

METRICAL EVIDENCE FOR AN INTERLUDE THEORY OF WEIGHT

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INTRODUCTION

1. The phenomenon:
quantity of $V\#CCV$, $VC\#V$, $VC\#CV$ in quantitative meter (Greek and Latin.)
2. Argument:
 - a. The duration of the entire Consonantal Interlude (CI; C_0 -string separating nuclei) determines weight. Weight is, in part, independent of where syllable boundaries fall.
 - b. Short-CI clusters: e.g. stop+liquid. I suggest they are compressible. When compressed, they generate short CI's. Preceding syllables can be light.
 - c. Long-CI clusters: e.g. stop+obstruent, obstruent+stop. These are incompressible. They can only generate long CI. Syllables to their left cannot be light.
3. The main new finding:
When CC is not compressed, $V_1\#CCV_2$ cannot occur in the meter if V_1 is metrically weak, whether it is parsed as $V_1\#.CCV_2$ or as $V_1\#C.CV_2$
4. Analysis outlined:
Two conditions must be met for a syllable to be assigned to a weight category.
 - a. syllable composition: $\check{\sigma}$ contain just V rhymes; $\bar{\sigma}$ contain VX rhymes.
 - b. interval duration:
 - $\check{\sigma}$ require short V-to-V intervals, hence short C-Interludes;
 - $\bar{\sigma}$ require long V-to-V interval; a short V must be followed by long CI

With incompressible, long CIs, $V_1\#CCV_2$ strings, if parsed as $V_1.CCV_2$, cannot qualify as either light or as heavy: they remain metrically unusable and are avoided for that reason.

INTERVAL THEORIES OF WEIGHT

5. Two VCCV parses in the meter of comic poets (Aristophanes, Plautus):
 - a. $aksa = \bar{\sigma}\sigma$ (Heavy-X) same metrical distribution as unambiguously heavy $a:ka$
 - b. $akra = \check{\sigma}\sigma$ (Light-X) same metrical distribution as unambiguously light aka
6. The constituent theory of weight (CTW): $\bar{\sigma}$ contains a V+X constituent.
 - a. $aksa = \bar{\sigma}\sigma$ (Heavy-X) because the constituents are $[ak][sa]$
 - b. $akra = \check{\sigma}\sigma$ (Light-X) because the constituents are $[a][kra]$
7. A strong interval theory of weight (ITW): $\bar{\sigma}$ is a V followed by a long interval to the next V.
 - a. $aksa = \bar{\sigma}\sigma$ (Heavy-X) because the ks forms a long CI, e.g. $a-ks-a$
 - b. $akra = \check{\sigma}\sigma$ (Light-X) because the kr forms a short CI, e.g. $a-k'-a$

8. A concrete implementation of the strong ITW starts from the idea that interval length relates to acoustic duration; and it seeks to explain differences in duration among otherwise similar clusters, e.g. *ks* vs. *kr*.

- Weight is determined by the acoustic duration of the entire CI. (Sturtevant 1922).
- CI-Duration is determined by cluster compressibility, i.e. extent of possible inter-consonantal overlap.
- Extent of overlap is determined by the perceptual recoverability of CI elements, esp. C_1 . (Mattingly 1981): *kr* affords greater overlap than *ks*, because *r* masks less than *s* the release cues to *k*'s presence and identity

9. Abstract implementations of the ITW: *ks* is two C's, *kr* is k' , one C.

Fujimura and Lovins 1978; Hirst 1985; Lowenstamm 2006; San 2002; Steriade 1994.

10. Different versions of the strong ITW's share an idea: syllable division is irrelevant to weight

- *aksa* and *akra* are assigned to different weight classes, even if they were divided in the same way: *a.ksa*, *a.kra* (Dennison 1906, Hale 896; Herrmann 1929: *a-ksa*, *a-hta* hyphenations in Greek, Latin: a visible minority).

- or even if not divided at all.

(Sturtevant 1922: confusion among Greek grammarians on syllable-division)

- despite this variation on how to divide them, the **weight** of *aksa*-type strings was invariant: they're always scanned $\bar{\sigma}$ (Heavy-X)

EVIDENCE FOR THREE COMPONENTS OF THE CONCRETE ITW

11. Points to establish

- Weight relates to duration of the CI:
heavy syllables are followed by longer CI's than light ones
- Longer CI relates to decrease in C_1 - C_2 overlap
- Overlap relates to perceptibility of C_1 : less overlap in initial clusters where C_2 is more likely to mask C_1 cues.

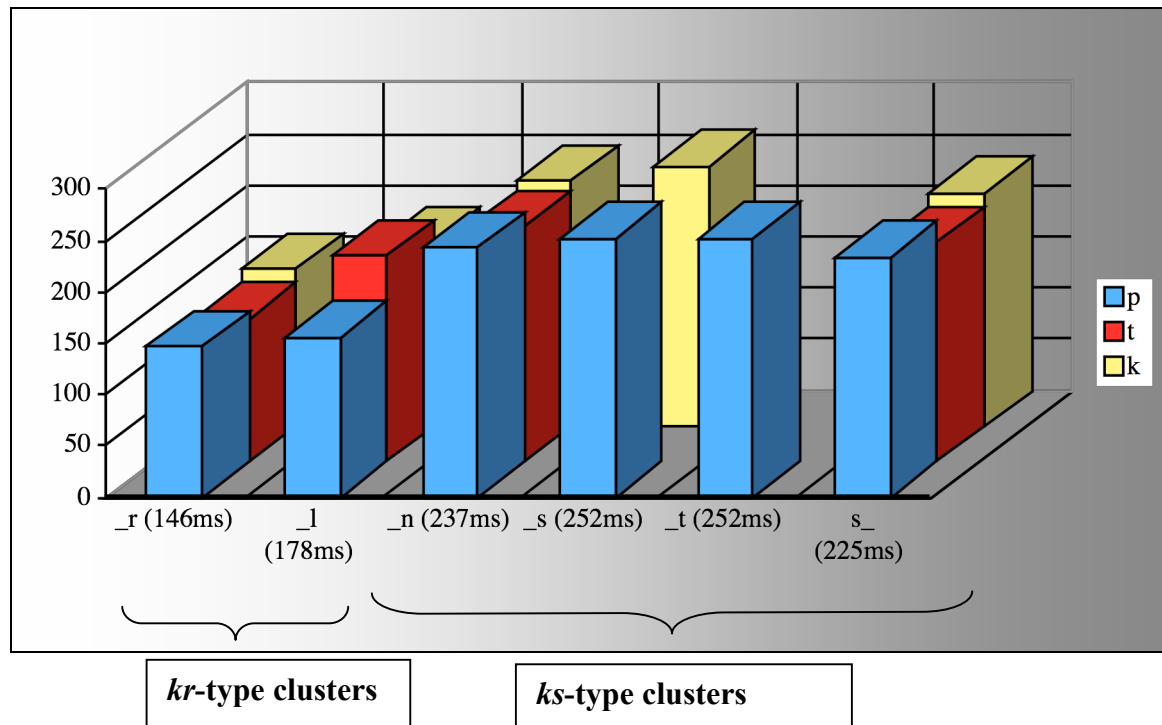
12. Stress and weight: well formedness judgments of 26 *famaCCa* nonce words,
2 Italian speakers (Milano, Rome).

Average Ratings (best = 7, worst = 1):

	• <i>famáCCa</i> : all CC	5.8 for one speaker, 7 for the other.
<i>kr</i> -clusters →	• <i>fámaCCa</i> : CC= TR ($\neq tl$)	5 for both.
	• <i>fámaCCa</i> : CC= <i>tl</i>	3.5
<i>ks</i> -clusters →	• <i>fámaCCa</i> : CC= Tt, Ts, Tn	2.2

As expected, *ks*-type clusters act as heavy: they tend to keep stress on the preceding V.

13. Weight and CI-duration of *ks*- and *kr*-type clusters: Italian data from McCrary 2007:136¹
 Durations measured in 24 nonsense [páCCa] words; 51 speakers of Standard Italian (Tuscany).



- Long CI's can't be attributed to the moraic status of C₁ (but see Broselow et al.1997)
- C duration in sonorants and *s* varies very little by position (C₁ vs. C₂):
 “moraic” *r* in *par.ka* is as short as “non-moraic” *r* in *pa.kra*
 - C₁ duration varies in heavy C₁C₂:
 sonorants shortest (66ms); obstruents before non-liquids longest (131ms).
 - judgments of syllable division vary:
 only 55% of responses to C_n, C_s, C_t clusters are heterosyllabic (p.31)

Long CI's have an effect on linguistic rhythm: but, in this data, the effect is not mediated by moraic structure or syllabic constituency

14. Duration and overlap:

One source of CI differences may be the extent of overlap between C₁ and C₂: at equal articulatory duration, a more extensively overlapped C will sound shorter.²

¹ McCrary (2007) argues for a different Interlude Theory: V₁ duration is an inverse function of CI-duration. She does not discuss weight per se but does document correlations between CI duration and intuitions of heterosyllabic assignment.

² In Italian, however, there is another source of CI differences between *kr*-type and *ks*-type clusters: stops contrast in length before glides and liquids – e.g. *akra* vs. *akkra* – but not before other C's – e.g. **akksa* – or after any C. In the position of length contrast, short stops are much shorter, a contrast polarization effect: cf. McCrary 2007:161 for discussion.

15. Overlap and perceptibility: Degree of overlap is reduced when cues to C₁ are more likely to be masked by C₂

- Byrd and Tan (1996); Chitoran, Byrd and Goldstein (2002).
- Wright (1996): 2 types of initial CC in Tsou, at 3 rates of speech, wrt measures of overlap.
 - (a) C₁ likely to be masked by C₂ under increased overlap: TT (pk, pt).
Overlap within these clusters is very stable across different speech rates.
 - (b) C₁ recoverable, based on internal cues, despite overlap by C₂: NT, FT, tsT
Overlap substantially increases at faster rates.

**THE EVIDENCE OF QUANTITATIVE METER
ALIGNMENT EFFECTS IN A.GREEK**

16. One challenge to the strong ITW: syllable-morpheme alignment effects

- VC#CV sequences are always scanned as $\bar{\sigma}$
- *akra* vs. *ak#ra* contrast for many Greek poets (below): $\check{\sigma}$ vs. $\bar{\sigma}$

17. Comparison between the weight of cross-boundary and word internal VC(C)V sequences

	Across #	Weight in meter	Word medial	Weight in meter
a.	VC#V (e.g. ak#a)	$\check{\sigma}^1$	VCV (aka)	$\check{\sigma}$
Rightward resyllabification is obligatory here.				
b.	VC#CV (e.g. ak#ra)	$\bar{\sigma}^2$	VCCV (akra)	$\bar{\sigma}$ or $\check{\sigma}$
Rightward resyllabification is impossible here.				
c.	V#CCV (e.g. a#kra)	$\bar{\sigma}$ or $\check{\sigma}$ or avoided		
d.	V#CCV (e.g. a#ksa)	$\bar{\sigma}$ or avoided	VCCV (aksa)	$\bar{\sigma}$
Sequences with potential for leftward resyllabification are avoided.				

^{1,2}Devine and Stephens 1995

18. Initial Greek clusters: boxed clusters are labeled TR (*muta-cum-liquida*) and assumed to be compressible, as in Italian.

a. Biconsonantal

C ₂ \ C ₁	T	T ^h	D	S	N	l	r
T	pt, kt			ps, ks	pn, kn, tm	pl, kl, tl	pr, kr, tr
T ^h		p ^h t ^h , k ^h t ^h			p ^h n, t ^h n, k ^h n	p ^h l, k ^h l, t ^h l	p ^h r, k ^h r, t ^h r
D			bd, gd		dn, gn, dm, (gm)	bl, gl	br, gr, dr
S	sp, st, sk	sp ^h , st ^h , sk ^h	sb, sd, sg		sm		
N					mn		

b. Triconsonantal:

C ₁ C ₂ \ C ₃	l	r
sT	spl, skl	str
sT ^h	(st ^h l)	sp ^h r, (sk ^h r)

Medial clusters are obtained by adding the following: geminates, TTL sequences (e.g. *ptr*, *k^ht^hr*) and sonorant-initial sonority falls or dips (e.g. *lm*, *rg*, *mbr*, *lktr*).

19. Scansion of VTRV in different Greek poets

Date	Poet	Medial (VTRV)	Initial (V#TRV)	Source
9 th -8 th BC	Homer, Hesiod	$\bar{\sigma}\sigma$	$\bar{\sigma}\sigma$, rarely $\check{\sigma}\sigma$	Hartel, apud Schade 1908; this study
7 th BC	Theognis	$\bar{\sigma}\sigma$, occasionally $\check{\sigma}\sigma$	$\check{\sigma}\sigma$, occasionally $\bar{\sigma}\sigma$	this study
6 th BC	Pindar, Solon	$\bar{\sigma}\sigma$ and $\check{\sigma}\sigma$	$\check{\sigma}\sigma$, occasionally $\bar{\sigma}\sigma$	this study; Schade 1908
5 th -4 th BC	Sophocles	$\bar{\sigma}\sigma$ and $\check{\sigma}\sigma$	$\check{\sigma}\sigma$, rarely $\bar{\sigma}\sigma$	Schade 1908
	Critias	$\check{\sigma}\sigma$, rarely $\bar{\sigma}\sigma$	$\check{\sigma}\sigma$	
	Aristophanes	$\check{\sigma}\sigma$, rarely $\bar{\sigma}\sigma$	$\check{\sigma}\sigma$	

20. Scansion of other clusters

	Medial (VCCV, CC ≠ TR)	Initial (V#CCV, CC ≠ TR)
All periods, all dialects	$\bar{\sigma}\sigma$	$\bar{\sigma}\sigma$

21. The L-Alignment of words to syllables has an effect on compressible CC's throughout the history of Greek, for poets with otherwise different syllabification patterns:

- a. VT#RV is scanned $\bar{\sigma}\sigma$ even when VTRV is scanned $\check{\sigma}\sigma$ (Aristophanes; Latin: Plautus)
Align L >> *Coda >> *Complex
- b. V#TRV scanned $\check{\sigma}\sigma$, while medial VTRV is variable, mostly $\bar{\sigma}\sigma$ (Theognis)
Align L (>>) *Complex (>>) *Coda

22. Unattested patterns:

- If Align L is a constant factor, why is VC#V never $\bar{\sigma}\sigma$?
This scansion would be predicted by Align L >> Onset

	Across #	Weight in meter	Word medial	Weight in meter
a.	VC#V (e.g. ak#a)	$\bar{\sigma}\sigma$	VCV (e.g. aka)	$\check{\sigma}\sigma$

- Align L seems to be variably ranked wrt competing phonotactics (e.g. Align >> *Coda but *Complex >> Align)
Then why do we never find an effect of the ranking *Coda >> Align L?

	Across #	Weight in meter	Word medial	Weight in meter
b.	VC#CV (e.g. ak#ra)	$\check{\sigma}\sigma$	VCCV (e.g. akra)	$\check{\sigma}\sigma$

23. Summary thus far:

- there is variation in the parsing of medial and initial TR within/across Greek dialects/stages
- all other clusters are invariant.
- despite this variability, a constant preference is seen for left-edge alignment in CC clusters, both for #CC and for C#C.

b. V_1 is in weak-light position (Homer, A528):
 $V_1\#CCV_2$ scanned $\check{\sigma}_w \sigma$, interpretable as $V_1\#.CCV_2$. Rare.

• E:ĩ kaj kuane:ĩsin ep' op^hrusi neuse Kronio:n
 'He spoke. And the son of Cronos nodded with somber brows.'

• E:ĩ kaj kuan e:ĩsine p'op^hrusi neuse Kro nio:n
 [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \sigma_w$]

c. V_1 in weak-heavy position (Homer, A439):
 $V_1\#CCV_2$ scanned $\bar{\sigma}_s \sigma$, interpretable as $V_1\#C.CV_2$.

Virtually nonexistent outside the first foot, very rare even there.

• Ek de Khryse:is ne:os be:ĩ pontoporoĩo 'Out of the sea-faring ship walked Chryseis.'

• ekde^h ry:se: isne: osbe:ĩ pontopo roĩo
 [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \sigma_w$]

Schade's (1908) parse for A439 assumes an archaic trochee-initial option for dactylic lines.

$V_1\#CCV_2$: does not occur in weak-heavy position.

• ekde^h k^hry:se: isne: osbe:ĩ pontopo roĩo
 [$\bar{\sigma}_s \check{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \sigma_w$]

31. Frequencies of $V_1\#CCV_2$ in the 3 metrical positions in the 1949 lines of Iliad A, B, G.

- | | |
|--|--|
| a. $V_1\#C.CV_2$ in strong position ($\bar{\sigma}_s \sigma$) | 293, once in 6 lines |
| b. $V_1\#T.RV_2$ in strong position ($\bar{\sigma}_s \sigma$) | 179, once in 11 lines |
| c. $V_1\#.TRV_2$ in weak light ($\check{\sigma}_w \sigma$) | 23, once in 85 lines |
| d. $V_1\#.CCV_2$ ($\neq TR$) in weak light ($\check{\sigma}_w \sigma$) | basically never (5 x, special words) |
| e. $V_1\#C.CV_2$ in weak heavy ($\bar{\sigma}_w \sigma$): | basically never
(1x/1949 on Schade's parse) |

32. Pre-analysis reminder: Homer (and all early stages of Greek) avoids all complex onset parses

Heterosyllabic parse of medial VTRV: *tr* and *kn* in the Illiad (A16)

• Atreidai te kai alloi eykne:mi:des ak^haioi 'Atrids and other well-greaved Achaians'
 • [atrei] [daĩtekaⁱ] [alloⁱe] [ykne:] [mi:desa] [k^haioĩ]
 [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \bar{\sigma}_w$] [$\bar{\sigma}_s \check{\sigma}_w \check{\sigma}_w$] [$\bar{\sigma}_s \sigma_w$]

30. Initial analysis: based on Align and attraction to strong position

- $V_1\#.CCV_2$ occurs, albeit infrequently, in weak light position:
 So, even for Homer, Align L >> *Complex >> Coda is a possible ranking.
- $V_1\#C.CV_2$ is frequent in strong position.
 This is the effect of STRONG ATTRACTION (cf. Kahn's 1976 attraction to stress)

STRONG ATTRACTION: Every syllable in strong position is closed.

STRONG ATTRACTION >> ALIGN L ${}_sV_1\#CCV_2$ parsed as ${}_sV_1C.CV_2$, not ${}_sV_1.CCV_2$
 ONSET >> STRONG ATTRACTION ${}_sV_1(\#)CV_2$ parsed as ${}_sV_1.CV_2$, not ${}_sV_1C.V_2$,

- c. The 7 first-foot trochaic parses (e.g. *ek.de.Khryseis* in A439) are infrequent because (a) complex onset parses are infrequent and (b) the option of initial trochees is an archaism.
- d. $V_1\#C.CV_2$ virtually doesn't occur in weak-heavy, such sequences are avoided.
 STRONG ATTRACTION partly explains this: V_1 is weak, it can't attract a following C.
 If STRONG ATTRACTION is moot, ALIGN L should determine the parse.

31. Remaining questions

- Why is $V\#.TRV$ an infrequent parse in weak light position? What's being avoided?
- Why is $V_1\#.CCV_2$ an impossible parse for other CC's (BAD ONSETS) in weak light?
- Why is $V_1\#C.CV_2$ an impossible parse for all CC's in weak heavy position?
 Under *BADONSET >> Align L >> *Complex, all $CC \neq TR$ should occur in weak-heavy.
 Under Align L >> *BADONSET >> *Complex, all sequences should occur in weak-light.
 Either way, no avoidance is expected.

32. A revised ITW:

- a. The Greek non-TR initials generated long CI's.
- b. Optimal quantitative rhythm is evaluated in two ways:
- as a function of syllabic constituents:
 a heavy position contains a C_0VX syllable, $X \neq \emptyset$
 a light position contains a C_0V syllable
- as a function of inter-nuclear interval durations:
 a heavy position contains a long internuclear interval:
 long nucleus or short nucleus + long CI.
 a light position contains a short interval:
 short nucleus + short CI.
- c. Both evaluations must be satisfied for a position to be assigned to the heavy or light category. Positions that satisfy one but not both weight criteria are neither light nor heavy: unusable.

33. The revised ITW answers earlier questions:

**Why is $V_1\#.CCV_2$ an infrequent parse for TR in weak-light position?
 What is being avoided?**

For Homer, all clusters generate long CI's: all, including TR, are produced with limited overlap. The infrequent $V_1\#.TRV_2$ parses contain the rare option of extensively overlapped TR. So what is being avoided is the option of extensive overlap between any CC cluster. What is being allowed, marginally, is overlap within compressible clusters, i.e. TR.

Why is $V_1\#.CCV_2$ an impossible parse for other CC's (incompressible CC's, BAD ONSETS) in weak-light position?

The parse is ok, but incompressible CC's always generate long CI's. Because of the long CI, the string $V_1\#.CCV_2$ can never be assigned to the light category, even if it's parsed as $V_1\#.CCV_2$.

• Why is $V_1\#.CV_2$ an impossible parse for *any* CC's in weak-heavy position?

STRONG ATTRACTION is inapplicable when V_1 is in weak position, so Align L prevails. The string is then parsed $V_1\#.CCV_2$: it contains a long CI, so the first syllable won't be light, but it can't be heavy either because it fails the heavy rhyme test.

34. An earlier question:

why, given the preference for left-alignment, is $VC\#V$ always scanned $\bar{\sigma}$ σ ?

- the unresyllabified string $VC\#V$ would be intermediate in weight, hence metrically unsable: it meets the syllable criterion for heavy weight but not interval criterion.
- it can't *not* be used: unlike $V\#CCV$, $VC\#V$ is way too frequent: a plurality of word types end in VC , many prefixes and most function words begin with V . So this is a usage explanation for the stability of the ranking of Onset >> Align.

35. Another earlier question:

why is $VC\#CV$ always scanned $\bar{\sigma}$ σ ? Why is it never parsed $V.C\#CV$ and scanned $\bar{\sigma}$ σ ?

The attested parse is induced by Align L: if the $C\#C$ cluster is compressible (e.g. $k\#r$) and produced with short CI (overlapped) the resulting string would be unusable (short CI but heavy 1st rhyme). The only way to use this string in accordance with the preference for left alignment is to maintain the long CI.

So our reliance on a double evaluation of weight – syllabic and interval-based – explains every constant aspect of resyllabification in Greek: where it must happen, where it cannot happen and where it leads to sequence avoidance.

VERIFYING THREE PREDICTIONS

36. The impossibility of $V_1\#.CV_2$ in weak heavy position ($\bar{\sigma}_w\sigma$) is attributed to the conflict between syllabic weight (as determined by Align L) and interval weight evaluations.

Prediction: There should be no conflict, no avoidance when V_1 is long, or a diphthong.

37. Checking this in Homer (A, B, Γ): $\langle VV \rangle$ is tautosyllabic, a long V or a diphthong.

122 $VV\#CCV$ sequences where the VV is in strong position,

27 $VV\#CCV$ sequences where the VV is in weak-heavy position.

The ratio is 1 to 4.5, fitting the observed avg. ratio of strong to weak-heavy positions (cf. 27).

There is no avoidance of $VV\#CCV$ in weak-heavy position.

Avoidance is limited, as predicted, to $V\#CCV$.

38. Poets who allow *medial* TR in short scansion $\check{\sigma}_w \sigma$, should also allow V#TRV sequences scanned $\check{\sigma}_w \sigma$ more frequently than Homer: both Align L and *Complex >> Coda now militate for the short scansion. All else should be the same.

39. Checking this for Theognis (Megara): a 1701 line corpus; he allows medial V.TRV.

a. $V_1\#C.CV_2$, V_1 in strong position ($\bar{\sigma}_s \sigma$) 59, once in 28 lines

b. $V_1\#T.RV_2$ V_1 in strong position ($\bar{\sigma}_s \sigma$) 27, once in 63 lines

c. $V_1\#TRV_2$ V_1 in weak short ($\check{\sigma}_w \sigma$) 42, once in 40 lines

d. $V_1\#.CCV_2$ V_1 in weak short, $CC \neq TR$ NEVER

e. $V_1\#C.CV_2$ V_1 in weak heavy ($\bar{\sigma}_w \sigma$) 8x, in 1st foot,

on

Schade's parse, NEVER.

40. Suppose that Align L >> STRONG ATTRACTION.

Prediction: V#CCV should become impossible in strong, as well as in weak heavy position. It should only be ok for weak light position, if TR is produced with short CI.

41. Checking this in Latin:

- All classical Latin poets avoid V# sT(L).V, **whether V_1 is in strong or weak position.** (Hoenigswald 1949). [Latin incompressible initials are limited to sT(L).]
- TR could be parsed as compressed, with short CI (Devine and Stephens 1977, Hill 2006).
- Generalized avoidance of V#sT(L)V is predicted if ALIGN L >> STRONG ATTRACTION:

All $V_1\#sT(L)V_2$ strings must be parsed as $V_1\#.CCV_2$

V_1 in $V_1\#sT(L)V_2$ can't occur in any heavy position (strong or weak heavy):
The first syllable has a long CI but doesn't satisfy the syllabic test for $\bar{\sigma}$.

V_1 in $V_1\#sT(L)V$ can't occur in weak light position either:
The CI is long so the first syllable can't be light either.

Only $V_1\#TRV$ with V_1 in weak light position is ok if parsed as $V_1\#TRV$

Undominated Align L is satisfied.

TR is compressed, it yields a short CI: V_1 's syllable is light on both counts.

SUMMARY

- This study has documented patterns of V#CCV avoidance in three metrical positions.
- An account was derived from assumptions about **syllables as constituents**:
 - a. The preference for left-aligned syllables and words
 - b. A Kahn-type attraction of following C's to the strong syllableand **CI's as weight factors**
 - c. A long CI cannot permit a short syllable before it: V.sTV can't be parsed $\sigma \sigma$
 - d. A short CI cannot permit a long syllable before it: VC.V can't be parsed $\bar{\sigma} \sigma$
- In the process, other patterns of resyllabification – allowed, forced, or blocked – and the limits on variation in the parsing of cross-# sequences have been explained.
- The connection between weight, CI duration, overlap and perceptibility remains speculative: left to future work.
- The new idea here is that quantitative rhythm operates with weight categories (light, heavy) that must be maximally distinct, hence *distinct on multiple dimensions*:
 - The abstractly measured weight of light and heavy rhymes must be distinct.
 - The more concrete interval duration of light and heavy sequences must be distinct too.
- W.S. Allen “Poetry is like speech, only more so.”

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