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AN EMERGING PLURAL OF ABUNDANCE IN THE SCANDINAVIAN LANGUAGES

1. INTRODUCTION. In this paper, I discuss Scandinavian abundance words with the suffix *-vis*, e.g. *hundrevis* ‘hundreds’. I distinguish them from other words in *-vis*, propose some hypotheses about their history, and discuss how they can best be classified synchronically. My focus is on Norwegian, but I point to differences between Norwegian and Danish or Swedish in those cases where I am aware that there are any.¹

There are several types of words ending in *-vis* in the Scandinavian languages. These are listed in table 1, where the classification of abundance words anticipates my conclusion. Although the focus is on abundance words, like *hundrevis* ‘hundreds’, distributive words, like *fylkesvis* ‘county by county’, will also be discussed. Other denominal formations, like *forsøksvis* ‘as an attempt’, compound nouns, like *levevis* ‘way of life’, and deadjectival adverbs, like *sannsynlegvis* ‘probably’, will not be discussed here.

Examples	Meaning	Word class		Formation type
		of whole	of base etc.	
<i>hundrevis</i> ‘hundreds’ <i>massevis</i> ‘masses’ <i>sekkevis</i> ‘sackfuls’ <i>kilovis</i> ‘(many) kilos’	abundance	noun	noun	inflection
<i>fylkesvis</i> ‘county by county’ <i>stegvis</i> ‘step by step’ <i>kilovis</i> ‘kilo by kilo’	distribution	adjective	noun	derivation
<i>forsøksvis</i> ‘as an attempt’ <i>innleiingsvis</i> ‘in the introduction’	(diverse)	adjective	noun	derivation
<i>levevis</i> ‘way of life’ <i>vikingsvis</i> ‘manner of a viking’	manner	noun	verb, noun	compounding
<i>sannsynlegvis</i> ‘probably’ <i>heldigvis</i> ‘luckily’ <i>vanlegvis</i> ‘usually’	modality	adverb	adjective	derivation

Table 1. Types of words in *-vis*

¹ This paper is a moderately revised version of the talk I gave at the 20th Scandinavian Conference of Linguistics, and reflects work in progress. In the time between the conference and the submission of the paper, I have continued my empirical research on words in *-vis*, and the ideas, analyses, and claims presented here have consequently been modified and refined. For a more detailed treatment of the history of the various kinds of words in *-vis*, cf. Kinn (in prep.). For a more thorough discussion of their synchronic status, with particular focus on abundance words, cf. Kinn (forthc. b).

2. CHARACTERISTIC PROPERTIES. In this section, I present the semantic, morphological, and syntactic characteristics of abundance words in *-vis*.

2.1. SEMANTICS. Abundance words have a meaning of a large, usually excessive, amount of something. Thus, the nominal expression in (1) means that the students can be counted in thousands. The exact number is unknown or irrelevant, but the speaker considers it to be large.

- (1) tusen-vis av student-ar
 thousand-ABU of student-PL.INDF²
 ‘thousands of students’

Distributives, on the other hand, have a meaning like ‘one instance at a time’; e.g., *fylkesvis* means ‘separate (-ly) for each county’, ‘county by county’, as illustrated in (2).

- (2) fylke-s-vis-e plan-ar
 county-LM-DISTR-PL plan-PL.INDF
 ‘(separate) plans for each county’

2.2. MORPHOLOGY. The morphological base of an abundance word is a measure noun, whereas the range of base nouns for distributive words is wider. Measure nouns are a heterogeneous group. In Kinn (2001), I distinguished between seven broad classes, and members of all these classes are employed in Danish and Norwegian abundance words, as illustrated for Norwegian in table 2.

Classification of measure noun	Examples of abundance words
[– quality, + definite size, + collective]	<i>hundrevis</i> ‘hundreds’, <i>millionvis</i> ‘millions’, <i>titusenvis</i> ‘tens of thousands’
[– quality, + definite size, ± collective]	<i>milevis</i> ‘tens of kilometres’, <i>kilovis</i> ‘kilos’, <i>litervis</i> ‘litres’, <i>månadsvi</i> ‘months’
[– quality, – definite size, + collective]	<i>drøsevis</i> ‘multitudes’
[– quality, – definite size, ± collective]	<i>massevis</i> ‘masses’, <i>mengdevis</i> ‘masses’
[+ quality, + collective]	<i>flokkevis</i> ‘flocks’, <i>bunkevis</i> ‘piles’
[+ quality, ± collective, – container]	<i>haugevis</i> ‘heaps’, <i>dungevis</i> ‘mounds’
[+ quality, ± collective, + container]	<i>byttevis</i> ‘bucketfuls’, <i>sekkevis</i> ‘sackfuls’, <i>kassevis</i> ‘cratefuls’

Table 2. Abundance words and classes of measure nouns

Swedish appears not to have words in *-vis* based on measure nouns of number (belonging to the class [– quality, + definite size, + collective], e.g. *hundrevis*), and few based on measure nouns of duration (i.e. part of the class [– quality, + definite size, ± collective], e.g. *månadsvi*); nouns ending in *-tal(s)* are used instead. Nouns in *-tal(l)(s)* are known in Danish

² I follow The Leipzig Glossing Rules, cf. <http://www.eva.mpg.de/lingua/files/morpheme.html>. The following abbreviations for grammatical morphs are used: ABU = abundance, DEF = definite, DISTR = distributive, INDF = indefinite, LM = linking morph, M = masculine, NOM = nominative, PL = plural, PRS = present, PST = past, PTCP = (past) participle, SG = singular.

and Norwegian, too, but are less common than in Swedish.³

Abundance words exhibit a morphological pattern which is distinct from that of distributive words, at least in Norwegian words with a monosyllabic base.⁴ A linking morph, the suffix *-e*, is normally added to monosyllabic bases in abundance words, while in distributive words, no such base extension is normally used. Compare the abundance words *dagevis* ‘(several) days’ and *flokkevis* ‘flocks (and flocks)’ in (3) with the distributive words *lagvis* ‘distributed over layers, in layers’ and *flokkvis* ‘flock by flock’ in (4). (The opposition between *flokkevis* and *flokkvis* is a tendency, not an absolute distinction.⁵ It is not reflected in Norwegian dictionaries.)

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|-----|----|---|----|--|
| (3) | a. | dag-e-vis
day-LM-ABU
‘days (and days)’ | b. | flokk-e-vis
flock-LM-ABU
‘flocks (and flocks)’ |
| (4) | a. | lag-vis
layer-DISTR
‘distributed over layers’ | b. | flokk-vis
flock-DISTR
‘flock by flock’ |

2.3. SYNTAX. Syntactically, abundance words behave almost exactly like bare plural indefinite measure nouns. Thus, *timevis* ‘(many) hours’ is like *timar* ‘hours’, *massevis* ‘(large) masses’ is like *massar* ‘masses’, etc. This section presents the most frequent usages.

Abundance words often follow the preposition *i* ‘in’.⁶ Such prepositional phrases typically function as adverbials at clause level, as in (5), or as postnominal modifiers, as in (6).⁷ Bare plural indefinite measure nouns are used in the same way.

- | | | | | | |
|-----|---|----------|-------------|--------------|--------------|
| (5) | Eg | vent-a | i | time-vis / | tim-ar. |
| | I.NOM | wait-PST | in | hour-ABU / | hour-PL.INDF |
| | ‘I waited for hours.’ | | | | |
| (6) | smør | i | masse-vis / | mass-ar | |
| | butter | i | mass-ABU / | mass-PL.INDF | |
| | ‘butter in masses’ ≈ ‘masses of butter’ | | | | |

In another construction, which is arguably a pseudopartitive, the abundance word is used noun-phrase initially, as in (7) and (8). They are then typically followed by a prepositional phrase with a substance noun. All three languages use *av/af* ‘of’, while *med* ‘with’ is not used in Danish.⁸ Bare plural indefinite measure nouns are used in the same way.

³ The (original) meaning of *-tal(l)* is ‘number’. The suffix *-s* is (or originates in) the genitival *-s*. The suffix is added when a noun in *-tal* is used noun-phrase initially in pseudopartitives, e.g. *hundretals menneske* ‘hundreds of people’.

⁴ There does not seem to be a similar difference for words with a polysyllabic base in Norwegian. Swedish differs from Norwegian with respect to monosyllabic bases, and I have not studied Danish in this respect.

⁵ Cf. Kinn (forthc. b) for an empirical study.

⁶ Apparently, such expressions are less common in Swedish than in Norwegian and Danish, and the difference between abundance and distributive words (cf. below) may be less clear in Swedish than in the other languages.

⁷ The reason that the *e* of *timevis* and *massevis* in these examples is not glossed as a linking morph is that the *e* is found in the indefinite singular form: *time* ‘hour’, *masse* ‘mass’. This is different from the *e* in e.g. *flokkevis*, which is based on *flokk* ‘flock’ with no *e* in the indefinite singular.

⁸ For a discussion of the choice between *av* and *med* in Norwegian, cf. Kinn (2001, forthc. a).

- (7) million-vis / million-ABU / 'millions of students'
million-ar million-PL.INDF of student-ar student-PL.INDF
- (8) liter-vis med vatn
litre-ABU with water
'litres of water'

Note that in (8), the indefinite plural form *liter* cannot be used instead of *litervis*. This is the case for most measure nouns whose indefinite plural is identical to the singular.

Distributive words like *fylkesvis* 'county by county' cannot be used in any of the above ways. They have traditionally been regarded as adverbs because they originated as such.⁹ Most of them are still typically used in an adverbial function, as in (9), but can now be used attributively, as in (10). They should therefore be classified as adjectives.

- (9) Ein vel representant-ane fylke-s-vis.
one elect[PRS] representative-PL.DEF county-LM-DISTR
'One elects the representatives county by county.'
- (10) fylke-s-vis-e val
county-LM-DISTR-PL election[PL]
'elections county by county'

Abundance words cannot be used as in (9) and (10). However, some forms have two meanings. For instance, *kilovis* with an abundance meaning can be used as in (11) and (12), while it can be used with a distributive meaning as in (13) and (14).

- (11) Smør i kilo-vis vart kast-a.
butter in kilo-ABU become\PST throw-PTCP
'Kilos (Lots) of butter was thrown away.'
- (12) Kilo-vis med smør vart kast-a.
kilo-ABU with butter become\PST throw-PTCP
'Kilos (Lots) of butter was thrown away.'
- (13) Dei sel smør-et kilo-vis.
they sell[PRS] butter-SG.DEF kilo-DISTR
'They sell the butter by the kilo (in kilo packages).'
- (14) Det er praktisk med kilo-vis sal av smør.
it be.PRS practical with kilo-DISTR sale of butter
'It's practical that butter is sold by the kilo (in kilo packages).'

This is most fruitfully regarded as heterosemy (or what one might call "inter-lexical polysemy", cf. Lichtenberk (1991)), i.e. forms like *kilovis* represent two different words with different, but related meanings. In this case, there is heterosemy between adjective lexemes with a distributive meaning and, as I will argue below, inflectional forms (of measure noun lexemes) with an abundance meaning.

⁹ For references, see Kinn (forthc. b).

Of course, nouns are used in many other constructions than those illustrated for abundance words above. But in general, bare plural indefinite measure nouns can be substituted for abundance words, and vice versa. Thus, the set of constructions that abundance words can be used in is a subset of the set of constructions for nouns.

3. HISTORY. I now turn to a sketch of the origins of constructions with abundance words. The element *-vis*, in all the word types in table 1, comes from (or still is) the noun *vis* ‘manner’. The history of the noun and the various morphological formations is complex, with massive borrowing from the German languages in combination with Scandinavian innovations, cf. Skautrup (1947–68), Tamm (1899), Ljunggren (1942). Thus, all these words were originally (at least in German) compound nouns (or noun phrases where the noun was preceded by a noun in the genitive or by an adjective). In the present paper, I will only roughly sketch a proposed development of abundance words, and no authentic historical data will be adduced here.¹⁰

The first development, sketched in figure 1, creates abundance words from distributive words. Stage I, the relevant initial phase, appears to have been established in the Scandinavian languages during the 17th century. By the 18th century, at least, clear patterns of distributive words in *-vis* existed. There was an alternation between expressions with and without the preposition *i* (or *udi/uti*) ‘in’. For instance, *pundevis* or *i pundevis* could be used adverbially with the distributive meaning ‘measured in pounds’, ‘pound by pound’. The introduction of these words initiated a gradual replacement of nouns in *-tal*, which were also used distributively after *i*, e.g. *i pundetal*.

Stage I	Stage II – hypotheses	Stage III
<p>(1) <i>(i) N-vis</i> ‘distribution’</p> <p>(2) <i>i N-tal</i> ‘distribution’</p>	<p>– Words used in the adverbial type <i>N-vis</i> were interpreted as adverbs (and gradually as adjectives).</p> <p>– Words used in the adverbial type <i>i N-vis</i> were interpreted as nouns and associated with nouns in <i>-tal</i>.</p> <p>– There was a reinterpretation of <i>i N-vis</i> and <i>i N-tal</i> based on context-induced inference: If several units of some substance are measured, then there is a lot of that substance.</p>	<p>(1) <i>N-vis</i> ‘distribution’</p> <p>(2) <i>i N-vis</i> ‘abundance’</p> <p>(3) <i>i N-tal(l)</i> ‘abundance’</p>

Figure 1. From distributives to abundance words

In stage II, two developments must have taken place. First, words in adverbials of the form without the preposition *i* and words in adverbials with *i* appear to have been interpreted as adverbs¹¹ and nouns, respectively – the latter in close connection with nouns in *-tal*. Thus, a development starts in the direction of a syntactic distinction between expressions with and without *i*. Second, there was a process of reinterpretation based on context-induced inference in the sense of Heine *et al.* (1991) of expressions of the types *i N-vis* and *i N-tal*. The

¹⁰ See Kinn (in prep.) for historical details.

¹¹ The interpretation of distributive adverbs as adjectives falls outside the scope of this paper.

inference is this: If several units of some substance are measured, then there is a lot of that substance. That is, distribution implies plurality, which, in the context of measure nouns, may imply abundance. The distinction between the types *N-vis* and *i N-vis* and the reinterpretation of one of them lead to the situation in stage III, where the types coexist with different meanings.

Stage III is found at least in modern Norwegian, where an adverbial expression like *kilovis* without the preposition has a distributive meaning, while the corresponding adverbial expression with the preposition, *i kilovis*, normally has an abundance meaning. Modern adverbial expressions of the type *i ... N-tal(l)* also have an abundance meaning.

More developments followed. Given the existence of abundance adverbials, the use of postnominal modifiers may have developed either by syntactic reanalysis or by analogy. Abundance adverbials frequently follow an object. These two semantically close constituents can easily be reanalysed as one noun phrase, as illustrated in figure 2 for a sentence meaning ‘They sold barrels (lots) of herring’.

source: Dei selde [sild] [i tønnevis].
 \Downarrow
 result: Dei selde [sild [i tønnevis]].

Figure 2. From adverbials to postnominal modifiers by syntactic reanalysis

However, this kind of structure may equally well have developed in analogy with expressions with a word in *-tal* or an ordinary measure noun. This possible development is illustrated in figure 3.

$$\frac{x}{[sild] [i tønnevis]} : \frac{[sild [i tønner]]}{[sild] [i tønner]} : \frac{[sild [i tønnetal]]}{[sild] [i tønnetal]}$$

$x = [sild [i tønnevis]]$

Figure 3. From adverbials to postnominal modifiers by analogy

The two possibilities do not exclude one another; rather, it is more likely that they have worked in concert to create the new noun phrase type.

Finally, pseudopartitive expressions with an NP-initial abundance word developed, cf. Hansen (1933: 9), who considers such constructions in Danish incorrect. It would appear that such structures have been created analogically. The development is strongly motivated by the similar or identical meanings of bare plural indefinite measure nouns and abundance words. Given the existence of the more or less synonymous expression types in figure 4, ‘millions of people’, NP-initial use is not a surprising innovation.

$$\frac{x}{\text{menneske i millionvis}} : \frac{\text{millionar av menneske}}{\text{menneske i millionar}}$$

$x = \text{millionvis av menneske}$

Figure 4. From postnominal to NP-initial use by analogy

Constructions with the preposition *av/af* developed no later than in the 19th century, while my oldest Norwegian example with *med* is from the middle of the 20th century.

4. SYNCHRONIC STATUS. This section addresses the question of how abundance words can be classified synchronically. What word class do they belong to, and are they compounds, derivatives, or inflectional forms? Three classifications have been proposed in the literature. I will look at these and two more possibilities.

4.1. DERIVED ADVERBS? In the Norwegian and Swedish tradition, it has been most common to regard abundance words as derived adverbs, cf. Western (1921), Næs (1972), Beito (1986), Leira (1992); Tamm (1899), Söderbergh (1968), Thorell (1981). The motivation for this classification is presumably their close formal and semantic similarity with distributive adjectives, which originated as adverbs and have tended to be regarded as such. But as should be clear from the presentation above, there is simply nothing adverbial about abundance words, and the assumption that they are adverbs has led to problems with analysing phrases containing them, cf. Western (1921) and Teleman *et al.* (1999).

4.2. DERIVED QUANTIFIERS? In Kinn (1998, 2001), I proposed to classify abundance words as derived quantifiers. The reason for this classification was similarities with quantifiers, for instance in partitive constructions like (15).

- (15) hundre-vis / tre av student-ane
 hundred-ABU / three of student-PL.DEF
 ‘hundreds/three of the students’

However, pseudopartitive constructions reveal that abundance words resemble quantifying noun phrases more than they do quantifiers alone. Thus, while a preposition must normally intervene between an abundance word and a substance noun, as in (16), the construction with a numeral quantifier does not allow this, as in (17). However, after phrases headed by a measure noun, a preposition can normally be used facultatively, as in (18), and after bare plural indefinite measure nouns, the preposition is as good as obligatory, as in (19).

- (16) flokk-e-vis av/med/*- sau-er
 flokk-LM-ABU of/with/*- sheep-PL.INDF
 ‘flocks (and flocks) of sheep’

- (17) tre -/*av/*med sau-er
 three -/*of/*with sheep-PL.INDF
 ‘three sheep’

- (18) ein flokk -/av/med sau-er
 a.M flock(M) -/of/with sheep-PL.INDF
 ‘a flock of sheep’

- (19) mengd-er av/med/??- sau-er
 mass-PL.INDF of/with/??- sheep-PL.INDF
 ‘masses of sheep’

Further, the usage where an abundance word is employed in a temporal adverbial, as in (20),

also shows that they resemble quantifying noun phrases rather than quantifiers alone.

- (20) Eg vent-a i time-vis / fleire tim-ar.
 I.NOM wait-PST in hour-ABU / several hour-PL.INDF
 ‘I waited for hours / several hours.’

It may be concluded that the assumption that abundance words are derived quantifiers is problematic.

4.3. COMPOUND OR DERIVED NOUNS? If abundance words are nouns, there are three possibilities: They can be compound noun lexemes, derived noun lexemes, or inflectional forms.

Abundance words have been classified as compound nouns in the Danish tradition, e.g. in *Ordbog over det danske Sprog* and, apparently, Hansen (1967). But they lack most of the properties associated with noun lexemes and compounds. First, they appear to have no inherent gender. Second, there are no inflectional oppositions between indefinite and definite or between singular and plural forms. Third, the suffix *-vis* does not have the same meaning as the noun *vis* that it stems from. Thus, they can hardly be compound noun lexemes.

Since abundance words do not have gender or definiteness and number inflection, they can hardly be derived nouns, either.¹²

4.4. INFLECTIONAL FORMS OF MEASURE NOUNS? A rather untraditional approach is to classify abundance words as inflectional forms of the measure nouns that they are based on. This is what I propose to do.¹³ I have demonstrated that they are semantically and syntactically similar to bare plural indefinite measure nouns. Indeed, in most cases, an abundance word and a bare plural indefinite measure noun can be substituted for one another. Table 3 exhibits the meaning–form relationship for measure nouns. For most such nouns, like *million*, the abundance meaning may be expressed either by an ordinary plural or an abundance word. But some, like *kilo*, have identical singular and plural indefinite forms. Normally, an abundance word must then be used to express the abundance meaning.

Singular	Plural meaning, plural suffix	Abundance meaning, plural suffix	Abundance meaning, abundance suffix
million	millionar	millionar	millionvis
kilo	kilo	–	kilovis

Table 3. The relation between the meaning and form of measure nouns

I propose to analyse this situation in the following way: The old indefinite plurals of measure nouns have (at least) two meanings: ordinary plural and abundance. The latter meaning cannot normally be expressed by suffix-less plurals, however. The indefinite plural cell of measure noun paradigms is in the process of being split; i.e. there is a movement towards a one-to-one relationship between meaning and form. In the function of expressing

¹² Kinn (forthc. b) adduces substantial syntactic evidence against regarding abundance words as noun lexemes. This evidence also considerably strengthens the analysis of them as inflectional forms of measure nouns.

¹³ Kinn (forthc. b) tests abundance words systematically against criteria for distinguishing derivatives from inflectional forms. Several criteria strongly indicate an inflectional status, while the evidence against such an analysis is very weak.

abundance, the new plurals of abundance are gradually replacing the ordinary plurals: For measure nouns with suffix-less plurals, the development has more or less been completed, while for measure nouns with suffixal plurals, there is still a choice between old and new forms.

Old and emerging paradigms are presented in table 4. To the extent that abundance meanings are expressed by definite forms, there is synchretism with ordinary plurals.

	Old paradigms		New paradigms		
	SG	PL	SG	PL	ABU
INDF	million	millionar	million	millionar	millionar ~ millionvis
DEF	millionen	millionane	millionen	millionane	
INDF	kilo		kilo		kilovis
DEF	kiloet	kiloa	kiloet	kiloa	

Table 4. Old and new paradigms for measure nouns

Plurals of abundance are not common in the world's languages, but they do exist. Corbett (2000: 30ff) discusses what he calls greater plurals, of which there are two subtypes: plurals of abundance and global plurals. Plurals of abundance have a meaning of excessive number, a semantic characterization that fits Scandinavian abundance words well. According to Corbett (2000: 116, 266) there are several examples of ordinary plurals having been developed from distributives. Thus, although plurals of abundance are rather unusual, the Scandinavian evolution of a kind of plural from distributives is not unprecedented.

It might be objected that since plurals of abundance are not productive for the class of nouns, they cannot be inflectional. But plurals of abundance are clearly productive for measure nouns. (21) is but one authentic example of this.¹⁴

- (21) container-vis med julegave-r
 container-ABU with Christmas.present-PL.INDF
 'containers (and containers) of Christmas presents'

5. CONCLUSION. The evolution of Scandinavian abundance words in *-vis* from distributives involves several developments, including reinterpretation based on context-induced inference and analogy. I have further argued that the classification of abundance words as compound nouns or derived adverbs, quantifiers, or nouns is problematic, while the assumption that they are new inflectional forms of measure nouns appears more promising. It seems that we are witnessing the emergence of something as exotic as a plural of abundance in our unexotic Scandinavian languages.

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¹⁴ The example is from <http://www.nrk.no/programmer/radio/norgesglasset/3311741.html>.

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