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Iambic inversion in Finnish

Abstract

The modern study of versification is based on the hypothesis that language is rhythmically organized, that metrical patterns are defined by simple rhythmic schemata, and that the two are related by correspondence constraints. Some analyses of the phenomenon of “inversion” in iambic verse reject a central aspect of this hypothesis in positing more complex metrical schemata containing both trochaic and iambic feet. I present evidence against such “trochaic substitution” analyses and demonstrate the iambic character of inverted feet with statistical data from the metrical practice of thirty-six Finnish poets. As a latecomer to the use of statistical evidence in theoretical linguistics I gratefully dedicate this article to one of the pioneers of this method.

1. Language and meter

If correspondence constraints relate metrical patterns to linguistic rhythm, then there are three possible loci of metrical variation: the correspondence constraints, the metrical patterns, and the linguistic rhythm itself (Hanson and Kiparsky 1996, Kiparsky 2005). The first two options are the theoretically interesting ones, and the third is not even a serious alternative in the material at hand, so I will not discuss it further here.

The analytical choice between metrical pattern and correspondence rule can be illustrated with so-called “trochaic inversion” in iambic verse:

- Analysis 1 (metrical pattern): the doctrine of foot substitutions. Line-initially and after major breaks, trochaic feet may be substituted for iambic feet.
- Analysis 2 (correspondence rule): The metrical pattern is uniformly iambic; stressed syllables may occur in Weak positions line-initially and at major breaks.

Similarly, there are two alternative analyses of iambic/anapestic verse in Finnish and other metrical traditions:

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- Analysis 1 (metrical pattern): the doctrine of foot substitutions. Anapestic feet may be substituted for iambic feet under certain conditions.
- Analysis 2 (correspondence constraint): the metrical pattern is uniformly iambic. Weak positions can be split into two syllables under certain conditions.

My thesis can be summarized in the following three points:

- The choice between these alternatives is an empirical matter.
- The correct analysis is in terms of a correspondence constraint.
- The analysis in terms of metrical patterns is excluded in principle. For, since metrical patterns consist of a simple abstract rhythmic structure, they can contain no missing positions, extrametrical positions, syncopation, or other deviations from rhythm. Therefore they must be licensed by the correspondence rules.

Here is a small example from English of the type of empirical evidence that supports locating the variation in the correspondence rules. In English verse, inverted iambs have a different profile from trochaic feet. They preferentially begin with a monosyllabic word, while trochaic feet show a slight preference for polysyllabic words. For example, in Tennyson's iambic work, lines like (1a) outnumber lines like (1b) by about 4 to 1.

- (1) a. **Rapt from** / the fick/le and / the frail (monosyllabic inversion)
b. **Pierces** / the keen / seraph/ic flame (polysyllabic inversion)

But in his trochaic poems, lines like (2a) and (2b) are roughly equally frequent.

- (2) a. **Here a**/bout the / beach I / wandered (monosyllabic trochee)
b. **Dreary** / gleams a/bout the / moorland (polysyllabic trochee)

(3)

	Monosyllables	Polysyllables
Inverted iambs	81%	19%
Trochees	54%	46%

If inversion in iambic lines were treated as the substitution of a trochaic foot for an iambic foot, then these data would be inexplicable. The stress configurations that are disfavored in inverted feet in iambic verse are precisely those which are *avored* in trochaic verse. The conclusion is that inverted feet are iambs, not trochees. In the next section I present a more elaborate argument for the same point from Finnish.

2. A problem: iambic inversion in Finnish verse

Finnish poets differ considerably in whether and to what extent they allow iambic inversion in polysyllabic words (Sadeniemi 1949, Leino 1982:206). In a study of thirty-six Finnish poets, I found that they divide into five distinct groups on this point.

(4) The typology of polysyllabic inversion in Finnish iambic verse

- Group 0: no polysyllabic inversion. Poets in this group allow inversion only when the first word of the inverted foot is monosyllabic. This group includes Koskenniemi, Hellaakoski, and Asunta.
- Group I: inversion allowed in LH- words. Yrjö Jylhä tolerates inversion in polysyllabic words only if their first syllable is Light and the second is Heavy. I did not find this maximally restrictive system of inversion in any other poet.
- Group II: inversion allowed in L- words. This group of poets allows inversion in polysyllables that begin with a light syllable. They include Manninen, Kailas, Viljanen, Harmaja, Lyy, Paloheimo, and Sarkia up to 1937.
- Group III: inversion allowed in L- and HH- words. Many poets invert polysyllables except if they begin with a Heavy-Light sequence of syllables: Noponen, Haahti, Hiisku, E. Leino, Kaatra, Sinervo, Pohjanpää, Erkkö, Pimiä, Oksanen, Cajander, Sarkia in his later work, Siljo, Vaara, early Lönnrot, and Kupiainen.
- Group IV: inversion allowed in any type of polysyllable. This group included Tynni, Vuorela, Kivimaa, Liinamaa, Kramsu, Juvonen, J. Haavio, Onerva, Kajanto, Mustapää, and Lönnrot in his later work.

The treatment of inversion is a consistent and stable feature of a poet's metrical practice, except for two poets who relax their practice by one notch in mid-career. In his early lyrics (up to 1845) Lönnrot belongs to Group III, in his later verse (from 1857), notably his experiments in hymn writing, he switches to Group IV. Sarkia starts out in Group II, and then, after his Italian journey which radically changed the character of his poetry, he adopts the looser style of Group III.

The relevant correspondence constraint is:

- (5) A Weak position cannot be affiliated with a stressed syllable, except at the beginning of a line,
- (i) in a monosyllabic word,
 - (ii) in a polysyllabic word that satisfies certain conditions on syllable weight.

Correspondence rule (5i), identical to that of Russian and German verse, also characterizes the metrical practice of the Finnish poets in Group 0. Note that its English

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counterpart contains precisely the same conditions, but applied disjunctively rather than conjunctively:

- (6) A Weak position must not be affiliated with a stressed syllable, except at the beginning of a line, or in a monosyllabic word.

The departures from the most conservative norm represented by Group 0 are motivated by the phonology of Finnish. Because every word begins with a stressed syllable, obedience to (5i) forces all iambic lines to begin with a monosyllabic word, which is rather boring. The added licence in (5ii) ensure that at least some of the polysyllabic vocabulary becomes available at the beginnings of iambic lines. The variants of (5ii) represented in (4) follows an orderly implicational pattern. If any inversion in polysyllables is allowed at all, it is allowed in polysyllables which begin with a sequence of a Light syllable and a Heavy syllable, where the mismatch between stress and the Weak/Strong metrical pattern is maximally compensated for by the harmonizing quantity relations. The license is successively extended to greater quantitative mismatches.

The different versions of (5ii) reflect the constraints in (7).

- (7) a. *H/W: No Heavy syllables in Weak position.
b. *L/S: No Light syllables in Strong position.

These constraints combine in different ways to give the typology in (8):

- (8) a. Group 0: No inversion with polysyllables. (5ii) is inapplicable.
b. Group I: (5ii) with *H/W, *L/S. No violations either of (7a) or of (7b).
c. Group II: (5ii) with *H/W. No Heavy syllables in Weak position (7a).
d. Group III: (5ii) with *H/W&L/S: No combined violations of (7a) and (7b) (constraint conjunction).
e. Group IV: (5ii) unconstrained. Polysyllables of any kind may invert.

Note that the relation between the disjunctive application of the constraints in (8b) and the conjunctive application in (8d) is analogous to the relation between (6) and (5i). If inversion in iambic lines were treated as substitution of trochaic feet, then these weight restrictions in inverted feet would be inexplicable. The weight configurations that are prohibited or disfavored in inverted feet in iambic verse are precisely those which are favored in trochaic verse. The conclusion is that inverted feet are iambs, not trochees.

But what about poets of group IV, who allow inversion regardless of syllable weight? Could their inversion be trochaic substitution? Leino (1982:208) has suggested

precisely this. He argues that the quantitatively unrestricted inversion in Group IV makes the system so opaque that poets have radically reanalyzed the meter. In the reanalyzed Group IV metrical grammar, “inversion” is no longer the result of a correspondence rule. It has become part of the basic metrical pattern.

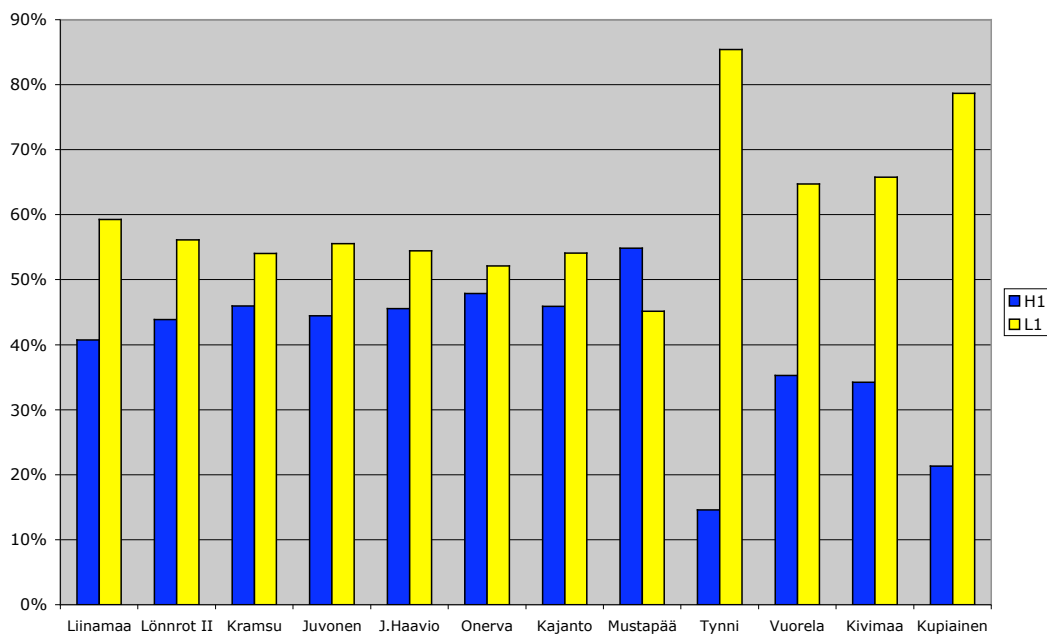
Leino’s suggestion presents an interesting challenge to metrical theory. On the view I explore here, there can be no such thing as a trochaic foot in the basic iambic schema. If meter is defined by simple rhythmic patterns, “trochaic substitution” must be due to a correspondence rule such as (5ii).

3. Quantitative evidence for the correspondence rule approach

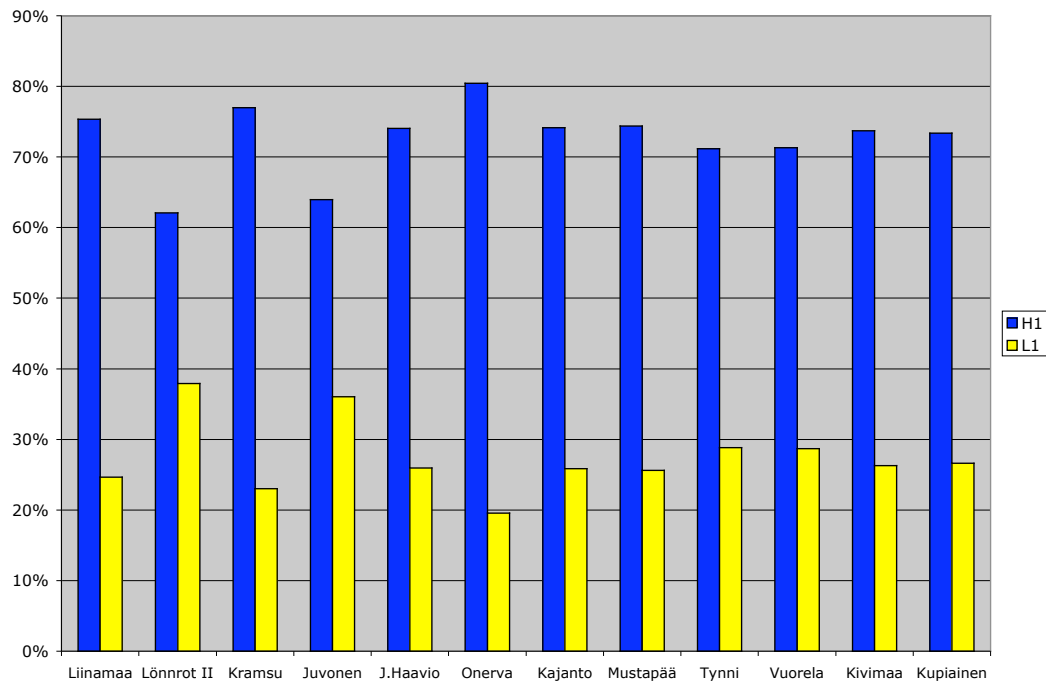
In order to test this prediction empirically, I compared the quantitative profile of line-initial polysyllabic words in the iambic and trochaic verse of thirty-two poets. I collected a total of 31,562 iambic lines containing 6,233 inversions, plus 10,655 trochaic control cases, and determined the distribution in the work of each poet of the four quantitative types HL-, HH-, LL-, and LH-. A summary of my findings is presented in Tables I and II in the Appendix. A fuller account will appear elsewhere.

The principal conclusion is that all poets, including in particular those of Group IV, treat inverted iambs quite differently from trochees. The following charts for Group IV poets show that after a line break Heavy syllables are strongly preferred in trochaic verse, while Light syllables are relatively more favored to varying degrees in inverted iambs.

IV Inverted iambs: H1 vs. L1



IV Trochees: H1 vs. L1



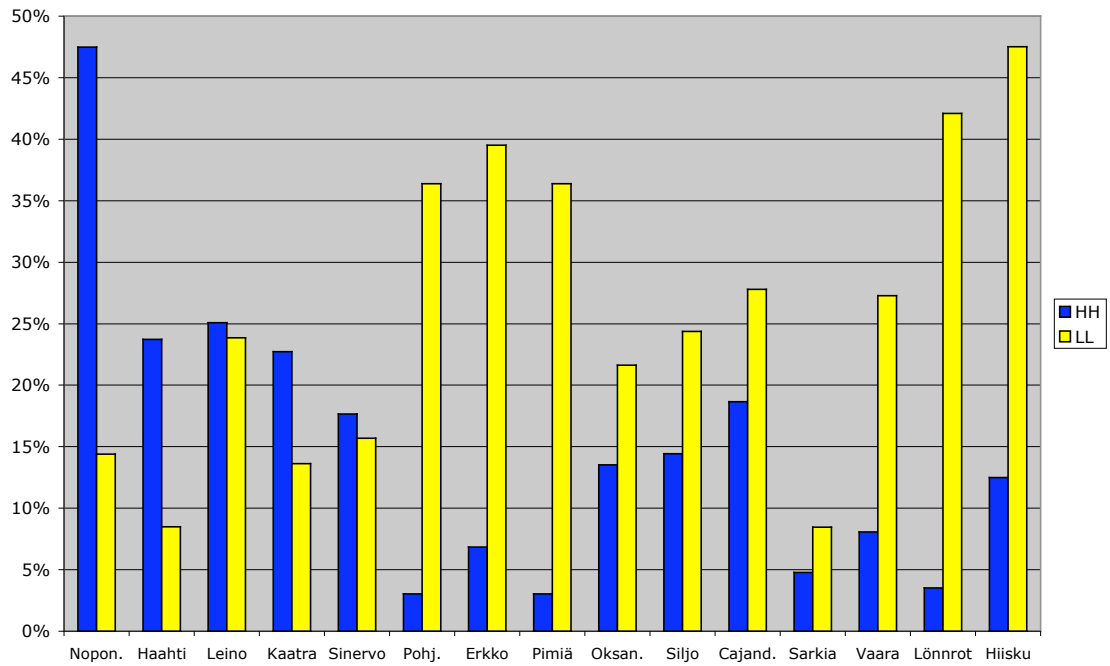
I conclude that the same hierarchy of mismatches between syllable weight and the iambic template that governs the categorical typology in (8) also governs the preferences in usage among the options within each Group.

The first chart also reveals an unexpected difference within Group IV. Four poets (Tynni, Vuorela, Kivimaa, and Kupiainen) avoid Heavy syllables in the Weak position of iambs significantly more than the others. In terms of our formal analysis, these especially “weight-sensitive” poets assign a relatively greater importance to constraint (7i).

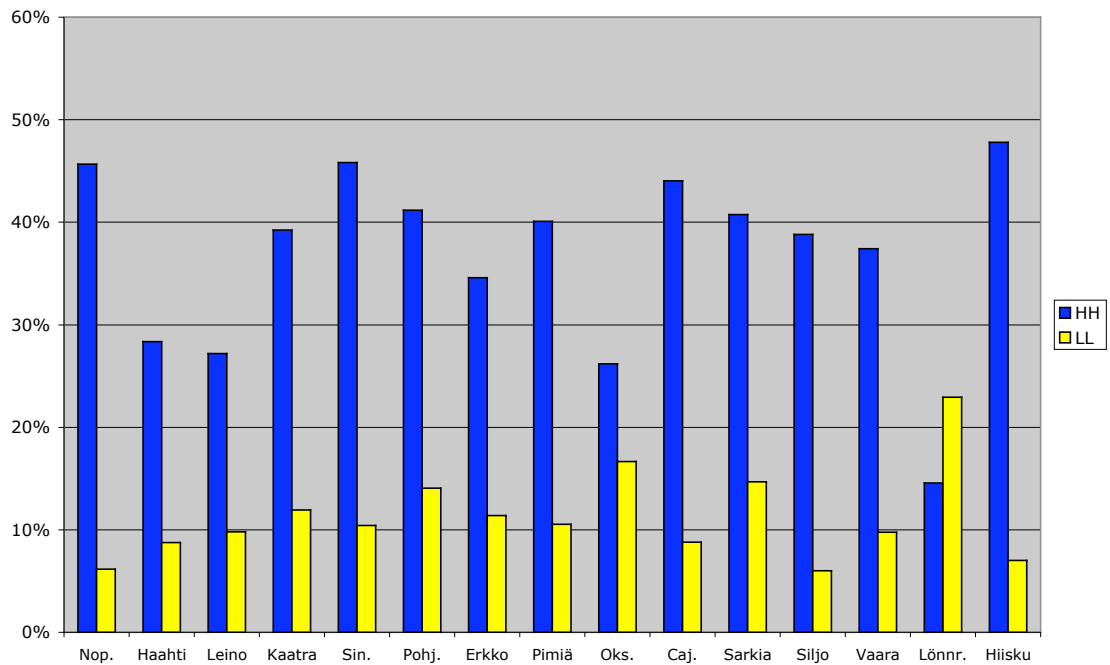
An analog to this dimension of metrical variation appears also in Group III, as can be seen in the corresponding chart for their iambs on the next page. Although the categorical exclusion of HL- in these poets’ iambs lowers the overall frequency of Heavy syllables in Weak position in their work, a comparison of the distribution of HH- and LL- easily separates the two types. The chart shows that in this group the more weight-sensitive style is dominant (ten out of fifteen poets).

In this group as well, inverted iambs are again sharply different from the basic trochees in the next chart. In the face of this evidence it is simply impossible to maintain the conception of iambic inversion as “trochaic substitution”.

III Inverted iambs: HH vs. LL



III Trochees: HH vs. LL



4. Conclusion

Iambic inversion in Finnish is a challenge for the hypothesis that versification patterns are defined by simple rhythmic schemata and highly constrained correspondence rules. I have shown that it actually provides good evidence for the hypothesis. The argument depends crucially on quantitative patterns of preference revealed by statistical analysis of large corpora of poetry.

References

- Hanson, Kristin, and Paul Kiparsky (1996) A theory of metrical choice. *Language* 72: 287-335.
- Kiparsky, Paul (2005) A modular metrics for folk verse. In Friedberg, Nila and Elan Dresher (eds.) *Formal Approaches to Poetry*. Berlin: Mouton de Gruyter.
- Leino, Pentti (1982) *Kieli, runo ja mitta: suomen kielen metriikka*. Pieksämäki: SKS.
- Sadeniemi, Matti (1949) *Metriikkamme perusteet*. Helsinki: SKS.

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Appendix

* Iambic	HL	HH	LL	LH	Inv.	Lines	% Inv.
1802 Lönnrot (1857-)	6.5%	37.3%	19.1%	37.1%	367	1195	30.7%
1855 Kramsu	2.7%	43.2%	10.8%	43.2%	74	714	10.4%
1876 Liinamaa	17.7%	23.0%	20.4%	38.9%	113	454	24.9%
1882 Onerva	4.3%	43.6%	23.1%	29.1%	117	464	25.2%
1889 Vuorela	17.6%	17.6%	33.3%	31.4%	51	490	10.4%
1895 Kajanto	17.2%	28.7%	14.8%	39.3%	122	267	45.7%
1899 Mustapää	27.8%	27.0%	17.3%	27.8%	248	898	27.6%
1904 J.Haavio	7.6%	38.0%	24.1%	30.4%	79	383	20.6%
1904 Kivimaa	17.4%	16.9%	24.2%	41.6%	219	1100	19.9%
1909 Kupiainen	3.7%	17.6%	22.1%	56.6%	136	556	24.5%
1913 Tynni	4.9%	9.6%	37.0%	48.4%	384	689	55.7%
1919 Juvonen	13.5%	31.0%	24.6%	31.0%	126	360	35.0%
Total Group IV	11.7%	27.8%	22.6%	37.9%	2036	7570	26.9%
1802 Lönnrot (-1845)	0.0%	3.5%	42.1%	54.4%	57	168	33.9%
1826 Oksanen	0.0%	13.5%	21.6%	64.9%	37	119	31.1%
1846 Cajander	0.2%	18.7%	27.8%	53.3%	493	2594	19.0%
1849 Erkko	0.0%	6.8%	39.5%	53.7%	205	1420	14.4%
1862 Noponen	0.0%	47.5%	14.4%	38.1%	139	850	16.4%
1874 Haahti	0.0%	23.7%	8.5%	67.8%	59	562	10.5%
1878 Leino	0.0%	25.1%	23.9%	51.1%	1396	5509	25.3%
1882 Kaatra	0.0%	22.7%	13.6%	63.6%	22	298	7.4%
1888 Siljo	0.3%	14.4%	24.4%	60.9%	312	951	32.8%
1889 Pohjanpää	0.0%	19.0%	19.0%	61.9%	42	457	9.2%
1897 Pimiä	0.0%	3.0%	36.4%	60.6%	33	237	13.9%
1903 Sarkia (1938-)	0.0%	4.8%	8.5%	86.8%	272	951	28.6%
1903 Vaara	0.0%	8.1%	27.3%	64.6%	99	447	22.1%
1912 Sinervo	0.0%	17.6%	15.7%	66.7%	51	352	14.5%
1912 Hiisku	0.0%	12.5%	47.5%	40.0%	40	209	19.1%
Total Group III	0.0%	16.1%	24.7%	59.2%	3257	15124	21.5%
1872 Manninen	0.0%	0.0%	16.5%	83.5%	224	1755	12.8%
1898 Lyy	0.0%	0.0%	22.1%	77.9%	95	521	18.2%
1900 Viljanen	0.0%	0.0%	32.4%	67.6%	182	1032	17.6%
1901 Kailas	0.0%	0.0%	7.4%	92.6%	27	193	14.0%
1903 Sarkia (-1937)	0.0%	0.0%	11.6%	88.4%	69	449	15.4%
1913 Harmaja	0.0%	0.9%	24.4%	74.7%	225	1315	17.1%
1910 Paloheimo	0.0%	0.0%	31.6%	68.4%	19	227	8.4%
Total Group II	0.0%	0.1%	20.9%	79.0%	841	5492	15.3%
1903 Yrjö Jylhä	0.0%	0.0%	0.0%	100.0%	99	227	43.6%
Total Group I	0.0%	0.0%	0.0%	100.0%	99	227	43.6%
1885 Koskenniemi	0.0%	0.0%	0.0%	0.0%	0	2233	0.0%
1904 Asunta	0.0%	0.0%	0.0%	0.0%	0	330	0.0%
1893 Hellaakoski	0.0%	0.0%	0.0%	0.0%	0	586	0.0%
Total Group 0	0.0%	0.0%	0.0%	0.0%	0	3149	0.0%
Grand total iambic					6233	31562	19.7%

Table I: Iambic inversions

*	Trochaic	<i>HL</i>	<i>HH</i>	<i>LL</i>	<i>LH</i>	<i>Lines</i>
1802	Lönnrot (1857-)	44.8%	17.2%	19.7%	18.2%	203
1855	Kramsu	40.7%	36.3%	10.1%	12.9%	582
1876	Liinamaa	38.1%	37.3%	10.9%	13.7%	641
1882	Onerva	38.2%	42.2%	12.4%	7.1%	225
1889	Vuorela	28.2%	43.1%	13.4%	15.2%	610
1895	Kajanto	42.7%	31.5%	9.0%	16.9%	89
1899	Mustapää	30.9%	43.5%	13.7%	11.9%	664
1904	J.Haavio	27.7%	46.4%	9.4%	16.6%	235
1904	Kivimaa	32.0%	41.7%	8.7%	17.6%	403
1909	Kupiainen	35.3%	38.1%	6.0%	20.6%	218
1913	Tynni	39.2%	32.0%	11.1%	17.7%	503
1919	Juvonen	32.8%	31.2%	20.2%	15.8%	247
Total Group IV		35.9%	36.7%	12.1%	15.4%	4620
1802	Lönnrot (-1845)	58.3%	14.6%	22.9%	4.2%	48
1826	Oksanen	44.0%	26.2%	16.7%	13.1%	84
1846	Cajander	37.2%	44.1%	8.8%	9.9%	454
1849	Erkko	43.6%	34.6%	11.4%	10.4%	422
1862	Noponen	40.3%	45.7%	6.2%	7.8%	357
1874	Haahti	53.6%	28.4%	8.8%	9.3%	194
1878	Leino	54.9%	27.2%	9.8%	8.2%	184
1882	Kaatra	37.3%	39.2%	13.6%	11.5%	260
1888	Siljo	39.3%	38.8%	11.9%	15.8%	183
1889	Pohjanpää	31.5%	41.2%	14.1%	13.3%	782
1897	Pimiä	38.3%	40.1%	10.5%	11.0%	399
1903	Sarkia (1938-)	29.9%	40.8%	14.7%	14.7%	184
1903	Vaara	39.6%	37.4%	9.7%	13.2%	318
1912	Sinervo	33.3%	45.8%	10.4%	10.4%	144
1912	Hiisku	32.5%	47.8%	7.0%	12.7%	228
Total Group III		40.9%	36.8%	11.8%	11.0%	4241
1872	Manninen	40.5%	40.5%	6.8%	12.3%	400
1898	Lyy	41.6%	40.3%	9.6%	8.6%	303
1900	Viljanen	36.0%	42.5%	9.3%	12.1%	247
1901	Kailas	39.8%	34.7%	14.3%	11.2%	98
1903	Sarkia (-1937)	26.2%	41.8%	13.3%	18.7%	225
1913	Harmaja	32.7%	32.0%	18.1%	17.2%	309
1910	Paloheimo	29.3%	47.9%	8.0%	14.9%	188
Total Group II		35.2%	40.0%	11.3%	13.6%	1770
1903	Yrjö Jylhä	41.9%	44.4%	6.3%	7.5%	160
Total Group I		41.9%	44.4%	6.3%	7.5%	160
Total trochaic						10791

Table II: Initial trochees

