

The development of 19th century Finnish vocabulary in the light of Martti Rapola's word collection

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Martti Rapola (1891–1972) conducted research on Finnish dialects and Old Literary Finnish throughout his long career, which culminated in his period holding the chair of Finnish language in Helsinki University. In the late 1930s, Rapola began collecting material for what would develop into a word collection of 19th century Finnish based on word meaning. His most active phase in the collection and study of this material seems to have been during the war years 1940–1945. In its entirety, Rapola's collection contains approximately 44 000 word notes. The majority of these are based on dictionaries, glossaries, books and articles published in the 19th century, though there is a small proportion of both earlier and later literary language, and material from unpublished sources. The list of sources consists of nearly 900 bibliographical entries. Rapola used his word collection as a source material for many etymological and lexical articles (of these note especially Rapola 1945, where he presents extensive but only qualitatively analyzed material in favour of his hypothesis considering the shortening of lexical forms during the development of Literary Finnish). Rapola (1960) also published a selection of his material in a book listing first instances of words which remained a part of Modern Finnish vocabulary. (On Rapola's word collection and its background see Lauerma 2018b.)

This study is based on a much condensed, but statistically valid sample of Rapola's unpublished material which was worked out in the Institute for the Languages of Finland in 2013–2018.¹ This sample contains 5600 lexical

¹ I would like to thank Tiina Kelloniemi (Turku University, 2016) and Jemina Tukiainen (Helsinki University, 2018) for their help in coding the material and editing its bibliography.

items on 1070 different concepts. These function as word entries representing also words that have prevailed in Modern Finnish, which enables comparisons between the 19th century variation and Modern Finnish usage. The material is divided into five groups: basic words, loan words, open compounds, compounds and derivatives. The proportions in which they appear in the material are as follows.

<i>Form group</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>+/- (%-point)</i>
	<i>All words in the material</i>		<i>Words in Modern Finnish</i>		
Basic words	94	1.7	6	0.6	- 1.1
Loan words	308	5.5	45	4.2	- 1.3
Open compounds	376	6.7	5	0.5	- 6.2
Compounds	2547	45.5	476	44.5	- 1.0
Derivatives	2275	40.6	538	50.3	+ 9.7
Total	5600	100.0	1070	100.1	+ 0.1

The aim of this article is to describe the nature of 19th century vocabulary, especially from the viewpoint of its structural properties, and to discover what kind of development has led to the word types still belonging to the Modern Finnish vocabulary.

Basic words

In Finnish language most of the uncombined words are derivatives or loans. However, besides pronouns and particles, basic words include substantives, adjectives and verbs with *A-* and *I-*stems (e.g. *ilma* ‘air’, *suunta* ‘direction’, *mieli* ‘mind’; *raaka* ‘coarse’; *huutaa* ‘to shout’). (On the diachronic background of this see e.g. Collinder 1960: 205 and Hahmo 1994: 10.)

The proportion of basic words in the material is small (ca. 1.7 %). Most of these words are from the first half of the 19th century. For the lack of more accurate expressions some basic words were used for detailed concepts. Words like this were later replaced especially by derivations (e.g. *linna* Helenius 1838 > *linnoitus* ‘fortress’, *raaka* Gottlund 1817 > *sivistymätön* ‘uneducated’).² This happened particularly with verbs (e.g. *huutaa* Renvall

² The time and place of Modern Finnish equivalents is not given when this information is found in Rapola 1960.

1826 > *äänestää* ‘to vote’). Less than one fifth of basic words have been replaced by compounds. In more than half of these cases the original basic word has been preserved as modifier or head of the expression (e.g. *ilma* Helenius 1838 > *ilmakehä* ‘atmosphere’; *mieli* Renvall 1826 > *mielipide* ‘opinion’; *suunta* Lönnrot Mehil 1836 n:o 3 s. 6 > *ilmansuunta* ‘point of the compass’).

In modern Finnish few basic words of this type have survived. The word *juna* ‘locomotive train’ had in the dialects also meaning ‘line, queue’, which is said to have given rise to the meaning ‘train’ of this word (SMS and SSA, sv. *juna*). However, *juna* could also be a shortened compound word, too, in the light of the compound words *rautatie(-)juna* and *vaunu-juna* (both Ahlman 1865 sv. Träng). The words *juna* and *jono* ‘row’ gave the model to a new word *jana* ‘segment of a line’; the same can be said for *ympyräinen* ‘round’ and *ympäröidä* ‘to surround’ and their relation to the word *ympyrä* ‘circle’, both *juna* and *ympyrä* introduced by Eurén (1860), as well as the onomatopoeic word *kitka* ‘friction’ (SMS, SSA; cf. also the dialectal word *jama* used by Wikman, 1829/1842). The use of the word *saha* ‘saw’ in the meaning of ‘saw mill’ is due to the shortening of certain compound words (*sahamyly* and *vesisaha* ‘water driven saw mill’), in the same way as the use of *sija* in the meaning of ‘case form’ derives (from the compound *sijamuoto*). In the material investigated these few basic words form mere 0.6 % of the words remaining in Modern Finnish.

Loan words

Young loan words are not frequent in the material (5.5 %), but they are found both in the older and newer sections of the corpus, especially in the originally unpublished letters and diaries. Etymologically most of these loans originate from Swedish or have at least been borrowed through Swedish. There are, however, a small number of direct loans from Russian (e.g. *leima* Poppius s.a. < *клеймо* ‘stamp’) and some from Latin (e.g. *mytologia* Lönnrot 1835: XIII < *mythologia* ‘mythology’). (On the young loan words e.g. Hakulinen 1961: 242–248; on the identification and origin of the loan words in Rapola’s material Lauerma 2018a: 178–179.)

More than half of the loan words (53.3 %) have been later replaced by different derivations (e.g. *arkkiivi*, Wikman 1829 sv. Archiv, from the Swedish word *arkiv* > *arkisto* ‘archive’; *vaccinerata*, TVS 1821 n:o 11 p. 44, from the Swedish *vaccinera* > *rokottaa* ‘to vaccinate’). Less than a third (32.3 %) have been replaced by compounds, some of which are loan translations (e.g. *bildhugari*, PK 1864: 57, from the Swedish *bildhuggare* > *kuvanveistäjä*

‘sculptor’, or *termometri* from the Swedish *thermometer*, TVS 1821 n:o 7 p. 28 > *lämpömittari* ‘thermometer’). Only about a sixth of these loan words (14.4 %) have remained in Modern Finnish. These instances are mainly terms used in philosophy (e.g. *logiikka*, written originally as *logika*, Europaeus Smtar 1850 n:o 16 p. 1 ‘logic’; *rationalisti*, PK 1864: 4 ‘rationalist’; *teoria*, Meurman KKL 1867: 151 ‘theory’) or in the study of literature (*balladi*, Ahlqvist 1855: 107 ‘ballad’; *novelli*, Smtar 1847 n:o 36 p. 2 ‘short story’, *romaani* ‘novel’), names of the new political ideologies and their supporters (e.g. *sosialismi*, Vlvj 1882: 163 ‘socialism’; *sosialisti* ‘socialist’) or scientific terms (e.g. *alkoholi*, SSV 1834 n:o 1 p. 2 ‘alcohol’; *fysiikka*, originally written as *fysiikki*, Becker 1843: 9 ‘physics’) (on the thematic distribution of the loan words cf. Lauerma 2018a: 179–182). The remaining loan words form still as many as 4.2 % of words which continue to occur in Modern Finnish.

Open compounds

In Finnish literary language compounds are written together or with hyphen. Compound structures with the parts written separately are considered to form a separate category, open compounds. Their number in the material (6.7 %) exceeds slightly that of loan words. This kind of compounds have not been described in detail in Finnish grammars (on the characteristics of open compounds Mikkola 1967: 18–23). The following analysis is based on a classification presented by Rapola (1945: 132–134, 137, 140–141), though it has been slightly generalized to reveal the form groups and their structural properties in a better way (Rapola has been more interested on the length of individual expressions).

Open compounds are usually formed of two components only and are noun-based; longer constructions and verb-based open compounds are rare. The modifiers of nominal open compounds are mainly adjectives or participes. More than half of such compounds have an adjective formed with *inen-* or *llinen-* derivative as modifier (e.g. *kansallinen* ‘national’; *kiintonainen* ‘fixed’). These open compounds have been shortened to proper compounds where *s-*ended casus componensis forms qualify a head word (e.g. *kansallinen henki* Smtar 1848 n:o 11 p. 1 > *kansallis/henki* ‘national spirit’) and sometimes they have been abbreviated to far shorter compounds (e.g. *kiintonainen tähti* Ahlqvist 1844: 4 > *kiinto/tähti* ‘planet’). Many open compounds have also been replaced by derivations (e.g. *kolmisivunen kuvake* ~ *kolmisivu* Kilpinen HMB 1835 n:o 98 > *kolmio* ‘triangle’; *vaimonpuolinen opettaja* Almanakka 1822: B8 > *vaimoinen opettaja* Becker 1843: 6 > *opettajatar*

‘schoolmistress’; *ruotsinkielinen kääntämys* Wikman 1842 sv. Öfversättning > *ruotsinnos* ‘Swedish translation’). Some open compounds have been replaced by real compounds based on different lexical elements (e.g. *valtiolinen talonhallinto* Smtar 1848 n:o 30 p. 2 > *kansantalous* ‘national economy’). This has been common especially among open compounds based on loan words (e.g. *elehterinen telegraahvi* Knv 1845 n:o 42 p. 3 > *lennätin* ‘telegraph’). Thus, only a few of the old open compounds with *(ll)inen*-derivative have remained in Modern Finnish (*kuusimittainen runo* Lönnrot 1855: 277 ‘hexameter poem’; *virallinen lehti* US 14.7.1889 ‘official magazine’; *yleinen historia*, Tikkanen Smtar 1847 n:o 2 p. 1 ‘general history’; *yleinen kansa* Polén Mhln 1859 n:o 1 p. 4 ‘the common people’).

Open compounds qualified by basic adjectives are much rarer. These have only occasionally been replaced by a corresponding compound (e.g. *oikea kulma* Kilpinen HMB 1835 n:o 98 > *suora nurkka* Europaeus Klvs 1845 > *suorakulma* Aschan 1859: 7 ‘right angle’), instead, replacements by *isto*-derivations are typical (e.g. *irtain tavara* Lönnrot 1863: 256 > *irtaimisto* ‘personal property’; *vähempi puoli* ~ *osa* Ahlman 1872 sv. Minoritet > *vähemmistö* ‘minority’). In many cases, lexically quite different constructions have become prevalent in Modern Finnish (e.g. *turha usko* Europaeus 1853 sv. Fördom > *ennakkoluulo* ‘prejudice’).

Open compounds qualified by participles are about as common as those qualified by basic adjectives. Participle cases have been replaced by compounds with *s*-ended casus componensis forms (e.g. *sivistynyt kansa* Smtar 1847 n:o 8 p. 3 > *sivistyskansa* ‘civilized nation’) or by other shorter compounds (e.g. *kiertelevä* ~ *kiertävä koulu* SJS 1857 n:o 24 p. 1, n:o 67 p. 3 > *kiertokoulu* ‘itinerant school’; *yhdistetty sana* Eurén 1859: 121 > *yhdistyssana* Europaeus Smtar 1847 n:o 13 p. 2 > *yhdyssana* ‘compound word’).

Nearly half of all open compounds have a modifier in the genitive. In some cases the present-day expression has been formed merely by changing the orthography (e.g. *hovioikeuden neuvos* Hannikainen 1847: 198 > *hovioikeudenneuvos* Ahlqvist 1864 ‘judge of the court of appeal’; *talouden hoitaja* OVS 1830 n:o 46 p. 4 > *talouden-hoitaja* Europaeus 1853 sv. Ekonom > *taloudenhoitaja* ‘housekeeper’). In most cases the genitive has been replaced by the nominative (e.g. *kirjan paino* SSV 1834 n:o 1 p. 4 > *kirjapaino* ‘printing house’; *tyttöin koulu* MY 1846 n:o 17 p. 3 > *tyttökoulu* ‘girls’ school’) or a shorter derivative (e.g. *elämän keino* OVS 1830 n:o 15 p. 2 > *elon keino* SSV 1835 n:o 31 p. 2 > *elinkeino* ‘source of livelihood’). In Rapola’s material, Modern Finnish only retains one open compound with the genitive, namely *hovioikeuden auskultantti* ‘judicial trainee’.

Open compounds with a modifier in other case than nominative or genitive are relatively rare (less than 6 % of nominal open compounds). Practically all attested forms in the material are deverbal. In most cases these expressions have been replaced by genuine compounds, often with lexical changes of varying level (e.g. *keinolla saatu* LSKH 1845: 53 > *keinotekoinen* ‘artificial’; *lävitse katsominen* Europaeus 1853 sv. Öfverseende > *yleiskatsaus* ‘overview’; *puoleensa veto* Roos 1845: 2, 132 > *vetovoima* ‘attraction’; *yksin hallihteivainen* ~ *vallihteivainen* Ahlholm 1830: 74 > *yksinvaltiias* Diktator ‘autocrat’). In a quarter of cases open compounds have been replaced by derivatives (e.g. *keralla äännettävä* TVS 1821 LL n:o 24 > *kerake* ‘consonant’; *yksin omani* Renvall 1826 > *yksityinen* ‘private’; *ääneen lukija* Godenhjelm 1873 sv. Vorleser > *luennoitsija* Hahnsson 1899 sv. Föreläsare ‘lecturer’). Only one open compound in the material has been directly compressed to form a genuine compound (*viralta pano* Wikman 1829 sv. Af-sättning > *viraltapano* ‘removal from office’).

Open compounds formed from more than two words are infrequent in the material (3.5 %). These constructions always have a deverbal part, either in modifier or head. Open constructions with deverbal modifier are sometimes shortened to genuine compounds (e.g. *höyryllä kulkeva laiva* Lönnrot 1836: 2 > *höyrylaiva* ‘steamboat’). With subsequent lexical changes this has happened to all constructions with deverbal head, which have been more frequent (e.g. *hyvään tapain oppi*, Becker 1843 ~ *vilpittömään tapain oppi*, Julistus 21.6. 1841 > *siveysoppi* ‘ethics’; *itse itsensä opettanut* ~ *ilman koulutta oppinut* Wikman 1829 sv. Autodidakt > *itseoppinut* ‘autodidact’; *veren ympäri juoksu* Nordblad 1837: 5 > *verenkierto* ‘circulation’).

Verbal open compounds are much more infrequent (8 % of all incidents) than nominal ones. Compounds with prefixes were replaced by derivatives (e.g. *käydä edellä* Hahnsson 1899 sv. föregå > *edeltää* ‘precede’; *sisällänsä pitää* Gottlund 1828: 19 > *sisältää* ‘contain’). Many constructions with an object or an adverbial have had the same fate (e.g. *pitää oppi-juttelusta* ~ *oppi-jutteluksia* Europaeus 1853 sv. Föreläsa, *pitää luento* Krohn 1862: 22 > *luennoida* ‘to lecture’; *istuttaa rokkoa* TVS 1821 n:o 6 p. 22, *panna rokkoa* Eurén 1860 > *rokottaa* ‘to vaccinate’; *muuttua kiveksi* TVS 1820 n:o 22 p. 2 > *kivettyä* Smtar 1847 LL n:o 6 p. 4 ‘fossilize’; *panna nuotille* Knv 1846 n:o 6 p. 2 > *säveltää* ‘to compose’).

According to the material, the words in modern Finnish retain only a handful of open compounds (0.5 %). The number of open compounds has declined more than any other group in the material (by as much as 6.2 percent points).

Compound words

Nearly half of the material (45.5 %) consist of compound words orthographically written as one word (on compounds in Modern Finnish e.g. Fromm 1982: 138–139 and Karlsson 1983: 203–204). There is variation concerning the amount and type of word elements and case selection (cf. lists by Rapola 1945: 135–136).

The great majority of the compounds (nearly 96 %) are formed of two words (e.g. *aakkosjärjestys* Wikman 1829 sv. Alfabetisk ‘alphabetic order’; *ajatelma-kaava* ‘ideology’ A. W. Ingman 1872; *arvanveto* ‘arpajaiset’, TVS 1823 n:o 7 p. 23 ‘lottery’; *terpetin-syöksy* ‘alcohol’, Varelius 1856: 39). The number of compounds consisting of three words is only ca. 4.2 %. Over half of these begins with a nominative. The genitive case is about as common in the first as in the middle part, while compounds with two parts in the genitive are rare. By the time of Modern Finnish, this type has often shortened, with changes in case or in lexemes (e.g. *ilman-litistyspumppu* TVS 1823 n:o 23 p. 92 > *ilmapumppu* ‘air pump’; *valtakunnanmulkkaus* Engblom 1845: 184 > *vallankumous* ‘revolution’). In words that still occur in Modern Finnish, number of compounds consisting of three words has thus diminished (to 2.6 %). In the remaining compounds of this type nominative is also more dominant than genitive (in the material the only three-part compound words retaining the genitive are *kuvanveistotaide* ‘statuary’, *maanviljelysopisto* ‘agricultural college’ and *talonpoikaissäätö* ‘peasantry’).

There are no longer compounds left in the material, because the very few compounds that consisted of four words have been shortened (*valtavaratoimikunta* Asetus-Kokous 1860 n:o 1 > *toimikunta*) or been replaced by other expressions (*maanpallonkeskipiiru* Helenius 1838 sv. Aeqvator > *päiväntasaaja* ‘equator’; *perustuskäsikirjainkammio* Wikman 1829 sv. Archiv > *arkisto* ‘archive’).

Over four fifths of the compounds (80.1 %) has a modifier in the nominative case. Only 15.6 % has a modifier in genitive. In words which still occur in Modern Finnish, the proportion of words with genitive modifier is even smaller (13.3 %), because also in compounds formed of two words genitive has often been replaced by nominative (e.g. *kansankoulu* Wikman 1829 sv. Folkskola > *kansakoulu* ‘elementary school’; *maanpallo* Helenius 1838 sv. Jordklott > *maapallo* ‘globe’; *opinaine* Gottlund 1828: XXXII > *oppiaine* ‘subject of instruction’). There is also a small proportion of compounds (about 4 %) with a modifier in other case than nominative or genitive. Of these not many are formed of more than two words and even these instances have later been shortened (e.g. *loppu-yhteensoindo* Wikman 1829 sv. Slutrim

> *loppusointu* ‘rhyme’; *sisään-veto-merkki* Europaeus 1853 sv. Citationstecken > *lainausmerkki* ‘quotation mark’). Some adjectives (and their nominal derivations) in the material begin with partitive, but this has later been changed to genitive (*yhtämukainen*, Ahlman 1872 sv. Likformig, *yhtämuotonen*, *yhtäkoavanen*, Kilpinen HMB 1835 n:o 98 > *yhdenmukainen* ‘uniform’; *yhtäsuuntainen*, Kilpinen 1847: 8 > *yhdensuuntainen* ‘parallel’; *yhtäpitäminen*, *yhtäpitävyisyys*, Europaeus 1853 sv. Öfverenstämmese, *yhtämuotoisuus* Carlsson 1876: 101 > *yhdenmukaisuus* ‘uniformity’). There are also compounds having modifiers in local cases. Those beginning with allative have been later replaced by derivations (*peälletarjoja* Gottlund 1828: 19 > *tillaaja* ‘subscriber’; *tuonille-pania* Poppius, letter 15.10.1818 > *säveltäjä* ‘composer’). One rare instance with ablative has been replaced by nominative (*edeltäluulo* Ahlqvist 1887: 136 > *ennakkoluulo* ‘prejudice’). More common are compounds having a modifier in the adessive, but these are restricted to expressions formed from the adjective *vanha* ‘old’ and the postpositional root *sisä* ‘in, inside’. These compounds have also later been replaced by derivations (e.g. *sisällänsäpitää* Ahlqvist 1845: 35 > *sisälteä* Kilpinen HMB 1835 n:o 98 ‘contain’ and *sisälläpito* Durchman – Ingman 1848: 66 > *sisältö* ‘contents’; *entiselläänolija*, *vanhallaolija*, Ahlman 1865 and *vanhoillaanolija*, Lönnrot 1886 > *vanhoillinen* ‘conservative’). There are also some rare instances of compounds with inessive, which have later been replaced by derivations (*edessälukeminen* Helenius 1838 sv. Föreläsning > *luento* ‘lecture’) or compounds beginning with nominative (*yhdessäeläminen* Europaeus 1853 sv. Sammanlefnad > *yhdyseslämä* ‘cohabitation’). Compounds beginning with illative are much frequent. Most of these have later been replaced by derivations (e.g. *eteenpano* Europaeus Klvs 1845 n:o 4 > *esitys* ‘presentation, performance’; *peräänkatsomus*, Cholera 1831: 7 > *valvonta* ‘supervision’), but some compounds of this type still occur in Modern Finnish (*pyhiinvaellus* ‘pilgrimage’; *pyhiinvaeltaja* ‘pilgrim’; *päähänpisto* ‘whim, sudden idea’; *yhteenlasku* ‘addition’). Compounds with prolativ have been replaced with other expressions (e.g. *ylitsepanija* and *-muuttaja*, Wikman 1829 sv. Öfversättare > *kielenkääntäjä* ‘translator’; *ylitse-* and *lävitsekatsaus*, Europaeus 1853 sv. Öfverblick > *yleiskatsaus* ‘overview’), but instructive has persevered in surprisingly many compounds (*omintakeinen* ‘original’; *vastenmielinen* ‘repulsive’; *vastenmielisyy*s ‘repulsion’), some of them formed from numerals (*kaksintaistelu*, ‘duel’, already in Krohn 1872: 6; *yksinoikeus* ‘monopoly’; *yksinvaltainen* ‘autocratic’; *yksinvaltias* ‘autocrat’). The proportion of compounds having parts in other cases than nominative and genitive has, however, been significantly reduced (to 1.3 %).

Modern Finnish compounds have, according to the material, become more dominated by the nominative (85.3 %, increase 4.4 percent points) and restricted slightly more to formations of only two words (97.2 %, increased by 1.5 percent points). The proportion of compounds is, however, in words still occurring in Modern Finnish nearly the same (44.5 %, decreased by only 1.0 percent points). Many compounds have been replaced by derivations, but on the other hand a great number of open compounds have developed into genuine compounds.

Derivatives

Though the Finnish language is rich in derivatives, the proportion of derivatives in the material (40.6 %) is clearly smaller than that of compounds. Three fourths of these are nominal derivatives (on these in Modern Finnish e.g. Collinder 1960: 224–226; Hakulinen 1961: 83–145; Fromm 1982: 124–132). These are formed by 66 different derivational suffixes (including participles *jA*, *nUt*, *ttU* and *vA*). The first 19th century occurrences of these derivatives are from the following decades.

1810s	13	e, i, inen, le, llinen, mA, minen, mUs, ne, O, os, Us, Uus
1820s	27	eA, iAs, in, iO, isA, isAs, jA, kAs, ke, kkA, kki, kkO, lA, lAinen, nen, nki, nne, ntO, vA(-participes), ri, stO, tAr, tOn, ttU, U, UU, vAs
1830s	13	jAinen, kAinen, (s :)kse, lAs, lO, mO, niekkA, ntA, nti, nUt, Ue, Ut, vA(-adjectives)
1840s	10	ine, lmA, mAInen, mOInen, nnA, re, te, tti, tto, UstA
1850s	2	nA, nKO
1860s	1	elO

All these derivational suffixes were already in use in the period of Old Literary Finnish, though some of them (e.g. *lmA*, *mO*, *Ue*) were rare or used only in folk poems (note especially *tAr*), often in the last quarter of the 18th century only (cf. VKS). Most of the 19th century first occurrences are from 1810s-1830s. Later instances are mainly derivatives which are infrequent or typical to certain authors only. Kilpinen in particular has formed derivatives with *ine*, *lmA* and *te* (e.g. *yline* Kilpinen HMB 1842 n:o 56 ‘ideology’; *valdelma* ‘statistics’, op. cit., *tosite* 1844: 219 ‘conviction’). *ustA*-derivatives were also formed by others (e.g. *ohjusta* Lönnrot 1847 sv. Rättesnöre

‘guideline’). Some words for ‘queen’ were derived with a loan suffix (*hi*)*nnA* (*kuninkaanna*, Lönnrot 1847 sv. Drottning, also *kuninkahinna* Aejmelaeus 1847, 45). The derivatives *mAinen* and *mOinen* only occur in a few isolated instances (*turhamainen*, Lönnrot 1847 sv. Fåfång ‘vain’; *yhdenmoinen* Kilpinen 1847 ‘of one kind’). Other rare derivatives from the 1840’s are *re* (*pölkäre* Europaeus 1847 ‘cube’), *tii* (*kuvatti* Knv 1845 n:o 50 p. 2 ‘imagination’) and *tto* (*vangitto* Lönnrot 1847 sv. Fängelse ‘prison’), from the 1850s *nA* and *nkO* (e.g. *käähkänä* Europaeus 1853 sv. Fängelse ‘prison’; *selinko* Lönnrot 1851 sv. идея ‘idea’), from the 1860s only *elO* (*puikelo* Ahlman 1865 sv. Oval ‘oval’).

The following lists show the most common derivatives in the whole material (first column) and in the words remained in Modern Finnish (second column). There have been both minor and major changes in the popularity of different derivatives, some of these already noticed by Rapola (1945: 147–148).

1. Us	8. stO	1. UUs	8. O, tOn
2. UUs	9. U	2. Us, stO	9. iO, lAinen, ntO
3. inen	10. mUs	3. inen, e	10. kAs
4. e, mA	11. ntO	4. u	
5. llinen	12. lAinen	5. llinen	
6. O	13. oS	6. jA, mA	
7. jA	14. iO	7. Os	

stO-derivatives have become as frequent as *Us*-derivatives by replacing many compounds and loan words (e.g. *Aadeli* ~ *vapaa suku*, Renvall 1823 and *Aadeli-sääty*, Helenius 1838 > *aatelisto* ‘the nobility’). The frequency of *U*-derivatives has also greatly increased, because they have replaced many other deverbal derivatives (e.g. *arvostelus* Smtar 1847 n:o 21 p. 4, *arvostelo* Smtar 1848 n:o 23 p. 2, *arvosteleminen* Smtar 1848 n:o 50 p. 4 > *arvostelu* ‘criticism’; *taistelus*, Helenius 1838, *taistelemus*, Engblom 1845: 177, *taiste*, Tikkanen Smtar 1847 n:o 42 p. 2, *taistelo*, Lindgren 1864: 21 > *taistelu* ‘battle’) and compound words (e.g. *kilvanajo*, *kilvanjuoksu*, both Lönnrot 1836: 152 > *kilpailu* ‘competition’; *neuvonpito*, Smtar 1848 n:o 1 p. 2 > *neuvottelu* ‘negotiations’; *eroitus-merkki*, Helenius 1838 sv. Komma > *pilkku* ‘comma’; *kanssakäyminen*, Juteini 1857: 158 > *seurustelu* ‘social life’). *Os*-derivatives have replaced many *Us*- and *mUs*-derivatives, but also *mA*- and *ntO*-derivatives (e.g. *kääntämys*, *tulkitseemus*, both Wikman 1829 sv. Öfversättning and *tulkinto*, Becker 1843: 9 > *käännös* ‘translation’; *vaihtaus*, Gottlund 1828: 277, *vaihtama* Reinholm 1850, 160–161 > *muunnos* ‘modifica-

tion') and compounds (e.g. *uloskirjoitus*, Helenius 1838 sv. Afskrift > *jäljennös* 'copy'). *iO*-derivatives have replaced especially *Us*, *UUs* and *stO*-derivatives (e.g. *ilmaus*, Innain 1856, *ilmestö*, Lönnrot Mehil 1837 n:o 8 p. 10 > *ilmiö* 'phenomenon'; *yhtyys* Helenius 1838, *yhteyks* Knv 1845 n:o 16 p. 1, *yhdystö* Lönnrot 1847 sv. Bolag > *yhtiö* 'company'), but also many other (e.g. *kolmikko* Renvall 1823, *kolmikas* Wikman 1829 sv. Triangel > *kolmio* 'triangle'; *äänike*, Ingman, E. A. 1834: VII, *äänikäs*, Lönnrot 1847 sv. Vocal, *ääntäjä*, TVS 1821 n:o 24 p. 97, *äänelijäs*, TVS 1821 n:o 24 p. 17, *äänikkä*, Lönnrot LB 1847 p. 266, *ääntäin* Roos 1851: 8 > *ääntiö* 'vowel') and compounds (like *naamapeite*, Tikkanen Smtar 1847 n:o 37 p. 2 > *naamio* 'mask', and *pitkulaispyörö*, Lönnrot 1851 sv. эллипсисъ > *soikio* 'ellipse'). Newcomers in the top ten list of derivatives are caritive adjectives with *tOn* and *kAs*-derivatives, both having replaced *lInen*-adjectives in particular (e.g. *epäsiveydellinen* Godenhjelm 1873 sv. Unsittlich > *siveetön* 'indecent'; *konstillinen* Ahlholm 1830: 11 and *keinollinen* Bonsdorff 1867: 15 > *taidokas* 'skillfull'). Of all derivatives the number of *mUs*-derivatives have decreased most dramatically, because these have to a great extent been substituted by especially *Us*- and *U*-derivatives or other (mainly deverbal) derivatives (e.g. *edellyttämys*, Ahlman 1872 sv. Förutsättning > *edellytys* 'precondition'; *keskustelemus*, LSKH 1845: 29 > *keskustelu* 'discussion'; *happamus*, Nordblad 1837: 46 > *happo*'; *runomus* Polén Mhln 1859 n:o 10 p. 236 > *runoelma* 'poetic work').

Some derivatives are never met among the Modern Finnish equivalents. Most of these are very rare in the whole material (e.g. derivatives *luontevas*, sv. Behändig 'plausible' and *ruokasas*, sv. Närande 'filling' formed by Wikman 1829 and *Ut*-derivatives like *tavut* 'tavu' Lönnrot 1835: XX 'syllable'; the majority of rare derivatives introduced in the 1840s–1860s belong to this category, too). There are, however, more frequent derivatives which have also disappeared. The last new *UU*- and *iAs*-derivatives (*korvuu* 'compensation', Lönnrot 1851 sv. вознаграждение; *käytteliäs* Europaeus 1853 sv. Praktisk 'practical') and participle forms (*kaavaeltu* and *kuvattu* Lönnrot 1851 sv. образованный 'cultivated') in the material are from the 1850s, *ine* and *kkA*-derivatives from the 1860s (*käyttine* Kilpinen KL 1868 n:o 19 'practise'; *yksikkä*, Costiander 1862 'singular'), *le* and *niekkA*-derivatives from the 1870s (*henkile* Kilpinen Vlvj 1881 n:o 7 p. 176 'person'; *vastusniekka* Ahlqvist Kltr 1872 n:o 4 p. 71 'opponent'). The last of the frequent new *minen*-infinitives in the material is from 1880s (*seurusteleminen* Lönnrot 1880, cf. *seurustelu* 'social life'). Deverbal derivatives have replaced many *minen*-

infinitives (Rapola 1945: 147), as well as *UU*-derivatives and participle forms.

Proportion of verbal derivatives in the material is small, only 10 % of all derivatives (on verbal derivatives in Modern Finnish e.g. Collinder 1960: 226–227; Hakulinen 1961: 174–200; Fromm 1982: 132–135). These verbal derivatives have been formed with 28 derivational suffixes. The first 19th century occurrences of these derivatives are from the following decades.

1810s	3	UtA, stU, u
1820s	11	ntA, ntU, OA, OidA, skentele, stA, tA, tse, ttA, UttA, UUttA
1830s	11	Aise, dA, ele, hti, ile, iA, ksU, ltA, OittA, tAA, uTu
1840s	1	tU
1850s	1	ksi
1860s	1	intU

All these derivatives were already in use in Old Literary Finnish, even reflexive derivatives of the type *antauta*, though some derivatives (e.g. *intU*, *ksi*, *UtU*) were very rare (cf. VKS). With the exception of *ksi*- and *intU*-derivatives (e.g. *halvaksia* Lönnrot 1851 sv. пренебрегать ‘despise’; *vaki-intua* Eurén 1860 ‘to be settled’) all the 19th century first occurrences are from the first half of this century.

The following lists show the most common derivatives in the whole material (first column) and in the words still occurring in Modern Finnish (second column).

1. ttA	6. dA	1. stA	6. ele, stU, tAA
2. ele, stA	7. ntU	2. UtU	7. ltA, ntA, ntU,
3. UttA	8. U	3. UttA	OidA, OittA, tse,
4. UtU	9. UtA, tAA	4. ttA	tU, UUttA
5. stU	10. ile, ntA	5. ile, U	

stA-derivatives have become the most frequent, because they have replaced various kind of verbal derivatives meaning change of state (e.g. *soristuttaa*, Erenius 1858 > *jalostaa* ‘to refine’; *somittaa*, Eurén 1860, and *somentaa*, Europaeus 1853 sv. Försköna > *somistaa* ‘to decorate’) as well as *ele*-frequentatives (*tunnella*, Ahlman 1865 sv. Igenkänna > *tunnistaa* Eurén 1860 ‘to identify’; *muodostella*, Smtar 1847 n:o 10 p. 1 > *muodostaa* ‘to form’) and loan words (*justeerata*, Becker 1843: 23 > *tarkistaa* ‘to check’).

Reflexive *UtA*-derivatives and open compounds have been replaced by *UtU*-derivatives (*mukauta*, OVS 1829 n:o 1 p. 3 > *mukautua* ‘to adapt; *polveuta*, Eurén 1860 > *polveutua* ‘to be descended from’; *suhteuta*, Lönnrot 1886, *olla johonkin*, Aschan 1859: 19 and *olla jnkn suhteen*, Europaeus 1853 sv. Förhålla sig > *suhtautua* ‘to take up an attitude’). *UttA*-derivatives have replaced not only simple *ttA*-causatives, but also some open compounds (e.g. *johdattaa*, *saattaa*, *tuottaa*, all by Helenius 1838 sv. Föranleda, Förorsaka > *aiheuttaa* ‘to cause’ < *matkaan-saattaa*, Cholera 1831: 4, ja *matkaansaada*, Canth 1891: 58), though the *UttA*-derivatives may have been longer (*ehdottaa*, Europaeus 1847: 0 > *edellyttää* ‘to presume’; *sovittaa*, Becker 1843: 9 > *sovelluttaa* ‘to adapt, apply’). On the other hand, *ntU*-derivatives have been replaced by shorter *U*-derivatives (e.g. *kehkeentyä*, Varelius 1845: 85 > *kehittyä* ‘to develop’).

Many of the verb derivatives in the material are so rare that not surprisingly there are no examples of them in the words that persist in Modern Finnish. Certain more frequent verb derivatives have also disappeared, such as the previously mentioned reflexive *UtA*-derivatives. Contraction verbs (*dA*) have been replaced by longer, but semantically more distinct derivatives (e.g. *reunata* Kilpinen 1847: 6 > *rajoittaa* ‘to border’; *sisätä* Europaeus 1847 > *sivustaa* ‘to furnish’; *sivuta* Dahlberg 1863: 4 > *sivuuttaa* ‘to pass’). The tendency for semantically more accurate derivation has in many verb derivatives been stronger than the trend favoring shorter expressions. As Rapola (1945) in his study took very little interest in verbs (cf. p. 147) he strongly emphasized the latter tendency for shortening, which is more clearly seen in the development of combined words and derived nouns.

Though some both nominal and verbal derivatives have become rarer or have even disappeared, derivatives have in general become more frequent, unlike all other lexical groups in the material. The proportion of nominal derivatives in Modern Finnish has increased over 7 percent points and that of verbal derivatives over 2 percent points. The sum total of derivatives in the Modern Finnish forms included in the material has grown by 9,7 percent points to 50.3 %. Uncombined words have thus won the majority and derivatives have become the largest lexical group.

Conclusion

When comparing the 19th century expressions to those that have prevailed in Modern Finnish, it becomes clear that the distribution of investigated word types has changed in many ways. According to the database, the proportion of basic words has become even smaller, because basic words were used for

detailed concepts mainly for the lack of more accurate expressions and were later replaced by other word types. The few surviving basic words in Rapola's material are of dialectal or onomatopoeic origin.

The proportion of loan words is also smaller than in the 19th century. It is, however, not clear how systematically Rapola took loan words into consideration. One should also remember that the Modern Finnish entries in Rapola's material represent the situation in the 1930s and 1940s, when attitudes towards loans were more puristic than nowadays. However, the material reveals clearly that loan words have been most persistent in certain disciplines and areas, such as philosophy, natural sciences and politics (cf. Lauerma 2018a: 182–184).

The proportion of open compounds has collapsed in Modern Finnish. Many construction types which were frequent in 19th century Finnish have practically disappeared because they have been replaced by proper compounds or, to a lesser extent, by derivations. Of this development a detailed, albeit dispersed report is given already by Rapola (1945: 132–134, 137, 140–141).

On the other hand, according to the database the proportion of proper compounds in Modern Finnish seems to be about the same as in the 19th century. Rapola (1945: 135–136) has described how also compound words have shortened, but gives no frequencies concerning this (or any other) part of his material. According to the database, Modern Finnish compounds are slightly more restricted to formations of only two words and have clearly become more dominated by the nominative; compounds beginning with other cases than nominative or genitive have become rare, though instructive has persevered in surprisingly many compounds.

Unlike all other lexical groups in the material, derivatives have in general become more frequent. Derivatives have most often replaced other word types (cf. already Rapola 1945: 137–142), including basic words and loans. However, there seem to be no entirely new derivational suffixes when compared to those used in the period of Old Literary Finnish. In spite of the fact that Rapola has collected more material from the 1840s and 1850s than from the previous decades (cf. Lauerma 2018b: 263), the 19th century first appearances of most derivational suffixes are as early as the 1820s and 1830s, when Finnish literary language experienced its most turbulent years of development. There have been clear changes in the popularity of different suffixes, though many of the derivatives in the material are so rare that not surprisingly there are no examples of them in the words that persist in Modern Finnish. Already Rapola (1945: 147–148) noticed that *O-*, *U-* and *Us-*derivatives

have replaced many *minen*-infinitives, but contrary to his claims, *UU*-derivatives have become less frequent. Rapola (op. cit.) also noticed the increased popularity of *stO*- and *kAs*-derivatives and the decline of *ntO*- and *mUs*-derivatives, though he didn't underline the latter one nor did he mention the increased popularity of *tOn*-derivatives. Verbal derivatives were practically ignored altogether by Rapola (op. cit.). Although their number is also limited in the database, they reveal in an interesting way how the tendency for semantically more accurate derivation can in some cases be stronger than the trend favouring shorter expressions.

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