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SOME OBSERVATIONS ON DISTANCE MEASUREMENT WORDS IN FINNISH AND SWEDISH

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The paper presents an overview of words denoting units of measurement in the Finnish and Swedish languages. Comparative studies between these two languages seem relevant because they have been used in the neighboring regions and countries with a long history of political, cultural, and people-to-people interaction. First, the study describes metalexemes of space and distance in Swedish and Finnish. Next, using thesauri, topical dictionaries and corpora, the study applies the combination of quantitative and qualitative approaches to identify and evaluate pragmatics and communication context for utterances of measure words. Then, the paper identifies several categories of measurement words in the languages, taking etymology into consideration, such as traditional measures, SI-units, foreign units and analyzes their use in the contexts of corpora representing modern discourse. The paper highlights the differences and similarities in how Swedish and Finnish use different categories of the vocabulary items. The detailed analysis of contexts provides observations about collocations and topics of news where these measure words occur. Moreover, the study addresses the impact of Swedish and Russian on Finnish, due to the historical and political circumstances. According to the data studied, the study infers that Finnish and Swedish use all types of measurement words. However, the frequency, contexts of the occurrences and speech situations differ. Some categories tend to be used in a limited amount of topics, while others have no restrictions in usage. The study is expected to contribute to practical dimensions of working with the languages, namely teaching and translation.

Keywords: Finnish, Swedish, spatial metalexemes, words of measurement, historical units of measurement, Scandinavian units of measurement, Russian units of measurement.

1. INTRODUCTION

The paper attempts to overview a set of vocabulary — distance measurement words — in Finnish and Swedish. Despite the differences in the origins of the Finnish and Swedish languages, the two languages have been used in the neighboring regions and countries with a long history of political, cultural, and people-to-people interaction, making comparative studies between them especially relevant.

Today, Finnish and Swedish are official national languages in Finland, and in the Åland Islands Swedish is the only language of official use. Swedish is therefore not considered a foreign language in Finland. Sweden recognizes several official minority languages, including Finnish and Meänkieli. The latter is often seen as a separate group of Finnish dialects.

Throughout history, Sweden formed unions with Denmark and Norway, while Finland was a part of the Swedish Kingdom and the Russian Empire. It resulted in mutual influence between nations and cultures which can be traced in the languages.

The two different cultures, Russian and Swedish, and their influence are traditionally described as *Eastern* and *Western* respectively. Inter alia, the difference can be traced in how different regions of Finland used to apply different measurement systems for expressing the idea of distance within the same country. The Eastern part of Finland is traditionally viewed as being under Russian influence, and some evidence can be found both in the language, culture, and religious rituals. For instance, the Finnish Karelia, bordering Russia, always carried on trade with Russian merchants. The continuous communication led to the integration of some Slavic loan words to a wide range of semantic groups including measurement.

2. SPATIAL METALEXEMES IN FINNISH AND SWEDISH

Distance and measurement words seem to be a relevant choice for a comparative overview since the concept of distance belongs to the domain of space, one of the key ancient metaconcepts.

As Elena Kubryakova notes, *subject (matter)* and *space* represent the main categories of existence [Kubryakova, 2000, p. 85]. Kubryakova describes two systems of world view, namely what-system and where-system [Kubryakova, 2000, p. 88]. The former places an object in the first

place distinguishing it from the surrounding backdrop and the latter serves for identifying the object's position in space, including distance between different objects. It is the second system that enables conceptualization of closeness and remoteness, changes in object's visual appearance depending on its distance from the observer, etc.

Johanna Viimaranta highlights that the fact that space cannot be directly reflected in language explains why different languages can express space differently despite the assumedly universal experience that humans have of space. She mentions that Herbert Clark suggested differentiating P-space for defining the properties of space as a physical entity and L-space — space in language [Viimaranta, 2006, p. 24]. To conclude, P-space is considered to be universal, but L-space differs from language to language, representing the mentality.

Even though *distance* is widely perceived as a scientific physical phenomenon, perceiving and measuring distance seems equally if not more important for the “naive” world picture. According to Yury Apresyan [Apresyan, 1997, p. 272], references to the naive world view can open up new opportunities for finding correlation between meanings of words and reality because the naive picture of the world in a given language reflects the unique way the speakers of the language perceive their surroundings.

Given the importance of describing space and its components as one of the fundamentals of people's perception of the world both in science and the naive world view, different languages develop corresponding metalexemes.

Evgenia Vorobyeva [Vorobyeva, 2011, p. 24–26] suggests seven properties of metalexemes. Thus, according to the author, metalexemes tend to be general lexemes which cannot be divided into components.

Consequently, the following Swedish metalexemes appear to reflect a more general concept of space — *rum* ‘space, room,’ *utrymme* ‘space,’ *plats* ‘place’ and distance — *längd* ‘length,’ *avstånd* ‘distance,’ *sträcka* ‘distance, reach,’ *mått* ‘measure,’ *dimension* ‘dimension.’ These lexemes are used to describe different spatial characteristics, for example, *fasadens längd* ‘length of façade’ and often form part of compound words describing space and distance, such as *armbågsrum* ‘elbow room.’

As for Finnish, we can define spatial metalexemes as words representing the same general concepts, for instance *paikka* ‘place,’ *tila* ‘space,’ *sija* ‘place, space,’ *väli* ‘distance, place,’ *matka* ‘distance,’ *mitta* ‘dimen-

sion, *pituus* 'length'. As in Swedish, they often appear to be parts of compound words (*työpaikka* 'workplace', *tavaratila* 'trunk') and are used for the same purposes (*sillan pituus* 'length of bridge').

It is worth mentioning that spatial metalexemes have obvious connection with temporal expressions and spatial conceptualization can be used for temporal concepts, especially in Finnish [Viimaranta, 2006, p.23–25].

However, metalexemes seem to express the most universal idea, so called P-space. In order to understand more precisely the characteristics of L-space it is worth to pay attention to measurement words.

3. STUDY METHOD

The method applied in this paper involves making a selection of words used for distance measurement in Swedish and Finnish and analyzing their use. It is suggested that the combination of quantitative and qualitative approaches can prove more effective for identifying and evaluating pragmatics and communication context for utterances of measure words. For the purpose of collecting the data we used topical dictionaries, thesauri and corpora. The corpora were also used to analyze examples of the words' use.

As a background fact, it should be noted that both Finland and Sweden adopted the International System of Units, or the SI-system, the modern version of the metric system. However, both cultures used developed systems of metrics described by native and/or eventual loan words. Moreover, both languages absorbed names of some foreign units of measurements due to influence from other cultures that was especially noticeable in Finland. Thus, being a part of the Russian Empire, Finland used the Russian measurement system widely, but at the same time facilitated the introduction of the SI-system which was fully adopted in 1880. However, at the earlier stage of its history Finland was known as a remote province of Sweden and the Swedish laws and measurement system applied in these territories. Throughout history, the foreign influence of more "remote" cultures on Sweden may not seem similarly significant; however, the history of the Swedish language saw periods of drastic changes.

Despite all transformations, the both cultures and languages managed to preserve a wide range of unique vocabulary items including

native words for describing measurements along with adopting foreign lexes for this purpose.

Generally, the study of this specific domain of vocabulary may be expected to contribute to practical dimensions of teaching and translation. Thus, as Alexandra Livanova notes in her article about traditional measurement words [Livanova, 2018, p.280] the measurement units can serve an important source of cultural information but at the same time produce difficulties in translation.

4. PRESENTATION OF STUDY RESULTS OF THE SWEDISH PART

To obtain data for studying the use of the measurement words in Swedish we used the Swedish language bank of the University of Gothenburg *Språkbanken* and its collection of corpora, *Korp v9*. Upon request, the tool [Språkbanken. Korp v9] returns the following entries of what it defines as “Measure linear extent”:

- 1) *tum* ‘thumb, inch’;
- 2) *aln* ‘cubit, elbow’;
- 3) *famn* ‘fathom’;
- 4) *fot* ‘foot’;
- 5) *kabellängd* ‘cable length’;
- 6) *kilometer* ‘kilometer’;
- 7) *meter* ‘meter’;
- 8) *mil* ‘mile’;
- 9) *punkt* ‘point’;
- 10) *centimeter* ‘centimeter’;
- 11) *decimeter* ‘decimeter’;
- 12) *halvmeter* ‘half a meter’;
- 13) *längdmeter* ‘running meter’;
- 14) *löpmeter* ‘running meter’;
- 15) *mikrometer* ‘micrometer’;
- 16) *millimeter* ‘millimeter’;
- 17) *nanometer* ‘nanometer’;
- 18) *yard* ‘yard’;
- 19) *armlängd* ‘arm’s length’;
- 20) *stadion* ‘stadion’;
- 21) *verst* ‘verst’.

Looking at the list, we see that it includes words denoting SI-units of measuring length, namely *meter* ‘meter’ which describes a base SI-unit and its derivatives such as *centimeter* ‘centimeter’, *decimeter* ‘decimeter’, *kilometer* ‘kilometer’, etc. Like in many other languages, the words of this category are loanwords and are widely used in Swedish. Within the scope of this research, it is worth highlighting the use of some of these words. Here are two examples taken from the collection of corpora [Språkbanken. Korp v9].

1. *Det är möjligt att det blir upp emot en decimeter snö, säger Lovisa Andersson, meteorolog på SMHI.*
‘It is possible that there will be up to a decimeter snow, says Lovisa Andersson, meteorologist at SMHI.’
2. *Segermarginalen var hela tre decimeter bättre än Mölndals Johanna Nilsson.*
‘The margin of victory was three decimeters better than Mölndal’s Johanna Nilsson.’

The first example refers to weather and climate and the second one to sports; neither of them is however used in strictly scientific or technical context. The first one is rather a part of a weather report available to general audience and the second one is a typical sports commentary. First of all, it is worth noting that the word *decimeter* ‘decimeter’ is used for denoting both vertical and horizontal distance. Second, we see how Swedish uses this “international” word denoting a certain length in the news contexts which is absolutely untypical of, for example, Russian where we would expect decimeters to appear only in a technical or more specific context. The statistics of the collection of corpora show that the Swedish word for decimeter occurs most frequently in the corpus of the Swedish Public Television (SVT) with the absolute frequency of 1418 hits.

Along with the fully “international” meter and its derivatives, the list contains compound words *halvmeter* ‘half a meter’, *längdmeter* and *löpmeter* ‘running meter’ which combine Swedish and “international” words.

There is another category of words on the list above referring to the historical measures such as *aln* ‘elbow’, *fot* ‘foot’, *famn* ‘fathom’, *tum* ‘inch, thumb’, and *armlängd* ‘arm’s length’.

Fot, *tum* and *aln* served as a basis of the system of duodecimal distance measurements *verkmått* which was used in Sweden before the introduction of the decimal system at the end of the 19th century. The Swedish duodecimal system also operated such words as *verklinja* (literary) ‘work line’, and *kvarter* ‘quarter’.

Bo Bergman offers a detailed description of the etymology of the word *armbåge* ‘elbow’ literally meaning ‘arm arc’ in his book on the etymology of Swedish words [Bergman, 2012, s. 29–30]. According to the author, the part *arm* ‘arm’ substituted the more ancient *al(en)* with the meaning *underarm* ‘underarm.’ It was also the name for the distance between the elbow and the little finger’s tip which constituted 60 cm. It is therefore logical that *aln* ‘elbow’ was used as a unit of measuring distance. The length of the Swedish *aln* ‘elbow’ as approximately 60 cm is also confirmed in the Dictionaries of the Swedish Academy [Svenska Akademiens Ordböcker].

Using the language bank above, we selected two examples of the use of the ancient word *aln* ‘elbow’ related to the Bible [Språkbanken. Korp v9].

1. *Låt det vara ett avstånd på omkring tvåtusen alnar mellan den och er. Josua 3:4.*
‘Yet there shall be a space between you and it of about two thousand cubits by measure. Joshua 3:4’ [Bible].

The quoted English translation of the Bible uses the word “cubit” referring to an ancient unit of measurement which Merriam-Webster Dictionary defines as “any of various ancient units of length based on the length of the forearm from the elbow to the tip of the middle finger and usually equal to about 18 inches (46 centimeters)” [Merriam-Webster]. That is, comparing these versions of the quotes from the Bible it is difficult to establish the estimated length of the mentioned distance (which parenthetically is also called *space* in the English version).

2. *Ska jag försöka lägga en aln till min livslängd och börja träna?*
‘Shall I add a cubit (an elbow) to my length of life and start working out?’

Although the sentence is a modern one, it alludes to Matthew 6:27 which reads as follows: ‘Which of you by being anxious, can add one moment to his lifespan?’ [Bible]. The cited text is complemented by a footnote explaining that the original text contained the word “cubit.”

This example shows us how a word denoting a given distance (that is, a spatial property) transformed its meaning and acquired temporal characteristics.

One more example of a text using *aln* ‘elbow’ retrieved from the collection of corpora reads as follows:

- Bland annat var det en vars längd uppskattades till trettio à trettiofem alnar, som hade låtet se sig utanför Älvsborgs fästning* [Språkbanken. Korp v9].
‘Among other things, it was one whose length was estimated at thirty to thirty-five cubits, which had been seen outside Älvsborg’s fortress.’

Here *aln* comes as a regular length measurement word historically used in Sweden. Since this word denotes a historical unit of measurement, it is not used widely in the modern language and the statistics of the collection of the corpora retrieved a limited number of hits for this unit, the absolute maximum frequency (7072) occurs in the corpus of the questionnaires which the Nordic Museum has been sent to respondents since 1920 for research purposes.

Similar to the word *aln*, the words *famn* ‘fathom’ and *tum* ‘inch, thumb’ describe lengths derived from the dimensions of the human body. Despite the similar origin, the semantics of the English *fathom* and the Swedish *famn* diverged significantly. Thus, according to Merriam-Webster [Merriam-Webster], the English fathom is used to describe a unit of measurement of the depth of water which is equal to six feet, or 1.83 meters. Even though the length of the Swedish *famn* was approximately the same, about 1.8 m, it was used more widely, including for determining a square of a surface. Here is an example from the collection of corpora: *Den är 20 famnar lång = 39 meter, dvs* [Språkbanken. Korp v9]. ‘It is 20 fathom long = that is, 39 meter.’

The word *tum* ‘inch, thumb’ is believed to originate from the measurement of a man’s upper part of a thumb, hence the name. In the modern language, the word *tum* is used widely for description of devices with the same meaning that the English “inch,” as in the following example from the collection of corpora: *En bild på 2 megapixel blir bra i 10 × 15 cm, då man kan skriva ut i 300 punkter per tum* [Språkbanken. Korp v9]. ‘An image of 2 megapixels will be good in 10 × 15 cm, as you can print at 300 dots per inch.’

The Swedish words *armlängd* ‘arm’s length,’ *fot* ‘foot’ from the list above along with such words as *tvärhand*, *handsbredd* ‘hand,’ and *fingerbredd* ‘finger’s breadth’ also received their names after dimensions of the human body.

According to Bo Bergman [Bergman, 2012, s. 546–547], the words *tvärhand*, *handsbredd* ‘hand’ belonged to the common Nordic medieval measurement system and both indicated the length of 7.5–8 cm.

The word *tvärhand* became a part of the expression *en tvärhand hög*, literary ‘one hand long,’ which is continuously used in the modern language to describe a short person like in the following example from the collection of corpora: *För det gör man inte, om man inte har Strl 35 på skor, bor på Östermalmsgatan och är en tvärhand hög* [Språkban-

ken. Korp v9]. ‘Because you do not do that unless you have a size 35 of shoes, live on Östermalmsgatan and are very short.’ More likely than not, native speakers of Swedish do not need to know the exact length of *tvärhand* to use and understand this expression.

The Swedish *mil* is worth special mention since a similar word is used in many languages and fields of application (e. g. nautical mile) denoting different lengths and *mil* can therefore be interpreted incorrectly by users of other languages. The modern Swedish *mil* indicates 10 km while historically the exact length of the *mil* varied between different Swedish regions including Finland (whose territory was under the Swedish rule). The word *mil* is widely used in modern Swedish because the length of the majority of routes is measured in *mil*, not kilometers. The collection of corpora returns a lot of examples, like the following: *Rolf Ericsson har sommarstuga på Gotland, ett par mil från Ojnareskogen, det område där Nordkalk utvidgar sitt kalkbrott* [Språkbanken. Korp v9]. ‘Rolf Ericsson has a summer cottage on Gotland, a couple of miles from Ojnareskogen, the area where Nordkalk is expanding its limestone quarry.’

On the list, we have Swedish words indicating foreign measures such as *yard* ‘yard’, *stadion* ‘stadion’ and *verst* ‘verst.’ All three words denoting English, ancient Greek and Russian measures respectively are explicitly described as foreign measurement units in the Dictionaries of the Swedish Academy. Since among all historical Swedish territories the Russian measurement system was relevant only to Finland and only during a limited period of time, the word *verst* could not root in the Swedish language. The word *arsjin* ‘arshin’ originating from Russian demonstrates a similar pattern. Unlike *verst*, *arsjin* is not even registered in the Dictionaries of the Swedish Academy. However, the word exists in the language and can be found, for example, in Bonniers Swedish Dictionary, where it is more generally defined as an Easter European length measure with a precise value for Russia — 0,711 m [Malmström et al., 1997, s. 35].

Consequently, the words *verst* and *arsjin* are very uncommon in the language, and the collection of corpora returns only one example with *arsjin* from the Swedish Wikipedia: *Från 1500-talet trängdes alnmåttet gradvis undan av längdmåttet arsjin, som motsvaras av 0.7112 meter* [Språkbanken. Korp v9]. ‘From the 16th century, the elbow measure was gradually displaced by the length measure arsjin, which corresponds to 0.7112 meters.’

5. PRESENTATION OF STUDY RESULTS OF THE FINNISH PART

Approaching the analysis of the Finnish lexemes, we defined data collected from the topical dictionaries. According to the Finnish thesaurus, there are 172 words marked with the topical category “Units of measure” [Finnish thesaurus], however only 31 of them are used for measuring length or distance. Some of words have homonyms or different meanings as seen in Table 1.

All these words can be divided into several groups according to their etymology, as follows:

- 1) measures loaned from Russian culture;
- 2) traditional Finnish measures;
- 3) measures loaned from Swedish culture or language;
- 4) measures loaned from other countries and languages;
- 5) SI-system measures.

To have a clearer picture of how all these groups are used in modern Finnish speech we decided to address two Finnish language corpora. The first one is the Helsinki Korp Version of Samples of Spoken Finnish [The Helsinki Korp Version of Samples of Spoken Finnish], which is a monolingual corpus representing Finnish oral speech from 1978 to 2000. The second corpus contains the articles from the YLE news archive dated 2011–2018 [YLE Finnish News Archive 2011–2018]. Its size is stated as 207,500,221 tokens. These two corpora were chosen to assess utterances of measurement words in different types of Finnish discourse: spoken conversational and journalistic.

Once the data were collected from the dictionary and divided into the groups above we gathered all the contexts of usage from the two corpora and conducted their qualitative research, the results of which will be presented further.

The first group includes such units as *arsina* ‘arshin,’ Russian *kortteli* ‘quarter,’ and *virsta* ‘verst.’ The first one is marked in most dictionaries as Russian measure [Vahros, Shcherbakov, 1975, p. 40], while *kortteli* and *virsta* can have different meanings depending on context.

The word *kortteli* also is listed as a traditional Scandinavian way of expressing distance. However, Russian *kortteli* differs from Scandinavian and refers to a different measurement system, the word itself has come to Finnish from Swedish *kvarter*, which means also “quarter” [Häkkinen, 2007, s. 481].

Table 1. List of words expressing distance according to Finnish Thesaurus

No.	Finnish word	Meaning in English
1	arsina	arshin, Russian unit of length (71.12 cm)
2	desimetri	decimeter
3	hehtometri	hectometer
4	jaardi	yard, English unit of length (equal to three feet, 91.4 cm)
5	jalka	foot (unit of measure, 30.48 cm)
6	kilometri	kilometer
7	kortteli	block (distance from one street to another in a city)
8	kortteli	Scandinavian unit of length, 0.148 m (half of foot or ¼ of <i>kyynära</i>)
9	kortteli	Russian unit of length, 0.1778 m
10	kyynära	specific Finnish unit of length, 0.594 m
11	linja	Finnish unit of length, around 2.062 millimeters, comparable to imperial line
12	maili	mile
13	meripeninkulma	nautical mile
14	metri	meter
15	mikrometri	micrometer
16	millimetri	millimeter
17	penikuorma	traditional unit of length equal to 10 versts, considered to be phonetic variation of <i>peninkulma</i>
18	peninkulma	measure of length equal to 6 km (before 1655)
19	peninkulma	measure of length equal to 10.688 km (1655–1886)
20	peninkulma	measure of length equal to 10 km (from 1887)
21	poronkusema	informal traditional measure around 7.5 km
22	päivämatka	traditional measure of length equal to 21 km
23	senttimetri	centimeter
24	stadion	ancient Greek measure of length (164–192 m)

No.	Finnish word	Meaning in English
25	tuuma	inch
26	vaaksa	Finnish span (space between thumb and index finger)
27	vakomitta	furlong
28	valosekunti	light second
29	valovuosi	light year
30	virsta	an old Russian unit of measure, the verst, 1066.8 m
31	ångström	angstrom (0.1 nanometers)

Kaisa Häkkinen mentioned that *virsta* ‘verst’ has been loaned from Old Russian not only by Finnish but also by almost all related languages (cf. Estonian *verst*, Veps *virsty*). Although the original *virsta* is Russian and equals 1066.8 meters, so-called *Ruotsin virsta* ‘Swedish verst’ (2672 meters) and *Suomen virsta* ‘Finnish verst’ (1069 meters) also existed. According to K. Häkkinen, after Finland adopted the International metric system at the end of the 19th century, such units as *virsta* and *arsina* are used mostly in traditional texts, proverbs and other folklore material [Häkkinen, 2007, s. 1502].

Data from the corpora verify this statement. The Corpus representing Samples of Spoken Finnish contains only 10 occurrences of *virsta* mainly in the Ingrian Finnish dialect, where the influence of Russian is stronger than in other parts of the country. For example:

1. ...*se käytettiin kolme virstaa, kolme **virstaa** oli, matka sieltä, kirkosta sinne, toiselle, puolen kirkko mikä se puoli kutsuttiin tsasuunoita...*
‘...it used to be three versts, was three versts, way from there from the church there, to another half church that they called a chapel...’
2. ...*se oli, taisei tulla sinne, kolmekymmentä **virstaa**, matkaa...*
‘...there was, might be around 30 versts of way there...’

YLE archive has 12 occurrences of *virsta*, almost all of them in contexts describing old measurement systems or in descriptive expressions.

1. *Tässä Ruoveden ja Juupajoen kievareiden välillä on niin sanottu paha **virsta**.*
‘Here between the taverns of Ruovesi and Juupajoki there is a so-called evil verst.’

2. *Hän pystyy yhä haistamaan naisen tuoksun sieraimissaan, vaikka siitä on jo kaksi kuunkiertoa ja tuhat virstaa.*
'He was still able to smell women's odour in his nostrils, though since that two moons and thousands of versts have passed.'

The word *arsina* has no occurrences neither in Spoken Finnish, nor in YLE news archive corpus. Meanwhile the situation with *kortteli* is not clear enough. The word itself is represented in both corpora, but distinguishing the exact meaning is not always possible even taking into consideration the context. However, next occurrence might be an example of expressing the idea of distance (exact amount of meters), but still it is impossible to define whether it is Russian *kortteli* or Scandinavian one:

...oli semmoinen, toista korttelin pituinen lohi...
'...there was such one and half quarter long salmon...'

Next group includes traditional Finnish measures, such as *jalka* 'foot', *kyynärä* 'elbow', *poronkusema*, *peninkulma*, *penikuorma* (these three are considered to be culture-related words and untranslatable), *päivämatka* 'distance for a day trip', *vaaksa* 'span'. Some of them, connected with parts of the body, which F. Petrushevskii called natural [Petrushevskii, 1849, p. 19], have similar equivalents in other languages, such as Russian, English etc., and refer to the early periods of language development, as their usage helped to create the easiest metrological system always available (*kyynärä* 'elbow', *jalka* 'foot', *vaaksa* 'span'). Other language units, for instance, *poronkusema*, *peninkulma* and *penikuorma*, originate from traditional culture and represent essential parts of life.

A well-known example of such units is the word *poronkusema*, which means "the distance that deer can cover without urinating," represents also temporal characteristics. Units *peninkulma* and *penikuorma* can also illustrate the lifestyle. According to K. Häkkinen, the both are compound words, where the first part *peni-* was used in old Finnish for "dog" (*penikki*), while the second parts refer to the words *kuulla* 'hear' and *kuorma* 'load', so that their meaning can be described as distance from which a dog's bark can be heard and distance, which a dog can run with some load [Häkkinen, 2007, s. 898].

Corpora data show that the usage of these units can be described as rather seldom. The Samples of Spoken Finnish contains only 5 occurrences of *kyynärä* 'elbow' in the meaning of distance:

...ja, oliko se, neljä **kyynärää**, pitkä ja, se pirtti ja, ja, kolme **kyynärää** leveä ja siinä oli kymmenen huonetta ja kaksi sänkyä...

‘...and it was four elbows long, this house and, and, three elbows wide and there was ten rooms and two beds...’

YLE News Archive corpus has a wider range than the previous one. The absolute frequency can be found in Table 2 below.

Table 2. Absolute frequency list of natural measure words expressing distance in YLE News Archive 2011–2018 Corpus

Lexem	Absolute frequency
jalka	31,366 (14 — measure word)
kyynärä	6
meripeninkulma	48
peninkulma	31
poronkusema	3
päivämatka	129 (1 — measure word)
vaaksa	36

A detailed analysis of contexts provides us a possibility to make some interesting observations about collocations and topics of news where these measure words are represented. As these words are considered to be traditional, contexts of their occurrences usually refer to descriptions of national houses, distances between places in historical texts as well as in news, regarding old words and concepts.

1. *Se on 281, 3 **jalkaa** pitkä ja 180,9 **jalkaa** leveä.*
‘It was 281.3 **foot** long and 180.9 **foot** wide.’
2. *Mutta ei siitä ole kauaa , kun Suomessakin käytettiin pituusmittoina linjaa , **jalkaa** , korttelia, **kyynärää**, peninkulmaa ja virstaa eikä metristä tiennyt kukaan.*
‘But this was not long ago when in Finland they used for measuring length words as line, **foot**, quarter, **elbow**, **peninkulma**, verst and no one knew about meters.’

Another significant group of measure words are those borrowed from the Swedish language or culture, which can be found in both corpora.

However, there are some difficulties in defining the origin of a word, because a lot of concepts came into Finnish language from others through Swedish. We tend towards classifying as a loan from Swedish language or culture such units as *kortteli* ‘quarter’ (in the usage to express Scandinavian unit of measurement), *linja* ‘line,’ *peninkulma* (Swedish mile), *tuuma* ‘inch,’ *virsta* (Swedish verst) and *ångström* ‘angstrom.’

Some of the listed words used to have other meanings, for example *kortteli* and *virsta* are known as Russian units, *peninkulma* — as a traditional Finnish one. However, the Finnish thesaurus lists them as also referring to Scandinavian and Swedish systems of measurement.

The word *tuuma* origins from Swedish *tum*, which etymologically is connected with *tumme* meaning “one thumb” [Häkkinen, 2007, s. 1368]. See also above. Thus, this measurement word can be classified as a natural one, because it refers to somatic vocabulary. However, the measure itself corresponds to the English system as well.

Linja ‘line’ came into Finnish from the old Swedish word *linia*, to which in modern Swedish corresponds *linje*. It is stated that *linja* appeared in written Finnish first time in an almanac of 1746 [Häkkinen, 2007, s. 612]. However, corpora research showed that this unit isn’t used in its measuring meaning.

Turning to corpora data was complicated because contexts do not always allow us to understand the exact meaning of the word (especially analyzing contexts of word *kortteli* and *peninkulma*). In some situations these words seem to be used for defining distance simultaneously referring to the past.

Tuuma ‘inch’ has occurrences in both corpora, however the amount of correlated appears to be much less than original, which can be explained by the homonymic forms of verb *tuumata* ‘to think’ and noun *tuuma* ‘idea, thought.’ For example, the whole frequency of *tuuma*-occurrences in The Samples of Spoken Finnish corpus is 14, but only 6 of them express a meaning which corresponds to our study’s topic. YLE News Archive demonstrates the same situation: the whole amount is 2400, and only 158 of them are correlated. The majority of the contexts deals with measurement of electronics or wheels, for instance:

1. *Myyjä suositteli sitten 32 tuuman tai 40 tuuman televisiota.*
‘Shop-assistant recommended a 32-inch or 40-inch TV.’
2. *Skoottereissa asiakkaat haluavat aiempaa suurempia eli 12 tuuman renkailla varustettuja malleja.*
‘In scooters, customers want larger models with tires that have 12-inch tires.’

Next group, representing measures loaned from other cultures has obvious connection with the previous one as a lot of words and concepts came into Finnish through Swedish (language or culture). We can suggest, that English measurement system, including such words as *jaardi* ‘yard’ and *maili* ‘mile’ became well-known in Finland through Swedish culture. Corpora data don’t allow to make any conclusions about their usage in speech (0 occurrences of both). Meanwhile, a corpus representing news offer a large amount of contexts (1004 for *jaardi*, 625 — *maili*), most of which refer to sport topic.

1. *Billy Cundiffin 19 jaardin potkumaali avasi kuitenkin ottelun pisteteh-tailun.*
‘However, Billy Cundiff’s 19-**yard** kick opened the scoring for the match.’
2. *Legendaarinen 500 mailin kilpailu keskeytettiin kahdeksi tunniksi Juan Pablo Montoyan kolaroitua pahasti.*
‘The legendary 500-**mile** race was suspended for two hours after Juan Pablo Montoya crashed badly.’

The last analyzed group refers to SI-system and represents the majority of contexts in both corpora. The absolute frequency in two corpora is given in the Table 3 below.

Table 3. Absolute frequency of SI-system units in both corpora

Word	The Samples of Spoken Finnish corpus	YLE News Archive Coprus
desimetri	0	6
kilometri	77	55,951
metri	66	67,697
millimetri	0	2284
mikrometri	0	69
senttimetri	34	3638

The topics covered by the contexts where these language units occur do not have any restrictions or specification.

According to all this data, we can infer that in modern Finnish all types of measurement words are used. However, the occurrences’ con-

texts and speech situations differ. The most “independent” group is SI-system measures, while the usage of others is restricted not only by topic but also by discourse and form of speech.

6. CONCLUSIONS

To summarize, we conducted an overview of words related to measuring distances in Swedish and Finnish, identified several categories of these vocabulary items, and considered examples of how the words are used in different contexts. We illustrated differences and similarities between the languages in terms of using vocabulary items related to SI-system, historical measurement systems and foreign measures. We also highlighted significant influence of the Swedish and Russian languages on the Finnish languages in this field. We believe that the study can contribute to practical work with the languages such as language teaching and translation.

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НЕКОТОРЫЕ НАБЛЮДЕНИЯ НАД СЛОВАМИ, ОБОЗНАЧАЮЩИМИ ЕДИНИЦЫ ИЗМЕРЕНИЯ РАССТОЯНИЯ, В ФИНСКОМ И ШВЕДСКОМ ЯЗЫКАХ

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В статье представлен обзор слов, использующихся для обозначения единиц измерения в финском и шведском языках. Сравнительные исследования между этими двумя языками представляются актуальными, поскольку данные языки использовались в соседних регионах и странах с долгой историей политическо-го, культурного и межличностного взаимодействия. Сначала в исследовании описываются металексемы пространства и расстояния в шведском и финском языках. Затем, используя тезаурусы, тематические словари и корпусы, авторы исследования применяют сочетание количественных и качественных подходов, чтобы выявить и оценить прагматику и коммуникативный контекст использования слов, обозначающих единицы измерения. После этого в статье описывается несколько категорий слов с учетом этимологии, обозначающих единицы измерения в рассматриваемых языках, таких как традиционные меры измерения, единицы СИ, иностранные единицы измерения, и анализируется их использование в контекстах корпусов, представляющих современный дискурс. В статье подчеркиваются различия и сходства в использовании разных категорий словарных единиц в шведском и финском языках. Подробный анализ контекстов позволяет привести некоторые наблюдения о словосочетаниях и темах новостей, в которых встречаются рассматриваемые слова. Кроме этого, в исследовании рассматривается влияние шведского и русского языков на финский язык в связи

с историческими и политическими обстоятельствами. На основании изученных данных в исследовании делается вывод, что в финском и шведском языках используются все типы слов, обозначающих единицы измерения, однако частотность, контексты их употребления и речевые ситуации различаются. Некоторые категории используются в достаточно ограниченном количестве тем, в то время как остальные не имеют ограничений. Ожидается, что исследование внесет вклад в практические аспекты работы с языками, в частности в преподавание и перевод.

Ключевые слова: финский язык, шведский язык, пространственные метаксемы, единицы измерения, исторические единицы измерения, скандинавские единицы измерения, российские единицы измерения.

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