. 62). However, the term *uninflected* is problematic in the perspective of Norwegian morphology. What is the "uninflected" form of a noun like *jente* "girl"? The answer is that there is none, because every form has a suffix. I would rather suggest that the first element is usually in a *basic form* or *citation form*. For nouns, this would be the singular, indefinite form. So a compound like *jente-galen* has an FE that is the same as the citation form of the word *jente*.

In my dialect, though, there is a further problem with this description, in that there are some exceptions to the rule that the first element takes the basic form. For instance, I would pronounce the first element in *grense-laas* "limitless" differently than the independent word *grense* "limit", which is a weak feminine noun in my dialect and thus ends in /a/ in the singular indefinite, as do *jente* "girl", *ape* "ape/monkey", *kake* "cake" and many others. Before the 2012 spelling reform in Norwegian (Nynorsk), I would have been able to make this distinction in writing as well, and spell them closer to how I would pronounce them: *grensa*, *jenta*, *apa*, *kaka*.

This means that in some cases, such as *jente-galen*, the first element is different from the citation form of the independent word – in my dialect. Another possible analysis is that the FE, at least in my dialect, is a stem with a compounding affix.

Regardless of dialect, and regardless of what the FE actually *is*, we can at least generalize that the phonological form of the FE stays "constant in all forms of the compound's paradigm" (Bauer 2009: 347) while the SE – and the whole compound – can be inflected as any adjective.

A possible conclusion on this is that the FE in a Norwegian compound is a stem, sometimes with a compounding affix, and the SE is a word. There are other possibilities; overlooking my dialect, in written Norwegian we could probably call the FE a word as well. As this question is not crucial to my analysis, I will not dwell on it any further.

4.2.6 Compounding vs derivation

When discussing the distinction between compounding and derivation, Faarlund et al (1997) point out that it can be difficult to determine whether an element is an independent word in the language:

"One could say that in purely formal terms, *supermarked* is a compound in Norwegian, because *super* occurs as an independent word (*Du er super!*). But a word like *hypermarked* has *hyper-* as its first element, which rarely occurs as an independent word (though there are instances of it), so it should preferably be considered a derivation. But otherwise these words are quite similar, and it may be unfavorable to divide them into two different categories." (p. 59, my translation)

First of all, this example is probably outdated as it would be hard to argue against *hyper* as an independent word today. An online search for phrases such as "*heilt hyper*" "totally hyper" yields thousands of results. That aside, the author is on to a problem with the "independent word" criterion for compound status. The word *tytte-bær* "lingonberry" is a classic example where the first element does not exist as an independent word, and yet we would consider it a compound because of its similarity to other words ending in *-bær* (this is also mentioned on page 61).

There are also some morphemes in Norwegian that look like shortened versions of existing words, and could either be interpreted as affixes or as slightly altered elements in a compound. The examples mentioned on page 60 are *gjen-* and *sam-*, which are very similar to the words *igjen* ("again") and *saman* ("together"). Their meaning in the compounds is also mostly (if not completely) unchanged. I would also bring up the affix *-leg/-lig* which is related to the word *lik* ("like"/"similar"/"equal"), but this is probably a case where the affix and the word have more clearly parted ways, as the affix both has a "weakened" meaning and a weakened phonological form, and the relation between the word and the affix is probably not known to most speakers.

4.3 N+A compounds in Norwegian

The type of compound that I am looking at in this thesis, are compounds that have a noun as their first element and an adjective as their second element. An example is the word *vin-raud* "red as wine" which is composed of the noun *vin* "wine" and the adjective *raud* "red". The structure of *vin-raud* is fairly simple, and fulfills a lot of the criteria for the prototypical Norwegian compound: Each element is an independent word whose form is unchanged. The second element is the head, and the first element the modifier. The compound is a hyponym of the second element, and we find other compounds with the same second element, denoting *vin-raud*'s taxonomic sisters, such as *blod-raud* "blood red".

4.3.1 The first element: The noun

The first element of an N+A compound almost always takes a form that is phonologically identical (apart from accents/tones) to the independent word's basic form or citation form (with the caveat from 4.2.5 in mind). In the case of the noun, this is the indefinite singular. Nouns are generally inflected by number and definiteness, and have different inflectional paradigms depending on their gender, among other variables. There are three genders in Norwegian (Nynorsk) and in my own dialect, and Tables 3 and 4 below are the most common paradigms for each gender, with the basic forms highlighted.

Table 3: STRONG NOUNS

	masculine	feminine	neuter
sg indef	ein bil	ei bru	eit blad
sg def	bil-en	bru-a	blad-et
pl indef	bil-ar	bru-er	blad
pl def	bil-ane	bru-ene	blad-a

Table 4: WEAK NOUNS

	masculine	feminine	neuter
sg indef	ein hag-e	ei jent-e	eit epl-e
sg def	hag-en	jent-a	epl-et
pl indef	hag-ar	jent-er	epl-e
pl def	hag-ane	jent-ene	epl-a

4.3.2 The second element: The adjective

The second element behaves the same as an independent adjective would. It can be inflected by number, gender, definiteness, and degree.

Table 5: ADJECTIVES

POS					COMP	SUP		
SG			DEF	PL		INDEF	DEF	
INDEF								
M	F	N						
Liten	lita	lite	vesle	små	mindre	minst	minste	
Raud		raudt	raude		raudare	raudast	raudaste	

The only thing that may differ is how degree is expressed. Short adjectives usually follow the pattern of *raud* "red" c.f. (24).

(24)	positive	raud	"red"
	comparative	raud-are	red-COMP "redder"
	superlative	raud-ast	red-SUP "reddest"

Longer adjectives, however, often take periphrastic forms similar to the English "more A" and "most A" constructions, such as *fantastisk* "fantastic", c.f. (25).

(25)	positive	fantastisk	"fantastic"
	comparative	meir fantastisk	"more fantastic"
	superlative	mest fantastisk	"most fantastic"

It would not be surprising if most of my data followed the pattern of (25), c.f. (26), even if their second element would normally (as an independent word) be inflected like *raud*. Faarlund et al (1997) agree, and say that this is a tendency with Norwegian compound adjectives (p. 358).

Not all of the compounds can take a comparative or superlative form at all, because in many cases the semantics is ungradable, c.f. (28).

(26) *fordomsfull – meir fordomsfull – mest fordomsfull*

*fordomsfull – *fordomsfullare – *fordomsfullast*

(27) *bilsjuk – meir bilsjuk – mest bilsjuk*

bilsjuk – ??bilsjukare – ??bilsjukast

(28) *tårnhøg – *tårnhøgare – *tårnhøgast*

*tårnhøg – *meir tårnhøg – *mest tårnhøg*

4.4 Previous research

4.4.1 Compounding in Norwegian

Norsk referansegrammatikk (Norwegian Reference Grammar)

Norsk referansegrammatikk (Norwegian Reference Grammar, Faarlund et al 1997) describes compounds as words made up of elements that are themselves words (p. 16). In the opening of the chapter on compounding (p. 61), however, a compound is simply defined as having two elements. Each element may in turn be a compound or a derivation. By this definition, even *jern-bane-arbeidar-forbund.s-leiing* "railway worker's association management" is made up of two elements, namely *jernbanearbeidarforbund* "railway worker's association" and *leiing* "management".

It is then shown that the second element normally determines the word class of the compound. Some exceptions to this are mentioned, such as *der-for* "therefore", which the authors consider a compound adverb with a preposition as its second element. It is also stated that the first element is usually uninflected, although *fedre-land* "homeland" and *nytt-år* "new year" are notable exceptions.

The grammar states that the distinction between compounds and derived words is particularly difficult to draw with words with foreign origins (p. 59). It then shows examples of words that are compounds in the original language, where the elements are instead affixes in Norwegian, such as *bio-logi* "biology". (A more interesting point on *biologi*, which the grammar does not mention, is that it has no accent on the first element, which is an important phonological characteristic of Norwegian compounds.) A few more points are brought up on the derivation/compounding distinction; I discussed these in the introduction.

There is also a short section on the distinction between compounds and "root words", where the main example given is *tytte-bær* "lingonberry". This word looks similar to other compounds ending in *-bær* (i.e. other varieties of berries), but **tytte* does not exist as an independent word in Norwegian (although in some dialects, it does – and it has the same meaning as *tyttebær*). The authors still consider *tyttebær* to be a compound, because it "is built up in the same way as *blåbær* ('bilberry/blueberry') *rognebær* ('rowanberry') etc" (p. 60, my translation and parentheses). No more theoretical explanation is given.

Later, the grammar gives a brief description of compound adjectives in particular, mentioning *-fri* "-free" and *-laus/-løs* "-less" as common second elements. It is shown that compounds ending in *-fri* often denote a positive lack of N, *-laus* rather denotes a negative lack of N (p. 78). It is also mentioned that many SEs have changed their meaning to something very general and thus become more suffix-like (p. 79), e.g. *-villig* "willing" and *-vennlig* "friendly". The problem of participles is then discussed; it is shown that participles make the distinction between compound adjectives and participles of compound verbs blurry.

The grammar then states that nouns are the most common first elements in compound adjectives. Examples are given, and then this category of compounds is not discussed any further.

Theil (2016): The prototypical Norwegian compound

Theil (2016) gives a thorough description of what he calls *the prototypical Norwegian compound*. That is to say that there are certain criteria we can use to define Norwegian compounds, and there will be instances that are closer to and further away from the prototypical definition. Some of the criteria he mentions (p. 236-237) are listed in table 6 (translation is mine).

Table 6. The prototypical Norwegian compound – selected criteria

- The compound contains two phonological words.
- One syllable in the first phonological word is accented.
- One syllable in the second phonological word is stressed and not accented.¹
- Each phonological word exists in the language as an independent word.
- Each phonological word has the meaning THING.
- The second phonological word is the head.
- The inflection is expressed on the second phonological word.

¹ In a conversation I had with Theil, he said that a better wording would be "The second phonological word has no accented syllable, but at least one stressed syllable". The original wording indicates that another syllable in the SE could be accented, which is not the case.

- The second phonological word has the same inflectional pattern as its equivalent independent word.

It is shown in Theil (2016) that there are many exceptions to these criteria – for instance, only N+N compounds (and not even all of those) have the meaning THING+THING. There are a number of other meanings an element of a compound can have. This will also be shown in the analysis chapter of this thesis.

MA and PhD theses

There have been written a few MA and PhD theses on Norwegian compounding at the University of Oslo. They have covered such topics as verb+verb compounds (Eiesland 2008), "inalienable" compounds (Grovs 2009), noun+verb compounds (or rather, noun incorporations) (Bäcklund 2007) and noun+noun compounds (Eiesland 2015). It is generally shown in these theses that the kinds of compounding they investigate are more productive than previous literature has claimed - such as the Reference Grammar (Faarlund et al 1997). There are still several categories of compounds which remain to be analyzed.

Bäcklund 2007 – N+V compounds or noun incorporations

This thesis discusses a morphological process called noun incorporation, which has been thought not to exist in Norwegian or closely related languages. Bäcklund uses examples such as *kniv-stikke* "knife-stab", which have before been seen as back-formations. He shows that this type of compound is actually productive and that there is a "rule" in the language which allows for verb-headed noun incorporations to arise independent of back-formation.

Eiesland 2008 – V+V compounds

Eiesland's MA thesis describes compounds where both elements are verbs. It shows, among other things, how the arguments of the verbs change when they become part of a compound. Eiesland also refutes the idea that this type of compound is not productive in Norwegian, and quantifies the productivity of each subgroup that she describes.

Grov 2009 – Inalienable compounds

Grov describes a type of compounds that has 3 elements: an FE, which can be of almost any word class; an SE, which is a noun describing an inalienable part of a whole (often a body

part); and a suffix which has the same phonological form as a perfect participle suffix. She describes the semantics of these compounds, and discusses new insights they provide on Norwegian grammar, and on word-formation processes in general.

Eiesland 2015 – N+N compounds

Eiesland again studies compounding in her PhD thesis. This time she looks at compounds where both elements are nouns. She again quantifies the productivity of this phenomenon, and defines the semantic relations that exist between the elements, and which kinds of nouns can occur in which kinds of relations. A network of relations and semantic groups unfolds in her analysis. Remarkably, Eiesland collected over 60,000 examples of N+N compounds, and analyzed 2000 of them!

4.4.2 Compounding in Danish

In Allan et al (1995) we find a description of compounding in Danish which is recognizable to a Norwegian speaker. As in Norwegian, the SE in a compound determines the compound's word class (p. 541), and so compounds with an adjective as the SE are adjectives.

In the section on compound adjectives, the author classifies these by the word class of their first element, and mentions nouns, adjectives and verbs as possible FEs. The compounds with nouns as FE are further divided into the following groups:

- FE is the agent² (e.g. *fugt-pletet* 'moisture-stained')
- FE is the object (e.g. *opsigt.s-vækkende* attention-awakening 'sensational')
- FE functions as an adverbial (e.g. *verden.s-berømt* 'world-famous') (p. 548)

This is a simple analysis that does not go into much depth (although more so than the equivalent section in Faarlund et al) and actually contains an erroneous example (*aften-skole* 'evening school', which is not a compound adjective at all). Assuming that all of the data fit into these three groups, the simple classification would seem elegant, but I am skeptical of

² It is strange to see that the author mixes syntactical and semantic terms: *agent*, *object* and *adverbial*. Also, can moisture really be an agent?

this assumption. It is interesting to note that the examples the author provides are actually noun+participle compounds, or synthetic compounds, and he does not show any examples like mine, where the SE is a "real" adjective. This gives me reason to think that his analysis is too simple to deal with the various relations that exist in N+A compounds.

The grammar states that compound adjectives in Danish normally follow the inflectional pattern of the SE (ex: *god-modig* 'good-natured' – *god-modigere* – *god-modigst*), but also shows exceptions to this rule (ex: *svensk-venlig* 'Swedish-friendly' – *mere svensk-venlig* – *mest svensk-venlig*). It is not clear from the examples that are provided whether Danish N+A compounds follow any particular pattern.

Later, the grammar describes derivational compounding, where one of the elements is derived from another word. In some cases, that element is not used in the same meaning (or at all) as an independent word. This can also be the case with N+A compounds, an example being *gud-frygtig* 'God-fearing' (p. 549) where **frygtig* does not exist as an independent word in Danish.

4.5 Summary

In this chapter, I have discussed many aspects of compounding, in general and specifically in Norwegian. I have concluded that compounding is a word-formation process that is distinct from derivation, and that is very productive in the Norwegian language. I have attempted to define the phonological and semantic structures of the compound, and have made the case that compounds do not have a syntactical structure. In discussing the "linking element" in some compounds, I have tentatively concluded that this is rather a compounding suffix on the first element. We have seen that other categories of Norwegian compounds have been studied, but N+A compounds have not been given proper attention until now.

5 Theoretical frameworks

In this chapter, I will briefly present the theoretical frameworks of cognitive grammar and construction grammar.

I will focus on the concept of meaning within these theories, that is, how they deal with semantics. I will also mention some insights the theories can provide on compounding. Finally, I will discuss how the theories inform my own study.

5.1 Cognitive Grammar

Cognitive grammar is a theory within linguistics that was created by Ronald Langacker, and is a prevalent competing theory to generative grammar, as championed by Noam Chomsky and many others. Probably the most important work within cognitive theory is Langacker's *Foundations of Cognitive Grammar* (1987, 1991).

An important statement cognitive grammar makes, is that language is not a separate domain of knowledge or ability in humans, but rather a product of other cognitive functions.

Cognitive grammar is also a usage-based theory, meaning that a speaker's knowledge of the language comes from input, context and culture, rather than innate faculties.

5.1.1 Meaning in Cognitive Grammar

In this chapter, I will present some of the arguments that are made within cognitive grammar that are important when studying lexical semantics.

- All of language is meaningful and symbolic.

This includes what we call "grammar", which has traditionally been considered separate from "lexicon" (e.g. Bloomfield 1933: 274). The way in which language is meaningful, is illustrated with Saussurean signs. A language is an inventory of these signs, or symbolic units, which consist of a phonological element and a semantic element. So-called function words, inflections and derivations have been thought to be "contentless", but cognitive grammar argues that even these are symbolic units, and so they too have both a phonology and a semantics.

- "Meaning is identified as the conceptualization associated with linguistic expressions" (Langacker 2013: 4)

Meaning is not inherent in the language, but is a socially constructed (and changing) link between a sound pattern and a concept or content. The way we describe semantics should be intuitive to a certain extent, and reflect the way the meaning is actually understood by the speakers, or how it is represented in the mind.

- Meaning is not simply compositional.

Langacker (1987: 452) argues that semantics quite often has to deal with linguistic structures that have "substantial content not attributable to either component". We will see that this is particularly relevant when it comes to compounds, in that their meanings are definitely not always, and perhaps even rarely, merely a sum of their two elements. The compounding process itself adds something, as do usage and context.

5.1.2 Compounding in Cognitive Grammar

In CG, the term *integration* is used to describe the combining of lexical elements. In compounding, this means that the two elements behave more like Legos than like bricks – they fit into one another so that each element does not contribute *separate* meaning, but rather integrates a part of the other element's meaning into its own. The head element opens up a so-called *elaboration site* (Langacker 1987: 489), which can be thought of as the part of the element that needs filling in. And what is filled in is the modifier element.

So although compounds are made up of independent words, which we might think should be equally weighted in the compound, we still understand compounds as being "headed", and that the modifier is there to elaborate on the meaning of the head in some way. In many cases, this takes the meaning of the head far away from our prototypical understanding of its meaning as an independent word.

5.2 Construction Grammar

Construction Grammar is a framework that was developed by Adele Goldberg within the last couple of decades. Goldberg's *Constructions* (1995) and *Constructions at work* (2006) are

central works within this theory. It shares a lot of its ideas and approaches with Cognitive Grammar and other usage-based theories.

Grammar is a set of constructions, which are defined as pairs of form and function – more or less the same as Saussurean signs. Constructions can be both generalizations and specific instances of a particular pattern. They span from morphemes to syntactic structures, and can also include compounds – or as we will see, groups of compounds.

Understanding my data within this framework, we will see that a semantic relation such as a Causality is a construction within which there are two open slots, and so the meaning of the compound is not simply a sum of whatever goes into the slots, but a particular relationship between their forms and functions. Importantly, the form-function pairings exist in a network that makes up our linguistic knowledge. Thus, they are related to each other in various ways. So when speaking of a type of relation between an FE and an SE, we can think of that *and* that type's members as constructions.

5.3 Construction grammar and cognitive grammar in my study

The concept in cognitive grammar of categories not being binary in terms of membership or non-membership, affects my analysis in that some of the semantic groups overlap and some data are less obvious or prototypical members of any particular group than others. Blurriness is allowed within this framework, and this allows for a nuanced view of the data.

Within construction grammar, a construction is a "form-meaning pair" where the meaning is not simply a sum of the parts. This is a useful way of looking at compounds. It is fairly uncontroversial to say that a word often takes on a new or modified meaning in a compound (as seen in my own findings). The mechanism behind this change, on the other hand, is not agreed upon.

The theoretical framework also affects how we view the distinction between compounding and derivation or affixation. The two do not need to be clearly separate within cognitive grammar, where we often deal with overlapping categories and non-prototypical membership.

5.4 Summary

This thesis uses the theoretical frameworks of Cognitive Grammar and Construction Grammar when attempting to understand the semantics of N+A compounds. Both these frameworks use the concept of form-function pairs (Goldberg calls them constructions), that is, any part of language has a phonology and a semantics. A person's linguistic knowledge is their inventory of known form-function pairs. I have the notion of constructions in mind when analyzing my data, and will call each semantic group a construction.

6 Methodology

In this chapter, I will briefly describe my method for collecting data for this thesis. I will also discuss some of the advantages and disadvantages to the method, and mention some possible alternatives. We will see that using the dictionary was quite effective, but had its limitations.

6.1 Collecting data

6.1.1 Excerpting from texts

When I started collecting data for this thesis, I did not have any systematic method in mind. So I simply started looking for N+A compounds in texts, such as newspaper articles. This way, I found some compounds that were not in the dictionary, either because they were neologisms or uncommonly used words, or because they were self-explanatory, or compositional, in their meaning. Thus, this was a good way to find a few interesting examples of the compound type, and it was effective in making me aware of it in texts and conversation. However, it proved to be slow-going.

6.1.2 Dictionary searches

The next step in collecting data was to perform searches in online dictionaries. The one I used for most of the data was Bokmålsordboka/Nynorskordboka (University of Bergen and Språkrådet 2017). To begin with, I searched for common adjectives, such as basic color terms, with an asterisk in front, such as *"*gul"*, to find entries ending with *-gul*.

Next, I wanted to see if I could collect a larger volume of data by going through larger amounts of adjectives in the dictionaries. So I searched for *"a1"*, which is the dictionary's label for the first of two inflectional paradigm "groups" of Norwegian adjectives. I sorted out the N+A compounds among them. This too yielded a significant amount of data, and provided examples which would form new groups. I had planned to do the same for *"a2"*, the second paradigm group, but decided that I had spent enough time gathering data, and had a lot to work with.

6.1.3 Excluding irrelevant results

When doing dictionary searches, not all the search results were relevant. This meant that I had to manually separate the relevant results from the irrelevant ones.

Some reasons a result might not be relevant:

- The word is a different kind of compound, c.f. (29)
- The word is not a compound at all, c.f. (30)
- The word does include the search term characters, but not as a compound element, or not in the meaning that I am looking for, c.f. (30), (31) and (32).

(29) *kvit-gul* white-yellow

(30) *mogul* Mogul

(31) *berg-ul* mountain-owl "eagle owl"

(32) *vind-gul* wind-waft "breath of wind"

In some cases, it was hard to tell the word class of the first element, either because the verb and the noun were homonymous, c.f. (33), or because the first element no longer is in use as an independent word. Those results I also left out of the analysis.

(33) *reise-lysten* travel-desirous "having wanderlust" (*reise-* can be analyzed as the noun *reise* or the verb *reise*, which are homonymous)

Some searches yielded so many results that I made a selection rather than include all of them. For instance, **full* yielded 146 results, and I could tell that most of the relevant results had the same semantic relation, so I made a selection from these data.

6.2 Disadvantages to the method used

The methods I used to collect data are not the most systematic, or the most comprehensive. Because of this, it is hard to do accurate statistics on the results. I don't know for sure if my data are representative of the lexicon of N+A compounds that are in use or that are arising in the language.

In using a dictionary as my main source, I also have to deal with the lexicographers' choices when it comes to lemmatizing compounds. Some lexicographers will omit compounds when their meaning is clear from their parts – many Norwegian lexicographers call this *gjennomsiktighet* or "transparency". Others will lemmatize the most commonly used compounds, regardless of their transparency. *Nynorskordboka* and *Bokmålsordboka* have several authors, so it is to be expected that their selection principles won't be completely consistent. Some searches yielded a lot of results that seemed to be very outdated or not commonly used, and other searches lacked relevant results that I might have expected to see. So to an extent, I am at the mercy of the lexicographers' ideas of what is a "real word", or what is an important enough word to document in a dictionary.

6.3 Advantages to the method used

The way in which I manually excerpted N+A compounds from the dictionary search results means that I have personally studied every example, at least enough to determine whether or not it is really an N+A compound. Thus, there should not be any false examples in the data. If there are, that is due to my own misjudgements, and not the data collection method itself yielding irrelevant results.

Most importantly, I feel that the data I have collected are sufficient to be able to do an analysis and discover the most important relations between FEs and SEs in this type of compound. There may exist relations (and thus semantic groups) that I have not come across, and I would be happy to learn of them. Nevertheless, the groups that I have described in my analysis seem to be descriptive and meaningful.

6.4 Summary

There may have been some bias in the process of selecting data for this thesis, and I recognize that including everything I found would have made for better statistics. Using more comprehensive sources, such as corpora, would also have been an efficient way to collect more relevant data. But in this thesis, my main aim was not to be statistical, but to try to create a descriptive classification, and to get as complete a picture as possible of the different semantic relations that exist in this compound type. I feel that my methods were sufficient, if not ideal, for that purpose.

7 Analysis part 1

This chapter is the first of two parts of my analysis, in which I will present and discuss my findings. Here I will define and describe the groups of N+A compounds that I have found, giving some very simple statistics and showing the distribution of FEs and SEs. As I mentioned in chapter 6, I would probably need more data (and a more systematic method of collecting them) to do accurate statistics, but we will still be able to see some tendencies.

In chapter 8, I will discuss the semantics in more depth, particularly with Dixon's adjective classification in mind, and show that the semantics of compounds is more complex than that of "simple" adjectives.

7.1 Description of Norwegian N+A compounds

In my analysis, I classify the data into 3 sets, containing a total of 11 semantic groups:

Set A: Quantification and description

1. Comparisons
2. Measurements
3. Degree
4. Associations
5. Possessions
6. Possession Descriptions

Set B: Emotional and physical response

7. Causalities
8. Attitudes and reactions
9. Capabilities

Set C: Other groups

10. Locations

11. Affix-like elements

My classification has 3 levels: On the highest level are sets A, B and C. Set A contains the semantic groups that have to do with quantification and description; Set B contains the groups describing responses, both physical and emotional/psychological; and set C is simply the rest of the groups, which stand out from the previous sets. The semantic groups themselves are numbered 1 through 11, and each group accounts for a particular kind of semantic relation. There is some overlap between some of these groups. The third level is subgroups, wherever it has made sense to separate further.

Each semantic group describes a relation, and each group is a construction. This means that they have generalizable phonological and semantic structures – with examples closer to and further from the construction’s prototypical structure.

Figure 1 shows the total number of compounds, unique FEs and SEs found in the data. I have collected 656 compounds, with 420 different FEs (nouns) and 111 different SEs (adjectives).

Figure 2 shows the number of compounds, FEs and SEs in each group.

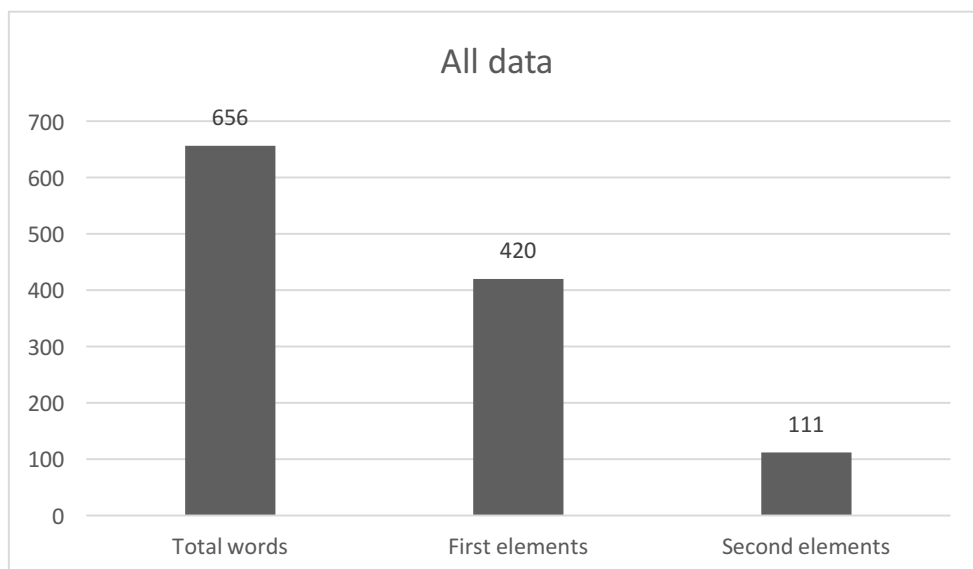


Figure 1: Shows the number of total words in the data, the number of unique first elements, and the number of unique second elements.

7.1.2 Set A: Quantification and description

Group 1. Comparisons: "A as N" – The HIMMELBLÅ construction

The first group I find is Comparisons, where the relation can be paraphrased as "A as N", or "A in the way that N is A". The meaning of the compound is a comparison between what the noun denotes, and what is being described by the compound. The noun is thus an illustration or measure of the adjective, a concrete entity and usually a strong perceptual (visual) image.

In this group we find 128 total compounds, 104 unique FEs, and 37 unique SEs.

The Dixon adjective classes that are represented, are Dimension, Color, Physical Property and Human Propensity.

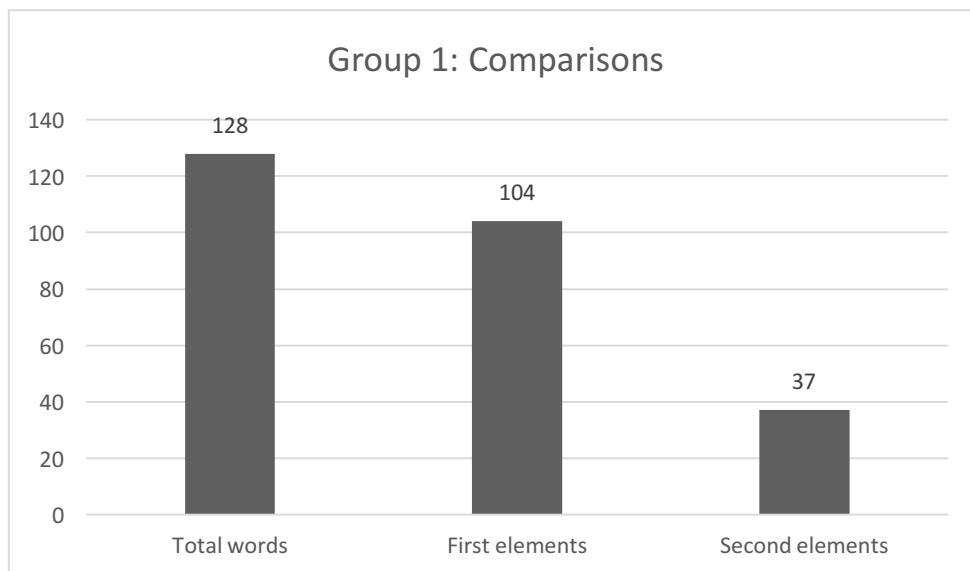


Figure 2: Shows the total number of compounds in Group 1: Comparisons, the number of unique first elements, and the number of unique second elements in the group.

Table 7. GROUP 1

<i>glas-blank</i>	glass-shiny
<i>sol-blank</i>	sun-shiny
<i>spegel-blank</i>	mirror-shiny

<i>sølv-blank</i>	silver-shiny	
<i>lik-bleik</i>	corpse-pale	
<i>skit-blid</i>	shit-cheerful	"faking cheerfulness"
<i>smør-blid</i>	butter-cheerful	
<i>fiol-blå</i>	violet-blue	
<i>himmel-blå</i>	sky-blue	
<i>is-blå</i>	ice-blue	
<i>vass-blå</i>	water-blue	
<i>kastanje-brun</i>	chestnut-brown	
<i>nøtte-brun</i>	nut-brown	
<i>sjokolade-brun</i>	chocolate-brown	
<i>avgrunn.s-djup</i>	abyss-deep	
<i>kne-djup</i>	knee-deep	
<i>hår-fin</i>	hair-fine	
<i>silke-fin</i>	silk-fine	
<i>vass-flat</i>	water-flat	
<i>bredd-full</i>	brim-full	
<i>eir-grøn</i>	rust-green	
<i>flaske-grøn</i>	bottle-green	
<i>gift-grøn</i>	poison-green	
<i>mint-grøn</i>	mint-green	

<i>mose-grøn</i>	moss-green
<i>oliven-grøn</i>	olive-green
<i>sjø-grøn</i>	sea-green
<i>smaragd-grøn</i>	emerald-green
<i>apal-grå</i>	apple tree-gray
<i>oske-grå</i>	ash-gray
<i>bly-grå</i>	lead-gray
<i>elg.s-grå</i>	moose-gray
<i>mus.e-grå</i>	mouse-gray
<i>perle-grå</i>	pearl-gray
<i>sement-grå</i>	cement-gray
<i>skit-grå</i>	shit-gray
<i>sky-grå</i>	cloud-gray
<i>stein-grå</i>	stone-gray
<i>stål-grå</i>	steel-gray
<i>ulv.e-grå</i>	wolf-gray
<i>brann-gul</i>	fire-yellow
<i>egg.e-gul</i>	egg-yellow
<i>kanari-gul</i>	canary-yellow
<i>krem-gul</i>	cream-yellow
<i>rav-gul</i>	amber-yellow

<i>safran-gul</i>	saffron-yellow	
<i>sennep.s-gul</i>	mustard-yellow	
<i>sitron-gul</i>	lemon-yellow	
<i>skit-gul</i>	shit-yellow	
<i>bein-hard</i>	bone-hard	
<i>berg-hard</i>	rock-hard	
<i>flint-hard</i>	flint-hard	
<i>glas-hard</i>	glass-hard	
<i>jarn-hard</i>	iron-hard	
<i>stein-hard</i>	stone-hard	
<i>glo-heit</i>	ember-hot	
<i>bringe-høg</i>	chest-tall	
<i> fjell-høg</i>	mountain-tall	
<i>himmel-høg</i>	sky-tall	
<i>kjepp-høg</i>	stick-tall	"cocky"
<i>kne-høg</i>	knee-tall	
<i>mann.s-høg</i>	man-tall	
<i>sky-høg</i>	cloud-tall	
<i>tårn-høg</i>	tower-tall	
<i>frost-kald</i>	frost-cold	
<i>haust-kald</i>	autumn-cold	

<i>is-kald</i>	ice-cold	
<i>jøkle-kald</i>	glacier-cold	
<i>kjøleskap.s-kald</i>	refrigerator-cold	
<i>kveld.s-kald</i>	evening-cold	
<i>stein-kald</i>	stone-cold	
<i>eple-kjekk</i>	apple-nice	"cheeky"
<i>krystall-klar</i>	crystal-clear	
<i>spegel-klar</i>	mirror-clear	
<i>sølv-klar</i>	silver-clear	
<i>kne-kort</i>	knee-short	
<i>lår-kort</i>	thigh-short	
<i>alabast-kvit</i>	alabaster-white	
<i>elfenbein.s-kvit</i>	ivory-white	
<i>fonne-kvit</i>	glacier-white	
<i>krit-kvit</i>	chalk-white	
<i>mjølk.e-kvit</i>	milk-white	
<i>opal-kvit</i>	opal-white	
<i>perle-kvit</i>	pearl-white	
<i>snø-kvit</i>	snow-white	
<i>tre-kvit</i>	wood-white	
<i>kne-lang</i>	knee-long	

<i>liv.s-lang</i>	life-long	
<i>fjør-lett</i>	feather-light	
<i>flor-lett</i>	gossamer-light	
<i>fnugg-lett</i>	(snow)flake-light	
<i>slør-lett</i>	veil-light	
<i>fløyel.s-mjuk</i>	velvet-soft	
<i>katt.e-mjuk</i>	cat-soft	"soft as a cat's movements"
<i>silke-mjuk</i>	silk-soft	
<i>avgrunn.s-mørk</i>	abyss-dark	
<i>belg-mørk</i>	pod-dark	
<i>kol-mørk</i>	coal-dark	
<i>lyn-rask</i>	lightning-fast	
<i>blod-raud</i>	blood-red	
<i>eld-raud</i>	fire-red	
<i>glo-raud</i>	ember-red	
<i>laks.e-raud</i>	salmon-red	
<i>rose-raud</i>	rose-red	
<i>rubin-raud</i>	ruby-red	
<i>tomat-raud</i>	tomato-red	
<i>vin-raud</i>	wine-red	
<i>gull-rein</i>	gold-pure	

<i>lyn-snar</i>	lightning-quick
<i>berg-sterk</i>	rock-strong
<i>bjørn.e-sterk</i>	bear-strong
<i> fjell-sterk</i>	mountain-strong
<i>mus.e-stille</i>	mouse-quiet
<i>knytt-neve-stor</i>	fist-large
<i>neve-stor</i>	fist-large
<i>troll-stor</i>	troll-large
<i>eddik-sur</i>	vinegar-sour
<i>potte-sur</i>	pot-sour
<i>avgrunn.s-svart</i>	chasm-black
<i>kol-svart</i>	coal-black
<i>natt-svart</i>	night-black
<i>ramn-svart</i>	raven-black
<i>varg-svolten</i>	wolf-hungry
<i>honning-søt</i>	honey-sweet
<i>sirup.s-søt</i>	syrup-sweet
<i>sukker-søt</i>	sugar-sweet
<i>bly-tung</i>	lead-heavy
<i>blad-tynn</i>	leaf-thin
<i>syl-tynn</i>	awl-thin

The basic color-related SEs can take many different FEs, to describe various nuances of the color. Surprisingly, this is even the case for *-kvit* "white" and *-svart* "black". We also see that some other physical characteristics can take a variety of modifiers, such as *-blank* "shiny" and *-hard* "hard". This speaks to the complexity of human perception, and the creativity with which we describe the physical world.

In some of the Comparison compounds, the FE can also function as a descriptor of large degree, or an amplifier. Such compounds as *troll-stor* "troll-large" and *glo-varm* "ember-warm" would fit in here, as their usage is not necessarily literal. This means that there is some overlap with the Degree group. The reason I have separated out a Degree group rather than calling it a subgroup of Comparisons, is that there are several examples that simply mean "very A", and where the comparison is not particularly meaningful.

Some of the color compounds in Comparisons have a connotation of being the "truest" form of the color. This is particularly the case with *krit-kvit* "chalk-white" and *kol-svart* "coal-black". This kind of comparison is also similar to the Degree semantics, but there is an almost idiomatic relation between the FE and the SE in these examples, so the FE can not be generalized to modify other adjectives.

Group 2. Measurements: the METERDJUP construction

These compounds denote measurements of dimension, mass and age. The SE in this case is an adjective denoting what is being measured, such as age or height, and the FE is an appropriate unit of measurement for this adjective, such as a unit of time or length. This group is related to the comparisons group, and indeed some data could belong in either one. I will mention comparison-measurement hybrids in the next section.

The reason I have separated out these data rather than include them in Comparisons, is that it does not seem meaningful to think of these sometimes purely technical measurements as comparisons. Something can not be "as tall as a meter" in the same sense that it can be "as tall as a tower", because a meter is an artificial concept or tool, rather than a concrete and visualizable entity that we can compare something to. A "day" is not an artificial unit of measurement, but it is a standardized unit. Also, we understand that saying that something is "a day old" is a measurement of age, and not a comparison of someone's age to a timeframe such as a day.

In this group, we find 14 compounds, 10 unique FEs and 6 unique SEs, as shown in Figure 3. Dixon's Age and Dimension classes are represented in these data.

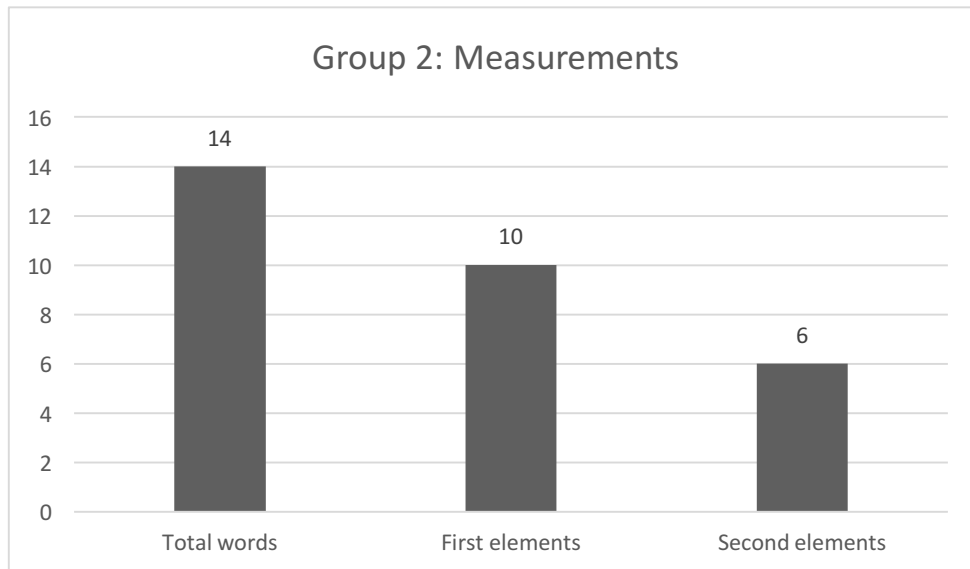


Figure 3: Shows the number of compounds in Group 2: Measurements, the number of unique first elements and the number of unique second elements.

Table 8. GROUP 2

<i>meter-djup</i>	meter-deep
<i>dag-gamal</i>	day-old
<i>månad.s-gamal</i>	month-old
<i>natt-gamal</i>	night-old
<i>veke-gamal</i>	week-old
<i>år.s-gamal</i>	year-old
<i>famn-høg</i>	fathom ³ -tall
<i>meter- høg</i>	meter-tall

³ The fathom is a measurement unit formerly used in Scandinavia, and is equivalent to 6 feet.

<i>meter-lang</i>	meter-long
<i>mil.e-lang</i>	mile ⁴ -long
<i>time-lang</i>	hour-long
<i>år.e-lang</i>	year-long
<i>famn-tjukk</i>	fathom-wide
<i>kilo-tung</i>	kilo-heavy

Subgroup: Comparison/measurement hybrids

Some data exist in the overlap between groups 1 and 2, in that they are a sort of measurement, but one that uses a "real life thing" rather than a standardized measurement. So where the meaning could be paraphrased "A as N", it could also be something like "A so as to reach/fill N". The reason for making this distinction is that *kne-djup* "knee-deep", for instance, is not really a comparison to the deepness of a knee, because a knee is not really deep in any meaningful sense. So it is rather a description of a deepness that would *reach* someone's knee, and this makes it more similar to a measurement.

It is interesting to see that the knee in particular is such a common thing to measure dimensions against. Perhaps this is because the knee is such a clear point on the body, and often a relevant point when it comes to measuring clothing.

Figure 4 shows the number of compounds, FEs and SEs in this subgroup. We see that this is one of two instances where the SE slot seems to be more open than the FE slot. This is probably because there is a greater limitation on measurement units than on what sort of dimension they can measure. Thus, this is a subgroup where the FE happens to play into the definition more than the SE does.

These compounds belong to Dixon's Dimension class.

⁴ This refers to the Scandinavian mile, which is 10 kilometers.

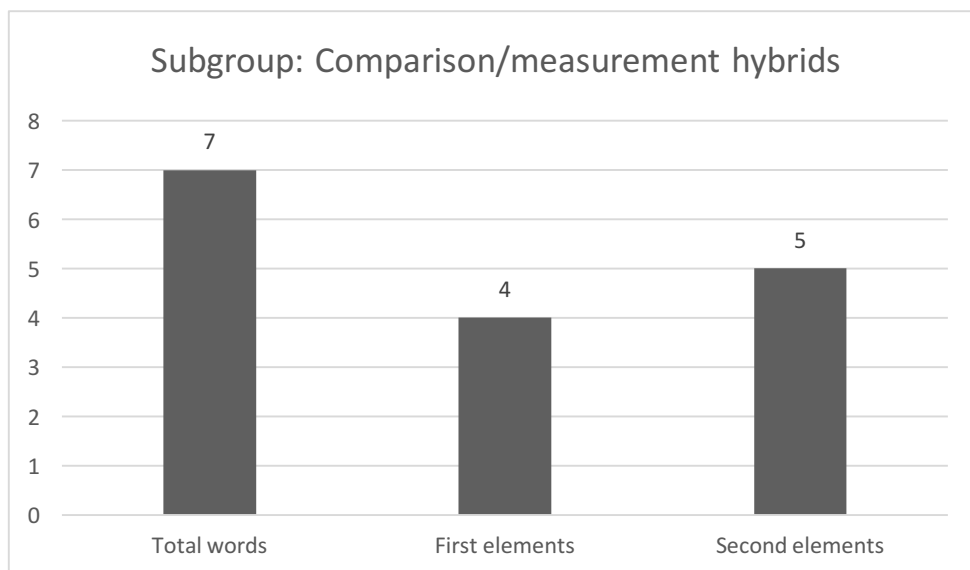


Figure 4: Shows the number of comparison/measurement hybrid compounds, the number of unique first elements, and the number of unique second elements in the subgroup.

Table 9. COMPARISON/MEASUREMENT HYBRIDS

<i>kne-djup</i>	knee-deep
<i>breidd-full</i>	brim-full
<i>bringe-høg</i>	chest-high
<i>kne-høg</i>	knee-high
<i>kne-kort</i>	knee-short
<i>lår-kort</i>	thigh-short
<i>kne-lang</i>	knee-long

Group 3. Degree: "very/completely N" – The DRITSØT construction

There are a number of first elements that function as degree markers or amplifiers. The semantics of the compounds they occur in is something like "very A" or "completely A". Some of these look almost like affixes, or *affixoids* (Fjeld and Vikør 2008, Booij 2005: 86), because they have lost or at least changed their meaning; for instance, *kjempe-* (literally

"giant", but normally meaning "very") as an FE no longer has anything to do with giants, and *drit-* and *skit-* (both translatable to "poop", but here also meaning "very") no longer have anything to do with excrements. We could then discuss whether words with these FEs are actually compounds, or whether this is a productive form of derivation in the language. Either way, these are part of a group of FEs that denote degree either in this affix-like way, or as comparisons. For this reason, there is a certain amount of overlap with the Comparisons group, and also Associations.

Some of the first elements clearly "belong" with certain second elements, and so they have become almost idiomatic. Others can modify almost any adjective, such as the aforementioned *kjempe-* and *drit-*. Notably, some of these FEs can also occur as FEs in N+N compounds, c.f. (34)-(35), (38)-(42). An important difference seems to be that in N+N compounds, these modifiers have certain limitations when it comes to positive or negative usage. For instance, it is hard to imagine *drit-* as having positive meaning when it modifies a noun, c.f. (34)-(35), whereas in compound adjectives, it can happily take on a positive meaning, as we will see in Table 10. On the other hand, *kanon-* tends toward a positive usage, and *kjempe-* swings both ways, as well as simply denoting size c.f. (41)-(42).

kjempe- and *drit-* seem to be particularly productive degree markers currently. I have only listed a few examples with each, but in my intuition as a Norwegian speaker, the possibilities in using these modifiers are almost endless. It is hard to think of an adjective that either of them *can not* modify. The only limitation I would put on *drit-* is that because it is a slightly vulgar word (though not as vulgar as its English equivalent), it does not feel natural modifying a higher-register word, c.f. (36)-(37) – though maybe it could be used to give such words an ironic usage!

(34) *drit-kjerring* shit-lady "very unlikeable woman"

(35) *drit-mat* shit-food "disgusting food"

(36) ??*drit-heilag* shit-holy

(37) ??*drit-besynderleg* shit-peculiar

(38) *kanon-lag* cannon-team "very strong team"

(39) *kanon-fest* cannon-party "very successful party" (in the social event sense)

(40) *kjempe-tabbe* giant-blunder "serious blunder"

(41) *kjempe-kar* giant-guy "very likeable guy"

(42) *kjempe-tre* giant-tree "huge tree"

It is clear, at least, that these modifiers are highly productive and that their meaning and usage have been generalized almost to the point of becoming affixes – even if there is some variation in how they are used in different contexts.

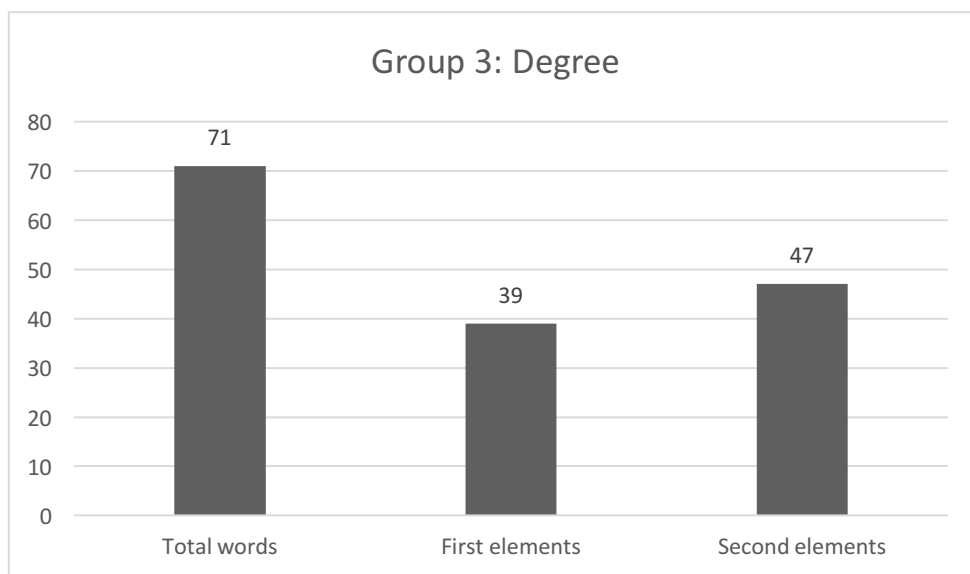


Figure 5: Shows the total number of Degree compounds, the number of unique first elements and the number of unique second elements in the group.

In this group, we find 71 compounds, 39 different FEs, and 47 different SEs, as shown in Figure 5. This is the second of the two instances where there is greater variation on the SE slot than the FE slot. Again, this is probably because the FE plays more of a role in the definition of this group than in most others. A Norwegian speaker will feel that some of these FEs can modify almost any adjective, so here the semantic limitations are to a greater extent on the FE.

The Dixon classes that are found here are Color, Age, Value, Human Propensity, Physical Property and Speed. This shows that a wide variety of characteristics can be modified by degree or amplification.

Table 10. GROUP 3.

<i>smør-blid</i>	butter-cheerful	"very cheerful"
<i>stein-blind</i>	stone-blind	"completely blind"
<i>knall-blå</i>	bang-blue	"bright blue"
<i>drit-bra</i>	shit-good	"very good"
<i>stein-daud</i>	stone-dead	"completely dead"
<i>stein-dauv</i>	stone-deaf	"completely deaf"
<i>svin-dyr</i>	swine-expensive	"very expensive"
<i>rot-ekte</i>	root-real	"very genuine"
<i>botn-falsk</i>	bottom-false/fake	"completely false/fake"
<i>smell-feit</i>	bang-fat	"very fat"
<i>blod-fersk</i>	blood-fresh	"completely fresh/new"
<i>brille-fin</i>	glasses-nice	"very nice"
<i>smell-fin</i>	bang-nice	"very nice/pretty"
<i>padde-flat</i>	toad-flat	"completely flat"
<i>drit-flink</i>	shit-clever	"very clever"
<i>bredd-full</i>	brim-full	"filled to the brim"
<i>stein-galen</i>	stone-crazy	"completely crazy"
<i>eld-gamal</i>	age-old	"very old"
<i>hund-gamal</i>	dog-old	"very old"
<i>stein-gamal</i>	stone-old	"very old"

<i>hjar-te-glad</i>	heart-happy	"very happy"
<i>kiste-glad</i>	chest-happy	"very happy"
<i>sjel.e-glad</i>	soul-happy	"very happy"
<i>hjar-te-god</i>	heart-good	"very kind"
<i>kjempe-god</i>	giant-good	"very good"
<i>knall-god</i>	bang-good	"very good"
<i>krut-god</i>	gunpowder-good	"very good"
<i>naud-god</i>	danger-good	"very good"
<i>knall-gul</i>	bang-yellow	"bright yellow"
<i>knall-hard</i>	bang-hard	"very hard"
<i>kniv-hard</i>	knife-hard	"very hard"
<i>gris.e-heldig</i>	pig-lucky	"very lucky"
<i>svin.e-heldig</i>	swine-lucky	"very lucky"
<i>bikkje-kald</i>	dog-cold	"very cold"
<i>smell-kald</i>	bang-cold	"very cold"
<i>stein-kald</i>	stone-cold	"very cold"
<i>svin.e-kald</i>	swine-cold	"very cold"
<i>død.s-kjedele-g</i>	death-boring	"very boring"
<i>klokke-klar</i>	bell-clear	"very clear"
<i>krystall-klar</i>	crystal-clear	"very clear"
<i>sol.e-klar</i>	sun-clear	"very clear"

<i>krit-kvit</i>	chalk-white	"very/completely white"
<i>drit-lei</i>	shit-bored	"completely fed up"
<i>skit-lei</i>	shit-bored	"completely fed up"
<i>belg-mørk</i>	pod-dark	"very/completely dark"
<i>drit-nydeleg</i>	shit-lovely	"very lovely"
<i>drit-pen</i>	shit-pretty	"very pretty"
<i>lyn-rask</i>	lightning-fast	"very fast"
<i>knall-raud</i>	bang-red	"bright red"
<i>død.s-redd</i>	death-afraid	"very afraid"
<i>liv-redd</i>	life-afraid	"very afraid"
<i>gull-rein</i>	gold-pure	"completely pure"
<i>klokke-rein</i>	bell-pure	"very clear" (sound, voice)
<i>krystall-rein</i>	crystal-pure	"very clear"
<i>stein-rik</i>	stone-rich	"very rich"
<i>sjokk-rosa</i>	shock-pink	"bright pink"
<i>bombe-sikker</i>	bomb-sure	"very/completely sure"
<i>drit-skjønn</i>	shit-beautiful	"very beautiful"
<i>eld-snar</i>	fire-quick	"very quick"
<i>lyn-snar</i>	lightning-quick	"very quick"
<i>kjempe-snill</i>	giant-kind	"very kind"
<i>drit-stilig</i>	shit-stylish (cool)	"very stylish/cool"

<i>blikk-stille</i>	?-quiet	"very quiet/calm"
<i>død.s-stille</i>	death-quiet	"very quiet"
<i>mus.e-stille</i>	mouse-quiet	"very quiet"
<i>naud-svolten</i>	danger-hungry	"very hungry"
<i>drit-søt</i>	shit-cute	"very cute"
<i>kjempe-søt</i>	giant-cute/sweet	"very cute/sweet"
<i>syl-tynn</i>	awl-thin	"very thin"
<i>knusk-tørr</i>	tinder-dry	"very dry"
<i>smell-vakker</i>	bang-beautiful	"very beautiful"

Group 4. Associations: the KONGEBLÅ construction

These are quite a few compounds in which the relationship between the FE and SE is an *association*. In other words, the elements describe concepts that are, perhaps metaphorically or culturally, associated with one another, but not literally similar as in the Comparisons group. *konge-blå* "king blue", for instance, is not a king-like blue, but a shade of blue that has an association with royalty.

sjokk- "shock" and *signal-* "shock" are similar to the Degree modifiers, in that the meaning of the compounds they occur in can also be interpreted as "very COLOR". But it is only colors (and even only a few particular colors) that they modify, and Norwegian speakers seem to have a concept of the "shocks" and "signals" having a meaning that is more obviously related to the independent words than would be the case if they were simply degree markers.

As shown in Figure 6, there are almost as many unique FEs as compounds in this group. There are 19 total compounds, 18 unique FEs and 9 unique SEs. Dixon's Color, Human Propensity and Physical Property classes are found here.

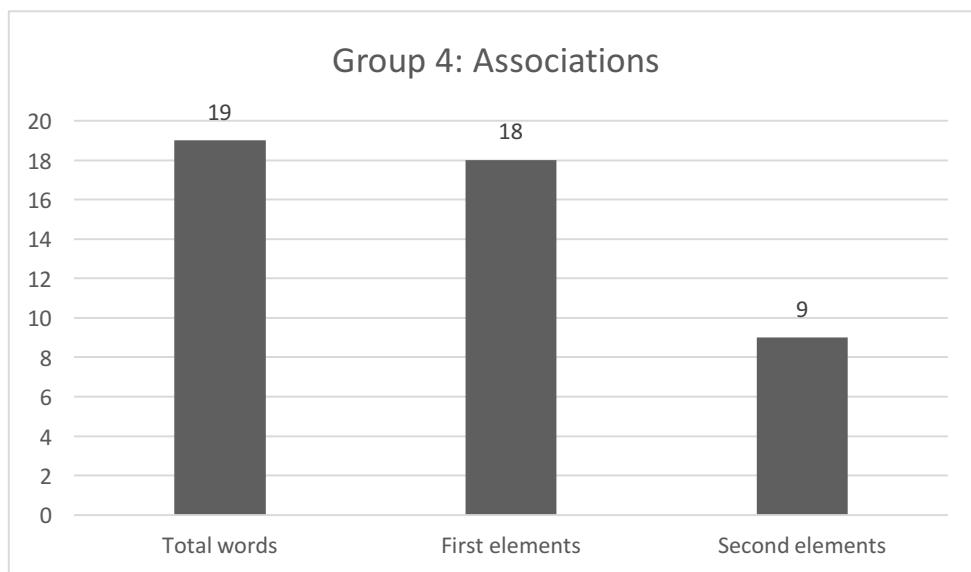


Figure 6: Shows the number of compounds in Group 4: Associations, the number of unique first elements and the number of unique second elements in the group.

Table 11. GROUP 4.

<i>bonde-blå</i>	farmer-blue	
<i>konge-blå</i>	king-blue	
<i>marine-blå</i>	navy-blue	
<i>uskuld.s-blå</i>	innocence-blue	"innocent"
<i>dogg-frisk</i>	dew-fresh	
<i>kjelde-frisk</i>	spring-fresh ⁶	
<i>morgon-frisk</i>	morning-fresh	
<i>mønster-god</i>	pattern-good	"a good example"
<i>jord-grøn</i>	earth-green	
<i>signal-grøn</i>	signal-green	

⁶ This refers to 'spring' in the sense of 'water source'.

<i>kommune-grå</i>	municipality-grey	"mousy"
<i>frost-klar</i>	frost-clear	"cold and clear" (air)
<i>kveld-klar</i>	evening-clear	
<i>klokke-klar</i>	bell-clear	
<i>sol.e-klar</i>	sun-clear	
<i>brille-klok</i>	glasses-wise	
<i>aftan-raud</i>	evening-red	
<i>signal-raud</i>	signal-red	
<i>sjokk-rosa</i>	shock-pink	

Group 5. Possessions: "Having or lacking N" – The FORDOMSFULL construction

Another large group of compounds are those which describe a having or lacking of the item that the first element denotes. I have grouped these together because their semantic relations are so similar. Many FEs can appear in both "having" and "lacking" compounds. However, often an FE selects for one of the possible "lacking" SEs.

There is a surprising number of different SEs in this group, denoting different nuances of "having" and "lacking". We have compounds denoting a complete lack of N, a shortage of N, a great amount of N, and in a few cases, simply a binary existence of N (e.g. *hiv-positiv* "HIV positive").

This is the group with the most data. We find 137 total compounds, 113 unique FEs, and only 19 unique SEs. Dixon's adjective classes Value, Physical Property and Human Propensity are found here.

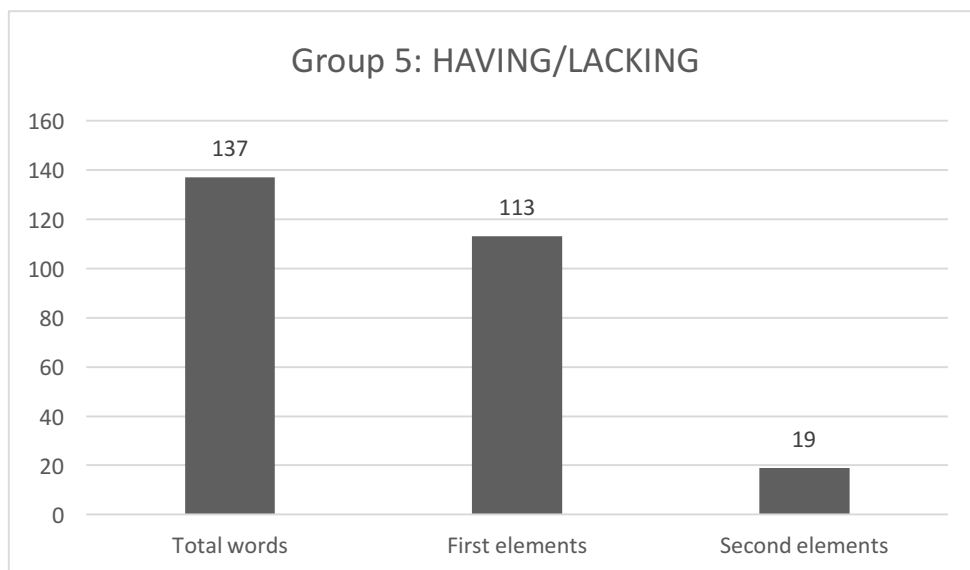


Figure 7: Shows the total number of compounds in Group 5, the number of unique first elements and the number of unique second elements in the group.

Table 12. GROUP 5.

<i>art.s-fattig</i>	species-poor
<i>blod-fattig</i>	blood-poor
<i>evne-fattig</i>	ability-poor
<i>feitt-fattig</i>	fat-poor
<i>folk.e-fattig</i>	people-poor
<i>fosfat-fattig</i>	phosphate-poor
<i>fukt-fattig</i>	moisture-poor
<i>industri-fattig</i>	industry-poor
<i>jarn-fattig</i>	iron-poor
<i>kalk-fattig</i>	lime-poor
<i>kalori-fattig</i>	calorie-poor
<i>mold-fattig</i>	mold-poor

<i>nedbør-fattig</i>	precipitation-poor
<i>næring.s-fattig</i>	nourishment-poor
<i>ord-fattig</i>	word-poor
<i>ressurs-fattig</i>	resource-poor
<i>røynsle-fattig</i>	experience-poor
<i>tanke-fattig</i>	thought-poor
<i>ånd.s-fattig</i>	spirit-poor
<i>fare-fri</i>	danger-free
<i>feber-fri</i>	fever-free
<i>fordom.s-fri</i>	prejudice-free
<i>fossil-fri</i>	fossil-free
<i>gjeld-fri</i>	debt-free
<i>is-fri</i>	ice-free
<i>karakter-fri</i>	grade-free
<i>krøll-fri</i>	wrinkle-free
<i>skule-fri</i>	school-free
<i>toll-fri</i>	duty-free
<i>alvor.s-full</i>	seriousness-full
<i>andakt.s-full</i>	piety-full
<i>anger- full</i>	regret-full
<i>ansvar.s-full</i>	responsibility-full

<i>bekymring.s-full</i>	worry-full
<i>betydning.s-full</i>	meaning-full
<i>blod-full</i>	blood-full
<i>effekt-full</i>	effect-full
<i>eld-full</i>	fire-full
<i>fantasi-full</i>	fantasy-full
<i>fare-full</i>	danger-full
<i>fordom.s-full</i>	prejudice-full
<i>fordring.s-full</i>	demand-full
<i>forhåpning.s-full</i>	hope-full
<i>forståelse.s-full</i>	understanding-full
<i>fortjeneste-full</i>	merit-full
<i>fortrøstning.s-full</i>	trust-full
<i>forventning.s-full</i>	expectation-full
<i>fred-full</i>	peace-full
<i>følelse.s-full</i>	emotion-full
<i>gru-full</i>	horror-full
<i>grøde- full</i>	crop-full
<i>gåte-full</i>	riddle-full
<i>harm-full</i>	anger-full
<i>hat.e-full</i>	hate-full

<i>hemmelegheit.s-full</i>	secret-full	
<i>hensyn.s-full</i>	consideration-full	
<i>håp.e-full</i>	hope-full	
<i>innsikt.s-full</i>	insight-full	
<i>kjøtt-full</i>	meat-full	
<i>farge-glad</i>	color-happy	"colorful"
<i>frost-hard</i>	frost-hard	"exposed to frost"
<i>vêr-hard</i>	weather-hard	"exposed to extreme weather"
<i>vind-hard</i>	wind-hard	"exposed to wind"
<i>ansvar.s-laas</i>	responsibility-less	
<i>ende-laas</i>	end-less	
<i>fred-laas</i>	peace-less	
<i>glede.s-laas</i>	joy-less	
<i>grense-laas</i>	limit-less	
<i>harm-laas</i>	harm-less	
<i>hjar-te-laas</i>	heart-less	
<i>karakter-laas</i>	character-less	
<i>klasse- laas</i>	class-less	
<i>lyd-laas</i>	sound-less	
<i>meining.s-laas</i>	meaning-less	
<i>papir-laas</i>	paper-less	

<i>råd-laus</i>	help-less	
<i>sjanse- laus</i>	chance-less	
<i>skam-laus</i>	shame-less	
<i>sorg-laus</i>	sorrow-less	
<i>søvn-laus</i>	sleep-less	
<i>topp-laus</i>	top-less	
<i>trinn-laus</i>	step-less	
<i>vekt-laus</i>	weight-less	
<i>verdi-laus</i>	value-less	
<i>trykk-lett</i>	stress-light	"unstressed"
<i>latter-mild</i>	laughter-mild	"full of laughter"
<i>sorg-mild</i>	sorrow-mild	"full of sorrow"
<i>måne-mørk</i>	moon-dark	
<i>frost-næm</i>	frost-easy	"gets a lot of frost"
<i>hiv-positiv</i>	HIV-positive	
<i>ugras-rein</i>	weeds-clean	"clear of weeds"
<i>uskuld.s-rein</i>	innocence-clean	"innocent"
<i>innhald.s-rik</i>	content-rich	
<i>kalk-rik</i>	lime-rich	
<i>kalori-rik</i>	calorie-rich	
<i>kjensle-rik</i>	emotion-rich	

<i>kjøt-rik</i>	meat-rich
<i>kunnskap.s-rik</i>	knowledge-rich
<i>lovnad.s-rik</i>	promise-rich
<i>minne-rik</i>	memory-rich
<i>næring.s-rik</i>	nourishment-rich
<i>omfang.s-rik</i>	dimension-rich
<i>ord-rik</i>	word-rich
<i>ozon-rik</i>	ozone-rich
<i>saft-rik</i>	juice-rich
<i>sevje-rik</i>	sap-rich
<i>siger-rik</i>	victory-rich
<i>signing.s-rik</i>	blessing-rich
<i>sinn-rik</i>	mind-rich
<i>skog-rik</i>	forest-rich
<i>skugge-rik</i>	shadow-rich
<i>sol-rik</i>	sun-rich
<i>stivelse.s-rik</i>	starch-rich
<i>suksess-rik</i>	success-rich
<i>tal-rik</i>	number-rich
<i>tradisjon.s-rik</i>	tradition-rich
<i>utbyte-rik</i>	benefit-rich

<i>vass-rik</i>	water-rich
<i>von-rik</i>	hope-rich
<i>ære-rik</i>	honor-rich
<i>ånd-rik</i>	spirit-rich
<i>band-sterk</i>	volume-strong
<i>folk.e-sterk</i>	people-strong
<i>kapital-sterk</i>	capital-strong
<i>kondisjon.s-sterk</i>	stamina-strong
<i>mann-sterk</i>	man-strong
<i>penge-sterk</i>	money-strong
<i>ressurs-sterk</i>	resource-strong
<i>trykk-sterk</i>	stress-strong
<i>vind-stille</i>	wind-still
<i>alkohol-svak</i>	alcohol-weak
<i>karakter-svak</i>	character-weak
<i>ljøs-svak</i>	light-weak
<i>næring.s-svak</i>	nourishment-weak
<i>ressurs-svak</i>	resource-weak
<i>trykk-svak</i>	stress-weak
<i>alvor.s-tung</i>	seriousness-heavy
<i>evne-veik</i>	ability-weak

Subgroup: Having a lot of N, or having little N

Within the examples listed above, some have a meaning that is more specific than "having" or "lacking", or existence or non-existence. This meaning denotes a gradation towards a large or small amount of N, such that the compound either describes "having a lot of N", or "having little N" – that is, in comparison to some expectation or standard.

The compounds ending in *-fattig* "poor", *-rik* "rich", *-sterk* "strong" and *-svak* "weak" belong in this subgroup.

On first glance it seems that at least *-fattig* and *-fri* have distinct usages. *-fattig*, literally meaning "poor", seems to denote an unhealthy or unwanted lack of something; a deficiency. *-fri* has a neutral or positive usage, in that the absence of N is a good thing, or at least not a disadvantage. This seems to be the case in English as well: a food item can happily be "fat-free" or "sugar-free", but it would be strange to see a "fiber-free" or "protein-free" label.

But upon further investigation, the SE *-fattig* becomes more complicated:

(43) *kalori-fattig* calorie-poor "low in calories"

In a wealthy part of the world, it is unlikely that this word would be used in a negative sense.

(44) *feitt-fattig* fat-poor "low in fat"

This word actually has two different usages: In the nutritional domain, it would usually have a positive meaning, in the same way as *kalori-fattig*. On the other hand, in the dermatological domain, this term describes dry skin, which can also be *fukt-fattig*:

(45) *fukt-fattig* moisture-poor "dry", "dehydrated"

Kalori-fattig and *feitt-fattig* show that *-fattig* is not exclusively negative in connotations, but that still seems to be the most frequent usage.

None of the data indicate that *-fri* can have a negative usage. When it comes to *-laus*, there is no clear tendency. *Grense-laus* "limitless" and *meining.s-laus* "meaningless" as examples show that the lacking can be positive or negative, and possibly even neutral.

Something all of the compounds in the Possessions group have in common is that the adjective takes on a different, more general meaning in the compound than it has on its own. Thus it becomes slightly problematic to classify these words as compounds – or we can at least say that they are not prototypical compounds. When a part of the compound has "weakened" or changed its meaning, it becomes more affix-like. We also see this with the compounds beginning with *kjempe-*, *drit-*, *døds-*, et cetera, as discussed in the description of Group 3 – Degree.

Group 6. Possession Descriptions: "Having A N" – The HÅRFAGER construction

A few compounds denote a more specific kind of "having", in which the adjective does not denote the *having* in itself, but rather modifies the noun that is *had* by the entity that the compound describes. These words will often describe characteristics of a person. Another way to paraphrase their meaning is, in many cases, "A-N-ed", such as in the case of *bryst-fager* breast-fair "large-chested".

There is some overlap between this group and Possessions, in that some of the compounds with FEs such as *-sterk* "strong" and *-svak* "weak" are ambiguous, and can either be interpreted as describing an amount of N or the strength of N.

In this group, we find 55 compounds, 44 unique FEs, and 26 unique SEs. The Dixon classes that are represented are Physical property, Human Propensity and Value.

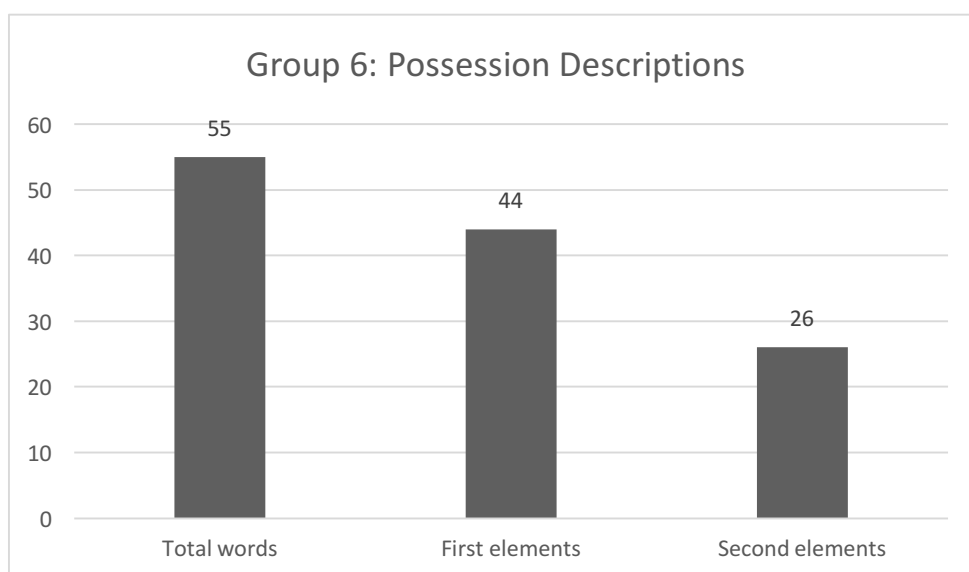


Figure 8: Shows the total number of compounds in Group 6, the number of unique first elements and the number of unique second elements.

Table 13. GROUP 6.

<i>skinn-blaut</i>	skin-wet	
<i>skjorte-blaut</i>	shirt-wet	
<i>hjerne-daud</i>	brain-dead	
<i>farge-ekte</i>	color-real	"fade-resistant"
<i>bryst-fager</i>	breast-fair	"large-chested"
<i>hår-fager</i>	hair-fair	"long-haired"
<i>form-fast</i>	form-stable	
<i>karakter-fast</i>	character-stable	
<i>plan-fast</i>	plan-stable	
<i>prinsipp-fast</i>	principle-stable	
<i>regel-fast</i>	rule-stable	
<i>rot-fast</i>	root-stable	"rooted"
<i>takt-fast</i>	rhythm-stable	
<i>vilje-fast</i>	will-stable	
<i>form-fin</i>	shape-pretty	
<i>kjensle-fin</i>	feeling-sensitive	
<i>liv.s-frisk</i>	life-healthy	"healthy, vital"
<i>ånd.s-frisk</i>	spirit-healthy	
<i>hovud-galen</i>	head-crazy	"crazy", "dizzy"

<i>farge-glad</i>	color-happy	"colorful"
<i>rist-høg</i>	instep-high	"having arched feet"
<i>golv-kald</i>	floor-cold	
<i>hus-kald</i>	house-cold	
<i>kjellar-kald</i>	cellar-cold	
<i>kjensle-kald</i>	emotion-cold	
<i>tanke-klar</i>	thought-clear	"lucid"
<i>råd-klok</i>	advice-wise	
<i>verdi-konservativ</i>	value-conservative	
<i>finger-nem</i>	finger-easy	"dexterous"
<i>avl.s-produktiv</i>	breeding-productive	"fruitful"
<i>art.s-rein</i>	species-pure	
<i>rase-rein</i>	race-pure	
<i>stil-rein</i>	style-pure	"stylistically consistent"
<i>stil-sikker</i>	style-secure	
<i>bryst-sjuk</i>	chest-sick	
<i>galle-sjuk</i>	gall-sick	
<i>hjarte- sjuk</i>	heart-sick	
<i>hug-sjuk</i>	mind-sick	"sad"
<i>humør-sjuk</i>	mood-sick	"moody"
<i>ånd.s-sløv</i>	spirit-dull	"having cognitive impairments"

<i>fot-snar</i>	foot-quick	
<i>råd-snar</i>	solution-quick	
<i>arm-sterk</i>	arm-strong	
<i>helse-sterk</i>	health-strong	"healthy"
<i>hovud-sterk</i>	head-strong	"not affected by heights"
<i>hug-sterk</i>	mind-strong	"strong-willed", "brave"
<i>kondisjon.s-sterk</i>	stamina-strong	
<i>ljøs-sterk</i>	light-strong	
<i>nerve-sterk</i>	nerve-strong	
<i>sene-sterk</i>	tendon-strong	
<i>sinn.s-sterk</i>	mind-strong	
<i>vilje-sterk</i>	will-strong	
<i>krav-stor</i>	demand-large	"demanding"
<i>mage-sur</i>	stomach-sour	"high on stomach acid", "in a bad mood"
<i>karakter-svak</i>	character-weak	
<i>evne-veik</i>	ability-weak	

The compounds ending in *-fager* are an interesting case, as the literal meaning describes the noun as being beautiful, whereas the more common usage may be a description of size or amount, c.f. (46)-(47).

(46) *bryst-fager* breast-fair "having beautiful breasts" – or more commonly: "having large breasts"

(47) *hår-fager* hair-fair "having beautiful hair" – or more commonly: "having long hair"

7.1.3 Set B: Emotional and physical response

Group 7. Causalities: "A because of N" – the BILSJUK construction

This group consists of compounds that have a causal semantic relation – that is, they describe an entity as being A because of N.

In *one* example, the causality goes the other direction: *stjerne-klar* denotes something along the lines of "clear enough so as to cause stars to appear". Thus the relation is "stars because of clearness" (N because of A, in a sense).

In this group, we find 35 compounds, 32 unique FEs, and 17 unique SEs. Dixon's Color, Physical Property and Human Propensity classes are represented here.

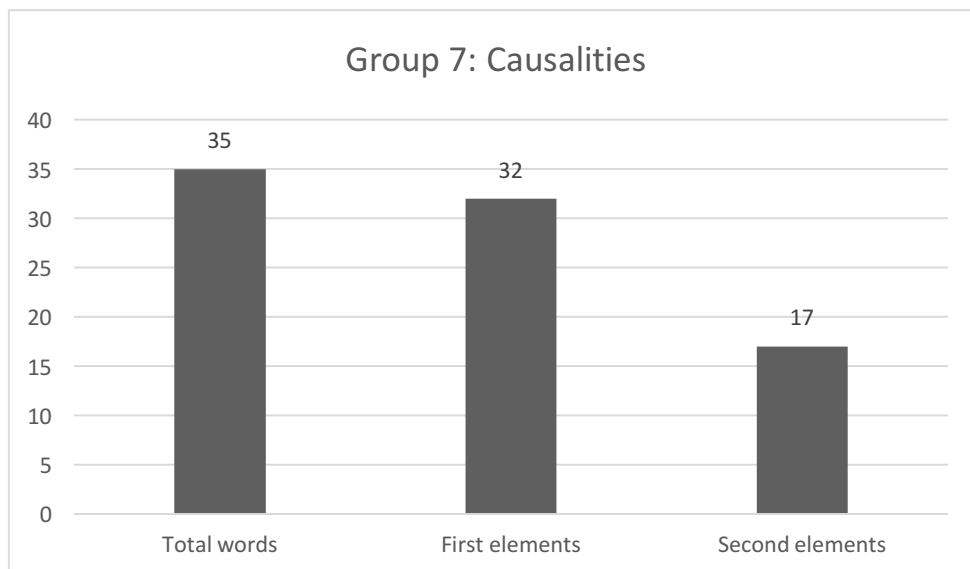


Figure 9: Shows the total number of compounds in Group 7: Causalities, the number of unique first elements and the number of unique second elements in the group.

Table 14. GROUP 7.

<i>tåre-blank</i>	tear-shiny
<i>dogg-blaut</i>	dew-wet
<i>gråt-blind</i>	crying-blind
<i>natt-blind</i>	night-blind

<i>snø-blind</i>	snow-blind	
<i>sol-blind</i>	sun-blind	
<i>stær-blind</i>	cataract/glaucoma-blind	
<i>skade-daud</i>	injury-dead	"died in an accident"
<i>snø-fast</i>	snow-stuck	
<i>oske-fast</i>	ash-stuck	
<i>vêr-fast</i>	weather-stuck	
<i>eir-grøn</i>	rust-green	
<i>feber-heit</i>	fever-hot	
<i>haust-kald</i>	autumn-cold	
<i>kjøleskap.s-kald</i>	refridgerator-cold	
<i>kveld.s-kald</i>	evening-cold	
<i>vass-kald</i>	water-cold	
<i>stjerne-klar</i>	star-clear	
<i>liv.s-klok</i>	life-wise	"having a lot of life experience"
<i>kaffi-kvalm</i>	coffee-nauseous	
<i>skum-kvit</i>	foam-white	
<i>måne-ljos</i>	moon-light	
<i>allergi-sjuk</i>	allergy-sick	
<i>astma-sjuk</i>	asthma-sick	
<i>barn-sjuk</i>	child-sick	"in labor"

<i>bil-sjuk</i>	car-sick	
<i>brokk-sjuk</i>	hernia-sick	
<i>elskhug.s-sjuk</i>	love-sick	
<i>feber-sjuk</i>	fever-sick	
<i>fylle-sjuk</i>	drunkenness-sick	"hangover"
<i>gikt-sjuk</i>	arthritis/gout-sick	
<i>gras-sjuk</i>	grass-sick	
<i>alderdom.s-sløv</i>	age-dull	"senile"
<i>eddik-sur</i>	vinegar-sour	
<i>natt-svart</i>	night-black	

A few of the examples above also appear in other groups, as they are ambiguous, such as (48)-(50).

(48) *gras-sjuk* grass-sick "sick because of grass" or "wanting grass"

(49) *eddik-sur* vinegar-sour "sour because of vinegar" or "sour as vinegar"

(50) *natt-svart* night-black "black because of night" or "black as night"

Måne-ljos "moon-light" can also have a (rather odd) metaphorical meaning in a context such as: *Viss du ikkje skjerpar deg, blir det måneljost her!* "If you don't pull yourself together, you're in trouble!" (a more literal translation: it's going to get moonlit here!)

Oske-fast "ash-stuck" was a word that came into usage in 2010, when air travel was disrupted because of the Eyjafjallajökull eruption. The word thus described the situation the travellers were in, "stuck because of ashes". Several other words with this *-fast* ending arose in the following years, such as *kjos-fast* in 2014. This refers to the condition of being stuck because of an airline strike, and is named after Bjørn Kjos, the much-criticized director of Norwegian Air Shuttle. Most of these *-fast* words were very ephemeral.

Group 8. Attitudes and reactions: "A towards/against N" – The BARNEVENNLEG construction

There are quite a few data that denote attitudes or reactions towards N, and have paraphrases along the lines of "A towards N", "A against N" or "A to N" (in a "towards"-like meaning). Some of them describe a mental attitude towards or a physical or mental reaction to N, and some describe an effect on N – and some may do both. Their meanings differ somewhat, but the relation can more or less be generalized to denote attitudes and reactions.

In this group, we find 80 compounds, 63 unique FEs, and 23 unique SEs. The Dixon classes found here are Human Propensity and Value.

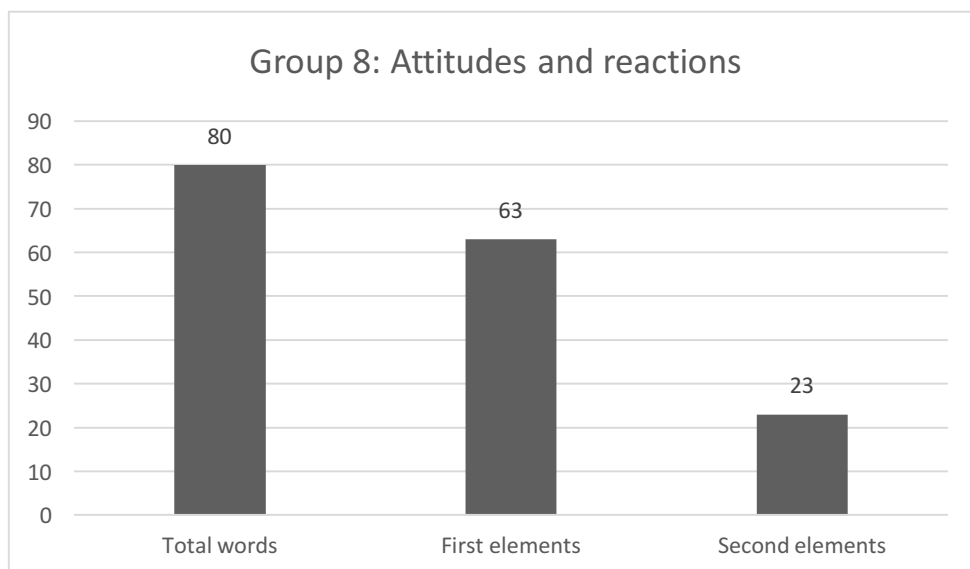


Figure 10: Shows the total number of compounds in Group 8, the number of unique first elements and the number of unique second elements.

Table 15. GROUP 8.

<i>ansvar.s-bevisst</i>	responsibility-conscious
<i>fart.s-bevisst</i>	speed-conscious
<i>kalori-bevisst</i>	calorie-conscious
<i>kvalitet.s-bevisst</i>	quality-conscious
<i>mote-bevisst</i>	fashion-conscious

<i>mål-bevisst</i>	goal-conscious	"goal-oriented"
<i>pris-bevisst</i>	price-conscious	
<i>farge-blind</i>	color-blind	
<i>ord-blind</i>	word-blind	"dyslexic"
<i>energi-effektiv</i>	energy-efficient	
<i>kostnad.s-effektiv</i>	cost-efficient	
<i>brann-farleg</i>	fire-dangerous	
<i>eksplosjon.s-farleg</i>	explosion-dangerous	
<i>helse-farleg</i>	health-dangerous	
<i>eld.s-farleg</i>	fire-dangerous	
<i>liv.s-farleg</i>	life-dangerous	
<i>trafikk-farleg</i>	traffic-dangerous	
<i>framsteg.s-fiendtleg</i>	progress-antagonistic	"reactionary"
<i>jøde-fiendtleg</i>	jew-antagonistic	"anti-Semitic"
<i>liv.s-fiendtleg</i>	life-antagonistic	"life-threatening"
<i>miljø-fiendtleg</i>	environment-antagonistic	
<i>gjest-fri</i>	guest-free	"hospitable"
<i>fart.s-galen</i>	speed-crazy	"likes to drive fast"
<i>gut.e-galen</i>	boy-crazy	"very interested in boys"
<i>jente-galen</i>	girl-crazy	"very interested in girls"
<i>sport.s-galen</i>	sport-crazy	"very interested in sports"

<i>arbeid.s-glad</i>	work-happy	"eager to work"
<i>fart.s-glad</i>	speed-happy	"likes to drive fast"
<i>fest-glad</i>	party-happy	"likes to party"
<i>kamp-glad</i>	battle-happy	"likes to fight"
<i>liv.s-glad</i>	life-happy	
<i>makt-glad</i>	power-happy	"happy to use one's power"
<i>prakt-glad</i>	glory-happy	
<i>dyr.e-god</i>	animal-good	"kind towards animals"
<i>brann-ignorant</i>	fire-ignorant	
<i>gluten-intolerant</i>	gluten-intolerant	
<i>laktose-intolerant</i>	lactose-intolerant	
<i>barn.e-kjær</i>	child-dear	"fond of / friendly towards children"
<i>dyr.e-kjær</i>	animal-dear	"fond of animals"
<i>fedreland.s-kjær</i>	father-country-dear	"patriotic"
<i>folk.e-kjær</i>	people-dear	"sociable"
<i>fred-kjær</i>	peace-dear	"peace loving"
<i>heim-kjær</i>	home-dear	"homebody"
<i>kvinne-kjær</i>	woman-dear	"fond of women"
<i>sanning.s-kjær</i>	truth-dear	"truthful"
<i>varme-kjær</i>	heat-dear	"thriving in the heat"
<i>ære-kjær</i>	honor-dear	"proud"

<i>liv.s-klok</i>	life-wise	"having a lot of life experience"
<i>mat-lei</i>	food-bored	
<i>skule-lei</i>	school-bored	
<i>gjest-mild</i>	guest-mild	"hospitable"
<i>mann.e-mild</i>	man-mild	"humane"
<i>dag-nøytral</i>	day-neutral	"not affected by the length of days"
<i>kjønn.s-nøytral</i>	gender-neutral	
<i>liv.s-syn.s-nøytral</i>	life-view-neutral	"non-discriminatory on the basis of religion or philosophy"
<i>religion.s-nøytral</i>	religion-neutral	"non-discriminatory on the basis of religion"
<i>verdi-nøytral</i>	value-neutral	
<i>kultur-open</i>	culture-open	"open to cultural diversity and change"
<i>mørke-redd</i>	darkness-afraid	
<i>stove-rein</i>	living room-clean	"house trained", "acceptable"
<i>barn.e-sikker</i>	child-secure	"child proof"
<i>idiot-sikker</i>	idiot-secure	"foolproof"
<i>arbeid.s-sky</i>	work-shy	
<i>folk.e-sky</i>	people-shy	
<i>ljøs-sky</i>	light-shy	
<i>folk.e-stygg</i>	people-nasty	"unsociable"
<i>arbeidar-vennleg</i>	worker-friendly	

<i>barn.e-vennleg</i>	child-friendly	
<i>brukar-vennleg</i>	user-friendly	
<i>distrikt.s-vennleg</i>	district-friendly	
<i>familie-vennleg</i>	family-friendly	
<i>forbrukar-vennleg</i>	consumer-friendly	
<i>framsteg.s-vennleg</i>	progress-friendly	"progressive"
<i>fred.s-vennleg</i>	peace-friendly	
<i>gjest.e-vennleg</i>	guest-friendly	"hospitable"
<i>kommunist-vennleg</i>	communist-friendly	
<i>konge-vennleg</i>	king-friendly	"supportive of the monarchy"
<i>menneske-vennleg</i>	human-friendly	
<i>miljø-vennleg</i>	environment-friendly	
<i>natur-vennleg</i>	nature-friendly	

Subgroup: Wanting N

This subgroup consists of words that describe hunger, cravings and similar experiences. The FE denotes what is wanted, and the SE denotes the "wanting" itself. So the paraphrase becomes "wanting N". There are surprisingly many different SEs that denote some variation on the meaning "wanting". Some of the compounds ending in *-svolten* "hungry" are part of this category, though not all – as seen in the first section. The words ending in *-tørst* "thirsty" also belong here.

An interesting feature of the SEs in this group is that many of them can take on a non-literal meaning in these compounds. *-sjuk* is an obvious case, where the literal meaning, "sick", becomes weakened so as to describe a sickness-like craving. But we see the same change in –

svolten "hungry" and *-tørst* "thirsty" as well. They do not always denote literal hunger or thirst. *-kåt* also takes on a different, less specific meaning: on its own, it denotes sexual excitedness, whereas in these compounds it clearly can describe an excitedness (or even quest) for something entirely unrelated to sex. It would be interesting to see more data of this kind, to see how productive this usage is.

In this subgroup, we find 22 compounds, 20 unique FEs and 6 unique SEs. Dixon's Physical Property and Human Propensity classes are found here.

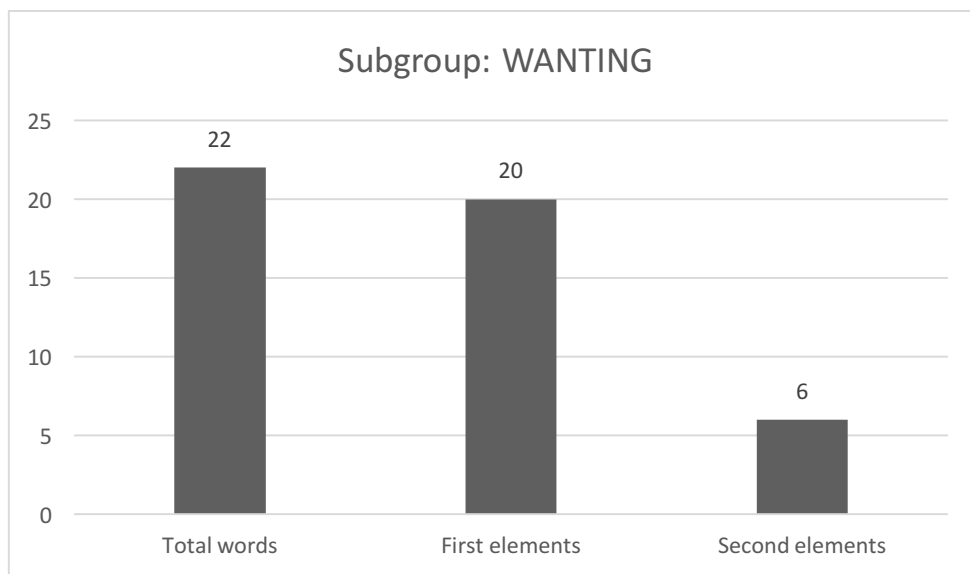


Figure 11: Shows the number of WANTING compounds, the number of unique first elements and the number of unique second elements in the subgroup.

Table 16. SUBGROUP: WANTING

<i>heim-fus</i>	home-craving	
<i>hemn-fus</i>	revenge-craving	
<i>veg-fus</i>	road-craving	"having wanderlust"
<i>kjendis-kåt</i>	celebrity-excited	
<i>PR-kåt</i>	publicity-excited	
<i>angrep.s-lysten</i>	attack-desirous	

<i>eventyr-lysten</i>	adventure-desirous
<i>kamp-lysten</i>	battle-desirous
<i>nyting.s-lysten</i>	pleasure-desirous
<i>tiltak.s-lysten</i>	initiative-desirous
<i>elskhug.s-sjuk</i>	love-sick
<i>gras-sjuk</i>	grass-sick
<i>heim-sjuk</i>	home-sick
<i>kaffi-sjuk</i>	coffee-sick
<i>makt-sjuk</i>	power-sick
<i>selskap.s-sjuk</i>	company-sick
<i>kjøt-svolten</i>	meat-hungry
<i>smørbrød-svolten</i>	sandwich-hungry
<i>blod-tørst</i>	blood-thirsty
<i>kaffi-tørst</i>	coffee-thirsty
<i>vin-tørst</i>	wine-thirsty
<i>øl-tørst</i>	beer-thirsty

Gras-sjuk is an interesting case as it has two very different meanings, placing it in two different groups.

(51) *gras-sjuk* grass-sick "wanting grass"

(52) *gras-sjuk* grass-sick "overfed on grass"

With the "overfed" meaning, the compound belongs in the Causalities group – that is to say, the meaning there is "sick because of grass". One could conceive of *kaffi-sjuk* coffee-sick "wanting coffee" also adopting a similar second meaning, such as "over-caffeinated", considering the often unpleasant aftermath of overconsuming coffee.

Subgroup: "Tolerating N", or "N-proof"

These words describe the characteristic of being able to tolerate or withstand something such as a physical effect or force – that is, the object's ability to maintain its most important physical properties when faced with what is named in the FE. Most of the examples denote a positive tolerance, but there are a couple exceptions, namely those ending with *-næm*, where the paraphrase would rather be "not tolerating N": *is-næm* ice-easy "easily frozen" and *vår-næm* spring-easy "not tolerating the spring".

Here we find 19 compounds, 18 unique FEs, and 5 unique SEs. These data belong to Dixon's physical property class.

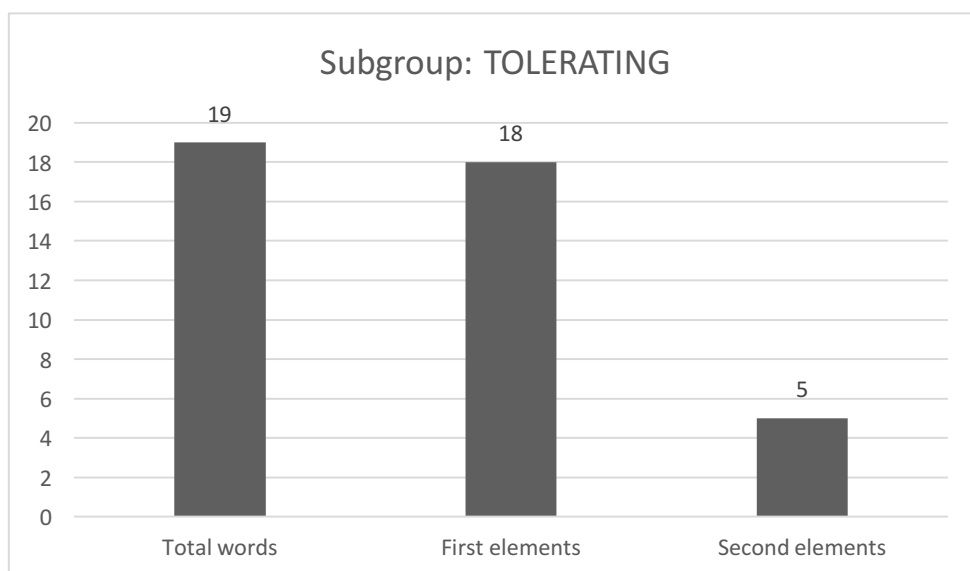


Figure 12: Shows the total number of TOLERATING compounds, the number of unique first elements and the number of unique second elements in the subgroup.

Table 17. SUBGROUP: TOLERATING

<i>kyssekte</i>	kiss-real	"kiss-proof"
<i>ljosekte</i>	light-real	"fade-proof"
<i>vaskekte</i>	wash-real	"washable" ⁷
<i>brannfast</i>	fire-stable	
<i>eldfast</i>	fire-stable	
<i>kuldefast</i>	cold-stable	
<i>slagfast</i>	hit-stable	
<i>syrefast</i>	acid-stable	
<i>trykkfast</i>	pressure-stable	
<i>varmefast</i>	heat-stable	
<i>vassfast</i>	water-stable	
<i>isnæm</i>	ice-easy	"not tolerating the cold" or "easily frozen"
<i>vårnæm</i>	spring-easy	"not tolerating the spring"
<i>dagnøytral</i>	day-neutral	"not affected by the length of days"
<i>bombe-sikker</i>	bomb-secure	
<i>brann-sikker</i>	fire-secure	
<i>kollisjon.s-sikker</i>	collision-secure	"crash resistant"
<i>møll-sikker</i>	moth-secure	
<i>skot-sikker</i>	shot-secure	"bulletproof"

⁷ Can also mean "genuine".

Group 9. Capabilities: The PENNEFØR construction

The words in this group describe a capability, or a lack thereof, of doing (something related to) what is denoted in the FE. The paraphrase thus becomes "good at N", "bad at N", "capable of N", "incapable of N" et cetera.

Both animate and inanimate entities can have such capabilities. For instance, a person can be *penne-før* pen-capable "good at writing", but a boat can be *sjø-dyktig* sea-capable "seaworthy".

In some cases, the "capability" really refers to the possibility of something being used – so it is not the thing itself that is "capable", but it is in a state that allows someone the possibility of doing whatever the FE refers to. For instance, a *nøkkel-ferdig* "key-ready" house does not have any real capabilities of its own, but it has the characteristics of allowing a person to be "capable" of moving into it – or putting the key in the door, in this particular case.

As shown in Figure 13, we have 58 compounds in this group, 43 unique FEs and 14 unique SEs. Dixon's Human Propensity and Physical Property classes are represented in this group.

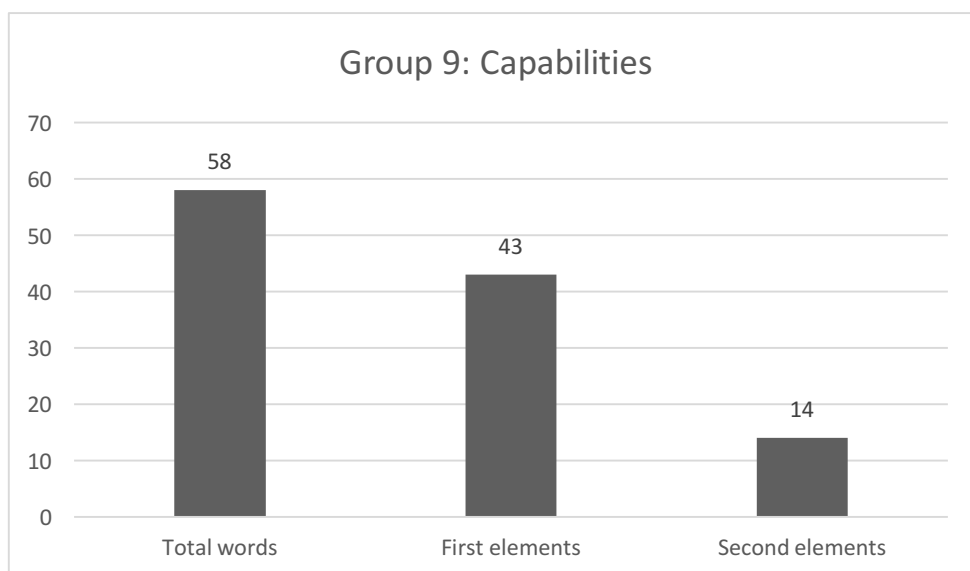


Figure 13: Shows the number of compounds in Group 9: Capabilities, the number of unique first elements, and the number of unique second elements in the group.

Table 18. GROUP 9.

<i>tone-dauv</i>	tone-deaf	
<i>arbeid.s-dyktig</i>	work-capable	"able to work"
<i>befruktning.s-dyktig</i>	fertilization-capable	"fertile"
<i>betaling.s-dyktig</i>	payment-capable	"solvent", "able to pay"
<i>funksjon.s-dyktig</i>	function-capable	"functional", "able-bodied"
<i>kamp-dyktig</i>	fight-capable	"fit for battle"
<i>konkurranse-dyktig</i>	competition-capable	"competitive"
<i>liv.s-dyktig</i>	life-capable	"viable"
<i>motstand.s-dyktig</i>	resistance-capable	"resistant"
<i>paring.s-dyktig</i>	mating-capable	"fertile", "sexually mature"
<i>sjø-dyktig</i>	sea-capable	"seaworthy"
<i>teneste-dyktig</i>	service-capable	"fit for service"
<i>hand-fast</i>	hand-stable	"strong", "graspable"
<i>finger-ferdig</i>	finger-ready	"dexterous"
<i>gryte-ferdig</i>	pot-ready	"ready to cook" (food)
<i>nøkkel-ferdig</i>	key-ready	"ready to move into" (house)
<i>slag-ferdig</i>	battle-ready	"quick-witted"
<i>skule-flink</i>	school-clever	"good at school"
<i>arbeid.s-før</i>	work-capable	"able to work"
<i>avgjerd.s-før</i>	decision-capable	"quorate"

<i>befruktning.s-før</i>	fertilization-capable	"fertile"
<i>betaling.s-før</i>	payment-capable	"solvent", "able to pay"
<i>bod-før</i>	message-capable	"able to deliver messages"
<i>forplantning.s-før</i>	reproduction-capable	"fertile"
<i>funksjon.s-før</i>	function-capable	"functional", "able-bodied"
<i>handling.s-før</i>	action-capable	"active", "efficient"
<i>kamp-før</i>	fight-capable	"ready for battle"
<i>klang-før</i>	sonority-capable	"voiced" (phoneme)
<i>motstand.s-før</i>	resistance-capable	"resistant"
<i>mål-før</i>	speech-capable	"eloquent"
<i>ord-før</i>	word-capable	"eloquent"
<i>penn.e-før</i>	pen-capable	"good at writing"
<i>sjø-før</i>	sea-capable	"seaworthy"
<i>strid.s-før</i>	battle-capable	"ready for battle"
<i>teneste-før</i>	service-capable	"fit for service"
<i>val-før</i>	election-capable	"electable"
<i>vedtak.s-før</i>	decision-capable	"quorate"
<i>våpen-før</i>	weapon-capable	"trained in using weapons"
<i>drift.s-klar</i>	operation-ready	"operable" (tool or machine)
<i>skot-klar</i>	shot-ready	"ready to fire"
<i>skrift-klok</i>	scripture-wise	"well versed in Scripture"

OR:	writing-wise	"well-read"
<i>verd.s-klok</i>	world-wise	"worldly", "educated"
<i>finger-nem</i>	finger-easy	"dexterous"
<i>drift.s-sikker</i>	operation-safe	"operable"
<i>råd-snar</i>	solution-quick	"quick-witted", "resourceful"
<i>bibel-sterk</i>	Bible-strong	"well versed in Scripture"
<i>sjø-sterk</i>	sea-strong	"not bothered by seasickness"
<i>spurt-sterk</i>	sprint-strong	"good at sprinting"
<i>båt-van</i>	boat-accustomed	"comfortable in a boat"
<i>ffell-van</i> (possibly "outdoorsy")	mountain-accustomed	"comfortable in the mountains"
<i>folk.e-van</i> "sociable"	people-accustomed	"comfortable around people", "sociable"
<i>hus-van</i>	house-accustomed	"feeling at home"
<i>scene-van</i>	stage-accustomed	"confident on stage"
<i>siger.s-van</i>	victory-accustomed	"wont to win"
<i>sjø-van</i>	sea-accustomed	"comfortable at sea"
<i>verd.s-van</i>	world-accustomed	"worldly"
<i>våpen-van</i>	weapon-accustomed	"trained in using weapons"
<i>skule-veik</i>	school-weak	"poor at school"

7.1.4 Set C: Other groups

The remaining groups that I have found do not directly relate to each other as the previous have. So I have simply placed them in a miscellaneous Set C.

Group 10. Locations – the SNØFAST construction

This group consists of compounds that describe the state of existing in locations, where the first element is the location itself, and the second element is a way of being there. The relation can be paraphrased as "A P N" where P is a preposition ("A in N", "A at N" et cetera).

The meanings do not always refer to literal locations; for instance, *berg-fast* "rock-stable" and *jord-nær* earth-near "down to earth" describe a way for a person to be metaphorically "solid" or "grounded". They can have literal usages too – these are just less common. As shown in Figure 14, there are 9 compounds in this group, 8 different FEs and only 2 different SEs. It would probably be possible to find examples with other SEs as well. Within Dixon's classification, these compounds are Positions in their literal meanings, and the ones that have metaphorical meanings are Human Propensities.

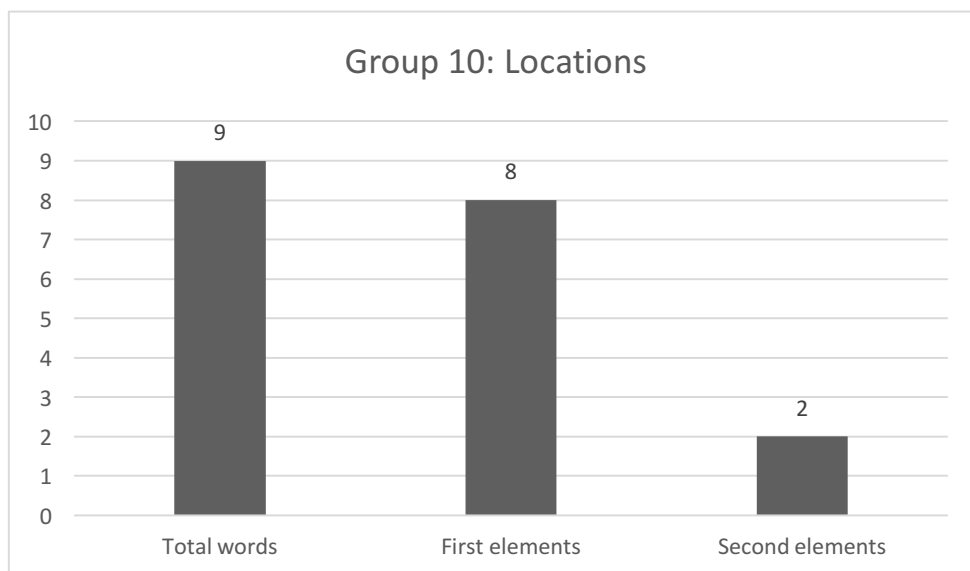


Figure 14: Shows the number of compounds in Group 10: Locations, the number of unique first elements and the number of unique second elements.

Table 19. GROUP 10.

<i>berg-fast</i>	rock-stable	
<i>golv-fast</i>	floor-stable	
<i>grunn-fast</i>	ground-stable	
<i>jord-fast</i>	earth-stable	
<i>land-fast</i>	land-stable	"part of mainland"
<i>seng-fast</i>	bed-stable	"bedridden"
<i>snø-fast</i>	snow-stable	"covered in snow"
<i>vegg-fast</i>	wall-stable	"attached to the wall"
<i>jord-nær</i>	earth-near	"down to earth"

Group 11. Affix-like SEs – the JENTEAKTIG construction

There are a couple of affix-like, or affixoid, SEs in the data, mainly *-messig* and *-aktig*. *-messig* has a meaning that is difficult to translate or even describe; the closest I can get is "pertaining to", so *miljø-messig* would mean "pertaining to the environment". But *hensikt.s-messig* has a more specific meaning than that: something like "serving the purpose". The meaning of this SE being so difficult to pin down makes it seem even more affix-like.

-aktig has a similar problem: we could often translate it with "like", "similar to" or the colloquial English "-ish". *Gutte-aktig* could happily be translated into "boy-like" or "boyish". But *fordel-aktig* simply means "advantageous", with none of the hesitation or approximation that "similar to" or "-ish" imply (and that *-aktig* also implies in other data). For simplicity's sake, I will gloss *-aktig* as "like", even when this does not make sense semantically.

The fact that these SEs have such general semantics – they don't have much meaning at all – makes them look similar to affixes. However, phonologically, they sound very much like

compound SEs – they fulfill the phonological criteria of the prototypical Norwegian compound (Theil 2016).

We can also try a coordination test on the compounds. A phrase like *sommar- og vinter-ferie* "summer and winter holiday" should be possible with prototypical compounds. Both *-aktig* and *-messig* seem to pass this test, c.f. (53)-(54).

(53) *lov- og forskrift-smessig* law- and regulation-pertaining "lawful and in accordance with regulations" or "pertaining to laws and regulations"

(54) *jente- og gutte-aktig* girl- and boy-like

As shown in Figure 15, there are 32 compounds in this group, the same number of unique FEs, and only 3 unique SEs.

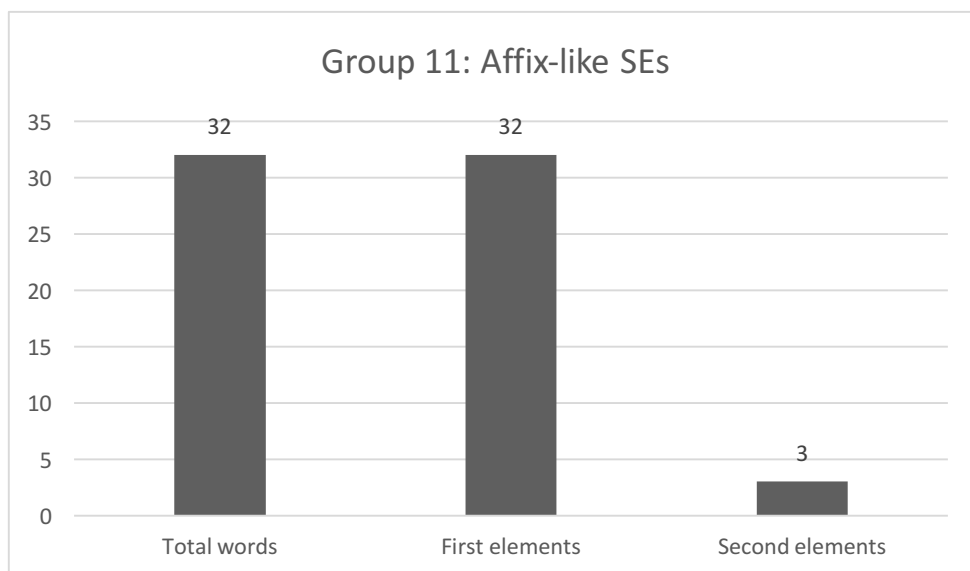


Figure 15: Shows the total number of compounds in Group 11, the number of unique first elements and the number of unique second elements in the group.

Table 20. GROUP 11.

<i>barn-aktig</i>	child-like	
<i>del-aktig</i>	part-like	"involved"
<i>engle-aktig</i>	angel-like	
<i>eventyr-aktig</i>	adventure-like OR fairytale-like	
<i>fabel-aktig</i>	fable-like	"fabulous"
<i>fordel-aktig</i>	advantage-like	"advantageous"
<i>graut-aktig</i>	porridge-like	
<i>gut-aktig</i>	boy-like	
<i>jente-aktig</i>	girl-like	
<i>kramp-aktig</i>	cramp-like	"forced"
<i>liv-aktig</i>	life-like	
<i>løgn-aktig</i>	lie-like	"lying"
<i>narr-aktig</i>	fool-like	"foolish", "ridiculous"
<i>orkan-aktig</i>	hurricane-like	
<i>pøbel-aktig</i>	hooligan-like	
<i>skøyar-aktig</i>	rascal-like	"mischievous"
<i>svin-aktig</i>	pig-like	"terrible" ⁸
<i>tjuv-aktig</i>	thief-like	
<i>vass-aktig</i>	water-like	

⁸ This word is perhaps more frequently used as an adverb.

<i>kunst-ferdig</i>	art-finished	"elaborate"
<i>bagatell-messig</i>	trifle-pertaining	"trivial"
<i>fag-messig</i>	subject-pertaining	"skilled"
<i>forhold.s-messig</i>	relation-pertaining	"proportional", "relative"
<i>forskrift.s-messig</i>	regulation-pertaining	"in accordance with regulations"
<i>hensikt.s-messig</i>	purpose-pertaining	"suitable", "serving a purpose"
<i>kjempe-messig</i>	giant-pertaining	"terrific"
<i>lov-messig</i>	law-pertaining	"lawful"
<i>regel-messig</i>	rule-pertaining	"regular"
<i>rett-messig</i>	right-pertaining	"lawful", "rightful"
<i>skjønn.s-messig</i>	discretion-pertaining	"discretionary", "approximate"
<i>stand.s-messig</i>	station-pertaining	"in accordance with one's station", "high-class"
<i>tid.s-messig</i>	time-pertaining	"modern"

Compounds of affixes?

The strangest word in the data is *kjempe-messig*. The dictionary defines it as describing size, thus being translatable with "huge". That would make at least some sense, as we could see the link between a giant and a large size. But the word seems to be more commonly used as meaning something like "terrific". In this meaning it is harder to gloss and to understand the semantics. A gloss like "very-pertaining" (or even "giant-pertaining"!) looks clumsy and does not even hint at the meaning "terrific". I have no explanation for this word, but it is an interesting case!

7.2 Summary

In this chapter, I have presented 10 semantic groups of Norwegian N+A compounds. There is some overlap between some of them, and I have given them 3 levels of hierarchy: 3 sets, 10 groups within the sets, and subgroups within some of the groups.

I have defined the semantic groups with the relation between the two elements in mind – not based on the semantics of either element alone, or on adjective types.

The next chapter will be a continuation of the analysis.

8 Analysis, part 2

This is the second and final part of the analysis of my data. In 8.1 I will discuss the amount of variation in first and second elements. In 8.2, I will describe some limitations on what nouns and adjectives can occur in the N+A compounds. 8.3 is a comparison of my analysis to Dixon's adjective classification, where I show that the semantics of compounds is too complex to be analyzed simply in terms of the semantics of their SE or head.

8.1 Variation in elements

As is perhaps expected, there is much more type variation in first elements than in second elements. In 9 out of 11 of my semantic groups, the FE slot is significantly more open than the SE slot. The two groups that differ from this tendency are those that are defined more by their FE than by their SE.

This tendency supports the idea that we describe the N+A compounds as constructions, where certain SEs are selected for and cannot easily be replaced, whereas the FE has very little semantic limitation. The FE slot being so open also demonstrates the creativity and productivity of these constructions. Within most groups, it is possible to create new examples "on the spot" that feel grammatical and that follow the pattern of the prototypical examples.

8.1.1 The distribution of second elements

There are many instances of a second element appearing in more than one semantic group. This shows that the semantics of the second element does not determine the semantics of the compound. It also shows that we are dealing with constructions and with relations between the first and second elements, and that we can not simply analyze compounds with the same SE together.

I will give examples of the distribution of some second elements.

-blind:

ord-blind word-blind "dyslexic" – Capability

snø-blind snow-blind – Causality

-fast:

berg-fast rock-stable – Comparison/Degree

brann-fast fire-stable – Tolerating

form-fast shape-stable – Possession Description

golv-fast floor-stable – Location

vêr-fast weather-stuck – Causality

-fin:

brille-fin glasses-nice – Degree

form-fin shape-nice – Possession Description

-stor:

troll-stor troll-large – Comparison

krav-stor demand-large – Possession Description

-sjuk:

gras-sjuk grass-sick – Causality

gras-sjuk grass-sick – Wanting

hjarte-sjuk heart-sick – Possession Description

-sterk:

bjørn.e-sterk bear-strong – Comparison

bibel-sterk Bible-strong – Capability

folk.e-sterk people-strong – Possession

helse-sterk health-strong – Possession Description

knall-sterk bang-strong – Degree

We see that some second elements can appear in several semantic groups, because their meaning in the compound is changed in different ways depending on the relation to the first element. And so it is that relation that becomes important, and not the semantics of the independent adjective. This strengthens the idea of the semantic groups as constructions. We will see more on this in 8.2.

8.2 Limitations on elements

Reading sections of word lists such as the list of adjectives in Nynorskordboka can provide some insights as to what kinds of nouns and adjectives compound and which do not. These are not hard and fast rules, but generalizations and tendencies. I will describe some of the limitations I have come across.

8.2.1 The length of the adjective

Longer adjectives seem to be less likely to compound. Adjective SEs tend to be short, in terms of the number of syllables in the word. This may be due to a general bias towards shorter words compounding, or it may be an accidental symptom of the adjectives with more "compoundable" semantics being shorter.

In my data, most of the data had SEs with only one syllable. No SEs were found in the data with more than four syllables.

Figure 16 shows the distribution of SE length, where the x axis represents the number of syllables in the SE, and the y axis represents the number of adjectives in the data containing that number of syllables.

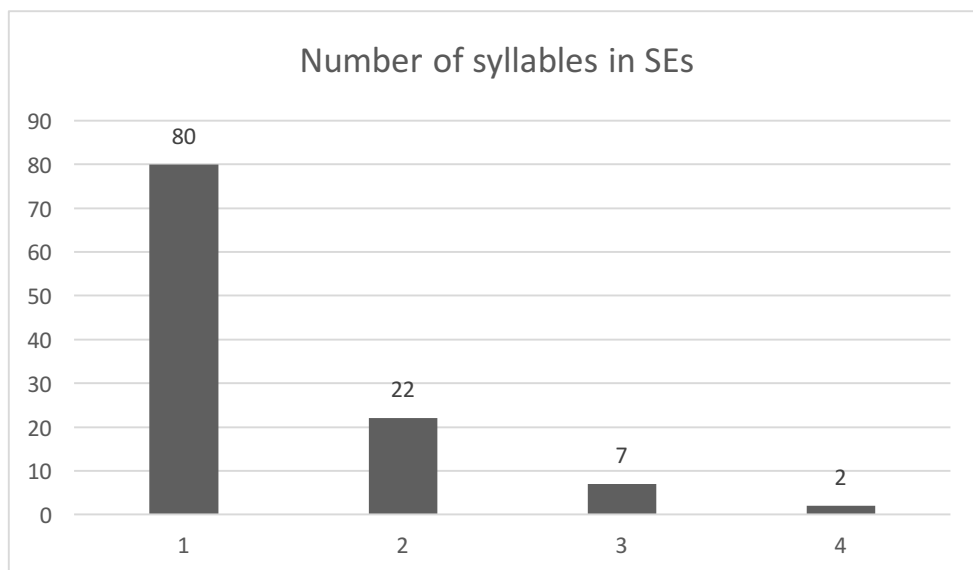


Figure 16: Shows the number of adjectives (second elements) in the data with 1 syllable, 2 syllables, 3 syllables and 4 syllables.

We can see that there is a clear decline in type frequency as the number of syllables increases, and that by far the most frequent length is 1 syllable. This is at least one way of demonstrating a length bias.

In contrast, non-compound adjectives seem to tend towards being longer. I did a random selection of 222 non-compound adjectives from the dictionary (University of Bergen and Språkrådet 2017), selecting the first relevant result from each result page (with 40 results per page). The results showed that 3 syllables was the most frequent adjective length, followed by 2 and then 4 syllables – see figure 17.

As we can see, there is a very significant difference between the length of adjective SEs in my compounds and non-compound adjectives. This shows clearly that the length bias is particular to the compound construction, and not a generalizable pattern for adjectives.

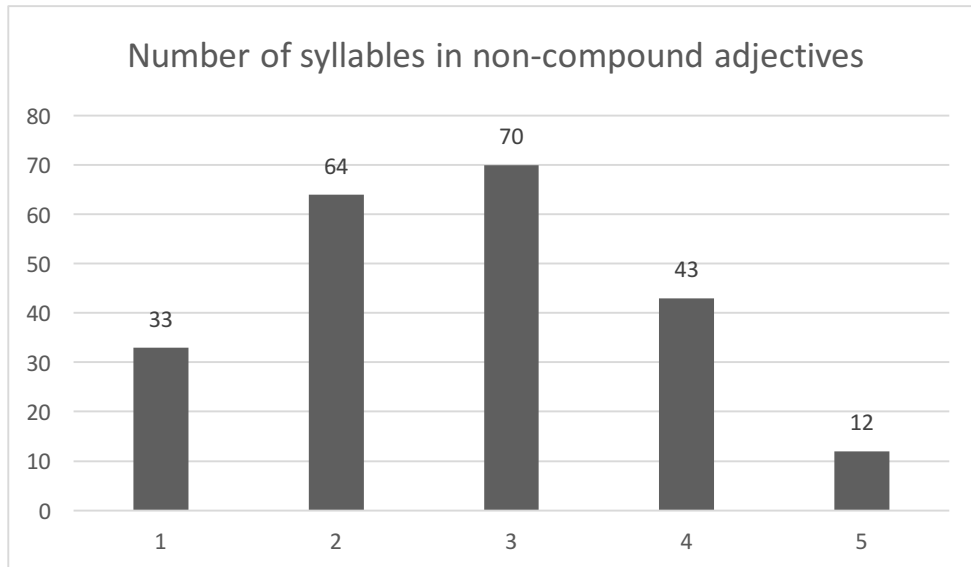


Figure 17: Shows the number of non-compound adjectives from a random selection with 1-5 syllables.

8.2.2 Foreign words vs. "native" words

Another rule seems to be that foreign words are less likely to compound. Words with non-Germanic origins do not occur in the data anywhere near as frequently as words with Germanic (or perhaps particularly Norse) origins. There are plenty of foreign adjectives to choose from, so it is not a question of a lack of words that could potentially be compounded. So an explanation for this tendency may be that compounding is a more productive pattern in Norwegian than in languages from which we recently imported words. Also, imported adjectives tend to be longer than native adjectives, so the length bias may come into play here.

8.2.3 Compounds within compounds

The FE of an N+A compound can itself be a compound, but it seems that the SE can not. More data would be needed to be able to confirm this. However, in my data this statement holds up. It is hard to explain why this is the case, but it could simply be another manifestation of the SE length bias. It is interesting, however, that FEs do not seem to have this limitation.

8.2.4 Openness of each slot

The noun slot is much more open than the adjective slot. In 9 out of 11 semantic groups, there was a clear pattern of there being more variation in FEs than in SEs. This is consistent with other patterns in language: the head position in a construction tends to have more limitations on it than the modifying position. This seems to be the case with other compound types in Norwegian as well, c.f. the previous research discussed in 4.4.1.

One explanation for this imbalance could be that we have many more nouns than adjectives in the Norwegian lexicon in general, so there is simply a difference in how much vocabulary there is "to choose from". However, we see this pattern even in noun+noun compounds (Eiesland 2015). Even there, there is a notable bias in favor of the modifier slot when it comes to openness. So this is more likely a general rule in the language: the modifier position in a construction is more open than the head position.

In my data of 656 compounds, I found 420 nouns as FEs and 111 adjectives as SEs. Out of the 420 nouns, 280 of them appeared in more than one compound. Thus a majority of the nouns were single instances. Out of the 111 adjectives, 25 of them appeared in only one compound. Thus most of the adjectives occurred in more than one compound. These numbers confirm that there is much more variation in the FE slot than in the SE slot – or rather, there is more variation in the modifying position than in the head position.

8.3 A Dixon analysis?

In this section, I will attempt to compare my analysis to Dixon's adjective classification (Dixon 2010). A reason for doing this, is to see if any interesting patterns arise, such as any of my groups completely or largely overlapping with any of Dixon's types. A lack of a pattern would also indicate that my analysis does not rely on adjective types, but on something else.

As we will see, classifying compounds into Dixon's types is quite challenging, because of the complex semantics of compound adjectives. It may even be possible to show that his analysis is not applicable to compounds.

Dixon divides adjectives into the following semantic types (Dixon 2010: 73-74):

1. Dimension
2. Age
3. Value
4. Color
5. Physical property
6. Human propensity
7. Speed
8. Difficulty
9. Similarity
10. Qualification
11. Quantification
12. Position
13. Cardinal numbers

An important thing that we will see, is that when classifying compound adjectives by Dixon's types, the second element will not always determine the adjective type. A notable example is *krav-stor* demand-large "demanding", where the second element is a Dimension adjective, but the compound would be better understood as a Human Propensity. There are many such instances in the data, as would be expected given that several second elements appear in more than one of my semantic groups as well.

In the following section, I will discuss each of Dixon's types, show which of my groups are represented in each type, and give examples from each. I will also bring up some problems with this classification, and discuss whether it can be meaningful to an analysis of N+A compounds in any way.

8.3.2 Dixon's classes

Dimension

The Dimension type includes adjectives that describe size, mass, and related measurable characteristics. Naturally, we find Dimension adjectives in the Comparisons and Measurements groups. Perhaps less obvious are the marginal examples in Possessions. These may more often describe metaphorical size rather than physical dimension.

Comparisons: *tårn-høg* tower-tall, *blad-tynn* leaf-thin

Measurements: *meter-djup* meter-deep, *famn-tjukk* fathom-wide

Possessions: *grense-løs* limit-less, *omfang.s-rik* dimension-rich

Degree: *syl-tynn* awl-thin

Age

This type is fairly self-explanatory. The adjectives in this type denote chronological age – or newness or recency (Wierzbicka 1986: 368-70) – in regards to people or other entities. The only compounds denoting age in my data are the ones that end in *-gamal* ("old"). I have not found any relevant data ending in *-ny* ("new") or *-ung* ("young").

Measurements: *dag-gamal* day-old

Degree: *stein-gamal* stone-old

Value

The adjectives in this type denote a subjective evaluation of something's value, placing it on a scale of good-bad, positive-negative and related value descriptions. Trying to place compounds in this type can be challenging and not completely satisfying: for instance, evaluating someone as being good *at* something seems to enter into human propensity territory. Perhaps adding a first element in many cases introduces some semantics that is more specific than simply a value, and relates it to something "in the real world". Whatever is being described thus becomes "good" in a particular way, which will often entail a mental or physical characteristic. Regardless, there is a limited number of compounds that clearly

belong here, and many of them are in the Degree group. This may be because this is the semantic type with the clearest tendency of second elements not changing their meaning in the compound, and so a compound ending with a Value adjective remains a Value compound.

Affix-like SEs: *fordel-aktig* advantage-ish "advantageous"

Degree: *kjempe-god* giant-good, *svin.e-heldig* swine-lucky, *død.s-kjedelig* death-boring

Color

This type is quite self-explanatory as well. It is worth pointing out that this is perhaps the type where it is most likely that the second element will "place" the compound in a type. In other words, there are relatively few instances of color SEs not also being classed as color compounds. A vast majority of the color-related compounds in my data are Comparisons, but there are occurrences in other groups as well.

Another observation we can make on the Color compounds, is that they all have a basic color term (as understood by Berlin and Kay 1969⁹) as their second element. I have not found any compounds ending in more nuanced color words such as **-burgunder* "burgundy" or **-turkis* "turquoise". It seems that when there exists a descriptive first element, that provides enough nuance, and so a basic color term is a sufficient second element, and indeed any other color word would likely conflict with the description from the first element. (There do exist A+A compounds with both basic and non-basic color terms as elements, such as *turkis-blå* "turquoise-blue". These can be understood as combinations of each element, or the "between" nuance of what each element describes, so *turkisblå* is a mix of, or right between, turquoise and blue.)

Comparisons: *mose-grøn* moss-green, *vin-raud* wine-red

Causalities: *eir-grøn* rust-green, *skum-kvit* foam-white

Associations: *bonde-blå* farmer-blue, *signal-raud* signal-red

Degree: *knall-raud* bang-red, *krit-kvit* chalk-white

⁹ A basic color term is a word denoting a color that is monolexemic, highly frequent and has a conventional meaning in the language.

Physical property

These adjectives denote physical characteristics and states, in people and in other entities.

Compounds from this adjective type are widely represented across my groups.

Comparisons: *stein-kald* stone-cold, *fjør-lett* feather-light

Possessions: *kalori-fattig* calorie-poor, *ozon-rik* ozone-rich

Possession Descriptions: *skjorte-blaut* shirt-wet, *ljøs-sterk* light-strong

Wanting: The compounds ending in *-tørst* "thirsty" and *-svolten/-sulten* "hungry" could be said to belong here, at least in their literal meanings. As metaphors, they can be Human Propensity words.

Causalities: *dogg-blaut* dew-wet, *måne-ljøs* moon-light

Tolerating: *eld-fast* fire-stable, *is-næm* ice-easy

Capabilities: *befruktning.s-dyktig* fertilization-capable "fertile"

Associations: *dogg-frisk* dew-fresh, *kveld-klar* evening-clear

Locations: *berg-fast* mountain-stable

Degree: *padde-flat* toad-flat, *knall-hard* bang-hard

Human propensity

This is another very widely represented adjective type. It describes characteristics, capabilities, mindsets and other attributes that can not be thought of as physical, but are more mental or "human" (though their meaning can often be abstracted to something more general than that). These adjectives are found across many of my groups.

A classification problem I have found with this adjective type, is that a lot of compounds can be classified here *as well as* into other types. It seems to be a type with a lot of semantic variation and range. I will discuss this further in 8.3.3.

I have also noted that Dixon (1982: 20) claims that human propensity adjectives generally do not have antonyms, and with the notable exception of many of the Human Propensity compounds belonging to Possessions, this seems to hold true for compounds of this type as well. For instance, *fordom.s-fri* "prejudice-free" has the antonym *fordom.s-full* "prejudiced", whereas the negation of *ansvar.s-bevisst* "responsibility-aware" would simply be *lite ansvar.s-bevisst* "little responsibility-aware", rather than **ansvar.s-ubevisst* or **uansvar.s-bevisst* "responsibility-unaware". There are a few cases where there exists a single word that has more or less the antonymic meaning, but is otherwise lexically unrelated – e.g. the antonym of *smør-blid* "butter-cheerful" could be *potte-sur* "pot-cranky".

Comparisons: *kjepp-høg* stick-tall "cocky", *eple-kjekk* apple-nice "cheeky"

Possessions: *fordom.s-fri* prejudice-free, *evne-veik* ability-weak

Possession Descriptions: *prinsipp-fast* principle-stable, *tanke-klar* thought-clear "lucid"

Wanting: *selskap.s-sjuk* company-sick, *eventyr-lysten* adventure-desirous

Causalities: *liv.s-klok* life-wise, *elskhug.s-sjuk* love-sick

Attitudes/reactions: *ansvar.s-bevisst* responsibility-aware, *gjest-fri* guest-free "hospitable"

Capabilities: *tone-dauv* tone-deaf, *folk.e-van* people-accustomed

Associations: *brille-klok* glasses-wise

Locations: *jord-nær* earth-near "down to earth" (metaphorical meaning)

Degree: *smør-blid* butter-cheerful "very cheerful", *hjarte-glad* heart-happy "very happy"

Speed

This is another group where the simple (and literal) concept of speed is not largely represented in my data, and where the most obvious examples are comparisons or degree compounds. One of the examples, *råd-snar* solution-quick, could also be considered a human propensity adjective, and only partly pertains to a concept of speed. So this classification is not clear.

Comparisons: *lyn-rask* lightning-fast

Possession Descriptions: *fot-snar* foot-quick

Capabilities: *råd-snar* solution-quick

Degree: *lyn-rask* lightning-fast

Difficulty

This type of adjectives denotes descriptions of difficulty and ease. The only data of this kind that I can find, are compounds with Degree-related first elements, such as *drit-vanskeleg* shit-difficult "very difficult".

Similarity

This type is fairly self-explanatory – examples of adjectives here would be *lik* "like/equal", *liknande* "similar" and *ulik* "unlike". I have not found any compounds of this kind.

Qualification

This semantic type denotes concepts related to truth and probability. Classifying compounds into this type is challenging, in that there are examples of second elements such as *-falsk* false, *-sann* true, *-riktig* correct et cetera, but many of the compounds seem to belong in other types. I will try to illustrate this problem with examples:

(55) *rot-ekte* root-genuine "very genuine"

(56) *botn-falsk* bottom-fake "very fake"

These seem to be perfectly fine examples of Qualification – and again, we find that the degree-describing first element lets the second element define the adjective type. Still, however, one is tempted to class these as Human Propensity adjectives as well. It is not uncommon to characterize a person as being "genuine" or "fake" in their behavior towards other people. This could be said to be a metaphorical usage, in that the person is not representing their personality in an honest way – rather than literally being a "fake person", that is, not really a person.

(57) *mote-rett* fashion-correct "fashionable"

This is a sort of qualification in that it defines something as being correct within the ideals of fashion. However, it does not have any real concept of "truth" attached to it – an item of clothing that exists in the real world can not really be "true" or "correct", it just *is* (though someone working within fashion may disagree with me on that!).

Quantification

This adjective type denotes amounts not described by cardinal numbers. It is represented in the Possessions group – that is more or less the semantics of many of the compounds, though they can describe both countable quantities and more general amounts (or simply an existence or non-existence). There are plenty of examples that are fairly clear-cut as being Quantifications.

Again, though, many of the examples of quantifications can easily fit into other Dixon types as well, such as Physical Property and Human Propensity.

Possessions: *kalori-fattig* calorie-poor, *alkohol-svak* alcohol-weak

Position

I have a group that is very similar to this adjective type: Locations (it could also be called Positions). So naturally there are data there that represent this type. This is the only instance where we could say there is complete (or near-complete) overlap between one of my groups and one of Dixon's classes, at least with the data that I have access to.

Locations: *jord-nær* earth-near (in the literal meaning)

Cardinal numbers

This adjective type is not represented. In Norwegian, cardinal numbers are not adjectives, but determiners. Ordinal numbers are adjectives, but they are not found as second elements in compounds.

8.3.3 Difficulties with classification

Classifying compound adjectives into Dixon's system proved to be quite a challenge. Many of the compounds' meanings feel too abstract and conceptual to fit the description of any of the adjective classes. Take for instance *religion.s-nøytral* "religion-neutral" and *barn.e-vennlig* "child-friendly".

(58) *Den norske skulen skal vera religionsnøytral.*

The Norwegian school is to be religion-neutral.

(59) *Denne filmen er veldig barnevennlig.*

This movie is very child-friendly.

I have classified these as reactions/attitudes, but this is largely in the sense that they describe real-world conditions that *reflect* attitudes, or a mental effect of some kind. Within Dixon's classification, they are not Human Propensities (because they describe non-human entities, and even non-sapient entities at that), or values (because calling something "religion-neutral" is not necessarily evaluating it on a positive-negative scale), and so what are they? I might call them concepts or abstract characteristics. And there are a lot of those within my data.

Another problem on the other side, is that a lot of the compounds seem to have semantics that are too complex to place them unambiguously in one adjective type. I have mentioned this in the discussions of some of the types. An explanation for this could be that the semantics of the compound is more complex than a sum of its elements. For instance, *råd-snar* "solution-quick" clearly describes something more than just a concept of speed + a concept of solutions to problems. It describes a human, mental ability to think of, and execute, good solutions to problems as they arise. *Kjensle-rik* "emotion-rich" does not simply denote a concept of emotion + a concept of having a lot of something, but rather, again, a human tendency to experience or express emotion widely and perhaps strongly – or even an event of some kind that would *cause* this depth and breadth of emotion. There seem to be a lot of human propensities "hidden" in other adjective types – but there are also "hidden" physical properties: *nærings-rik* "nutrition-rich" is both a quantification of nutrients and a description of specific physical properties (really, a biochemical description).

If these problems can lead to a conclusion, I would say that they show that a classification of adjective types and a classification of compound relations are two very different things, and produce very different results. It seems that Dixon's classification, although useful when discussing non-compound adjectives, does not apply to compounds, because of the complexity of their semantics. It does not account for the semantic relation between the elements in a compound, which often contributes at least as much semantic information as the head (which in this case is the adjective). This also strengthens the idea that classifying N+A compounds by their second elements is not the most useful way to analyze them from a semantic perspective. Compounds that share the same second element do not necessarily have anything else in common semantically, and it is rather the semantic relation that is generalizable to a concept of a construction.

9 Conclusion

This thesis has explored the topic of noun+adjective compounds in Norwegian.

In my analysis, I defined 11 semantic groups, some with subgroups. I saw that some of the groups were similar to each other in what sorts of concepts they denoted, and so I organized them in 3 sets. The first one pertained to quantifications and descriptions more on the “objective” side. The second denoted responses. The third was simply a set of the remaining groups.

Set A: Quantification and description

Group 1: Comparisons – e.g. *himmel-blå* "sky-blue"

Group 2: Measurements – e.g. *meter-djup* "meter-deep"

Subgroup: Comparison/measurement hybrids – e.g. *kne-djup* "knee-deep"

Group 3: Degree – e.g. *drit-søt* "shit-cute"

Group 4: Associations – e.g. *konge-blå* "king-blue"

Group 5: Possessions – e.g. *fordom.s-full* "prejudice-full"

Group 6: Possession descriptions – e.g. *hår-fager* "hair-fair"

Set B: Emotional and physical response

Group 7: Causalities – e.g. *bil-sjuk* "car-sick"

Group 8: Attitudes and reactions – e.g. *barn.e-vennleg* "child-friendly"

Subgroup: Wanting – e.g. *kaffi-tørst* "coffee-thirsty"

Subgroup: Tolerating – e.g. *brann-sikker* "fire-secure"

Group 9: Capabilities – e.g. *penn.e-før* "pen-capable"

Set C: Other groups

Group 10: Locations – e.g. *snø-fast* "snow-stuck"

Group 11: Affix-like SEs – e.g. *jente-aktig* "girl-like"

The semantic groups were defined by the relation between the FEs and the SEs. In many cases, these relations selected for certain kinds of SEs. In two cases, the relation selected for certain FEs (Degree and Measurements). But generally, we have seen that the groups are not reducible to one of their elements.

There is a great deal of variation in both elements. In most cases, the FE slot is much more open than the SE slot. The exceptions to this rule are the groups where the FE is strongly selected for. But the general tendency is in accordance with other patterns in the language; that the modifier position is more open than the head position. In the case of N+A compounds, this could be because there is a larger vocabulary of nouns than adjectives in Norwegian – or it could be that there are semantic or phonological limitations on what kinds of adjectives can be heads, whereas the modifier does not have these limitations.

Many SEs appear in more than one semantic group. This shows that it is not simply the semantics of the SE that determines the semantics of the compound, and that they are rather constructions based on semantic relations, where each element can be variable, but the relation between them is generalizable.

We have seen that there are several limitations on SEs: There is a length bias, which means that they tend to be short – most only have one syllable. Norwegian adjectives in general do not have this same bias, but rather tend to be longer. SEs tend to be "native" words rather than foreign or borrowed words. Finally, there are no examples in the data of compounds whose SE is also a compound.

When comparing my analysis to Dixon's adjective classification, we saw that they did not have much in common. Within most of his classes, compounds from more than one of my semantic groups appeared. Most of my semantic groups were also distributed across more than one of his classes. This showed that Dixon's classification and my analysis have different bases, and different usages where they are useful.

I argued that defining N+A compounds by their adjective class did not account for the semantic relation between the elements. It seems that Dixon's classification does not apply to compounds, because the semantics are too complex, and so a compound can be classified in more than one way; and because the SEs in many cases change their meanings when compounded.

10 Topics for further research

Generally, more research is needed on compounding in Norwegian. Some kinds of compounds that have not yet been covered, are the following:

- V+A compounds, such as *skrive-før* write-capable "good at writing"
- A+V compounds, such as *rein-skrive* pure-write "write a final copy of"
- A+A compounds, such as *sur-søt* sour-sweet "sweet and sour"
- A+N compounds, such as *god-stol* good-chair "favorite chair"
- V+N compounds, such as *skrive-bord* write-table "desk"

There exist more possible combinations than these, and it is not currently known whether there is any combination that would be impossible to find in the language.

The topic of degree-marking or amplification in compounding could also use more research. What kinds of compounds can take FEs such as *kjempe-* and *drit-*, and what kinds of limitations or preferences are there on the different modifiers of this kind? To what extent are the specific modifiers ephemeral? In the future, will the now fairly new amplifier *drit-* "shit" last in its current usage, go back to only having negative connotations, or become completely generalized as an amplifier?

The differentiation between compounding and derivation is another area that has not yet been satisfactorily covered. What are the criteria that separate compound elements from derivational affixes? How do we determine that one has changed into the other? What is the theoretical basis for holding the phenomenon of compounding as a distinct morphological process in the Norwegian language?

Finally, a larger, perhaps corpus-based study of Norwegian N+A compounds could contribute more insights into the phenomenon that I have studied in this paper. It would be interesting to see if a significant amount of data was not accounted for in my analysis, and if new types of relations came to view.

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