

Non-initial adpositions in Pindar

Syntactic or phonological movement?

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Ancient Greek adpositions

- In Ancient Greek (AG) classical prose, adpositions are proclitic words which surface **first** in the adpositional phrase (AdP). Hence their name in AG: *prothéseis*.
- However, in AG verse, adpositions can also appear **further right** within the AdP, apparently without any difference in meaning.

a. **kat'** *Ólympon* (N. 10.17)
on Olympus
“on Olympus”

b. *Aígīnan* **káta** (I. 6.8)
Aegina on
“in Aegina”

a. **an'** *híppoisí khrūséais* (O. 8.51)
on horses golden

b. *khrūséaisít'* **an'** *híppois* (O. 1.41)
golden and on horses
“on golden horses”

- Let's call them descriptively **initial** and **non-initial adpositions**.

The questions at hand



- This variability is puzzling and usually explained as a poetic and/or archaic trait. But it raises a couple of questions:
 1. What are the **conditions** and **constraints** on such a variability?
 2. What **mechanism** allows for two different positions for one and the same adposition?
- I will focus on the poet **Pindar** (first half of the 5th century BCE):
 - **Wide array of patterns** for AdPs;
 - **Transitional state** of the language between archaic and classical Greek;
 - **Postpositive treatment** of some phrase heads such as relative pronouns or complementizers (Bertrand 2022, Bertrand & Faure 2023)

Outline of the paper



1 Word order variability



2 Adpositions as postpositives



3 Triggers of postponement



4 A conflict between syntax and prosody



1 Word order variability

Adposition types

The set of **primary adpositions** in Pindar comprise 21 items.

They all can be combined with verbs.

Note that some are synonymous:

- *metá* = *pedá*
(identical metrical shape)
- *prós* = *potí*
(different metrical shape)
- *en* = *es*
(in uses with the accusative)

Adposition	Initial	Non-initial	% Non-initial	Total
en	317	100	24.0%	417
sún	81	44	35.2%	125
pará	79	37	31.9%	116
ek	88	19	17.8%	107
epí	63	28	30.8%	91
es	57	32	36.0%	89
apó	47	25	34.7%	72
amphí	42	19	31.1%	61
prós	43	14	24.6%	57
hupó	32	17	34.7%	49
kata	24	16	40.0%	40
aná	15	16	51.6%	31
hupér	16	11	40.7%	27
potí	17	7	29.2%	24
perí	13	9	40.9%	22
metá	17	4	19.0%	21
diá	14	3	17.6%	17
pró	9	1	10.0%	10
antí	4	1	20.0%	5
pedá	4	0	0.0%	4
Total	982	403	29.1%	1385

Adposition types

Secondary adpositions are derived from diverse adverbs and nouns and never enter in verb composition. In Pindar they comprise 36 items.

Adposition	Initial	Non-initial	% Non-initial	Total
hékāti	3	9	75.0%	12
áter	5	6	54.5%	11
áneu	8	1	11.1%	9
héneken	0	6	100.0%	6
éksō	3	2	40.0%	5
éndon	2	3	60.0%	5
háma	4	1	20.0%	5
áneuthe	2	1	33.3%	3
antía	2	1	33.3%	3
hekás	1	2	66.7%	3
khârin	1	2	66.7%	3
pélas	0	3	100.0%	3
péran	3	0	0.0%	3
ánkhista	1	1	50.0%	2
áterthe	1	1	50.0%	2
émpalin	2	0	0.0%	2

Adposition	Initial	Non-initial	% Non-initial	Total
hêneka	0	2	100.0%	2
húperthen	0	2	100.0%	2
ópisthen	1	1	50.0%	2
amphís	0	1	100.0%	1
ánkhi	1	0	0.0%	1
ankhoû	0	1	100.0%	1
ánta	1	0	0.0%	1
ektós	0	1	100.0%	1
enantíon	0	1	100.0%	1
engús	1	0	0.0%	1
hamā	0	1	100.0%	1
hupénerthen	0	1	100.0%	1
hupsóthen	0	1	100.0%	1
kathúperthe	0	1	100.0%	1
khōrís	1	0	0.0%	1
krúbdān	1	0	0.0%	1
míga	0	1	100.0%	1
mígdān	0	1	100.0%	1
prín	1	0	0.0%	1
propároithen	1	0	0.0%	1
tēle	1	0	0.0%	1
tēlóthen	0	1	100.0%	1
Total	47	55	53.0%	102

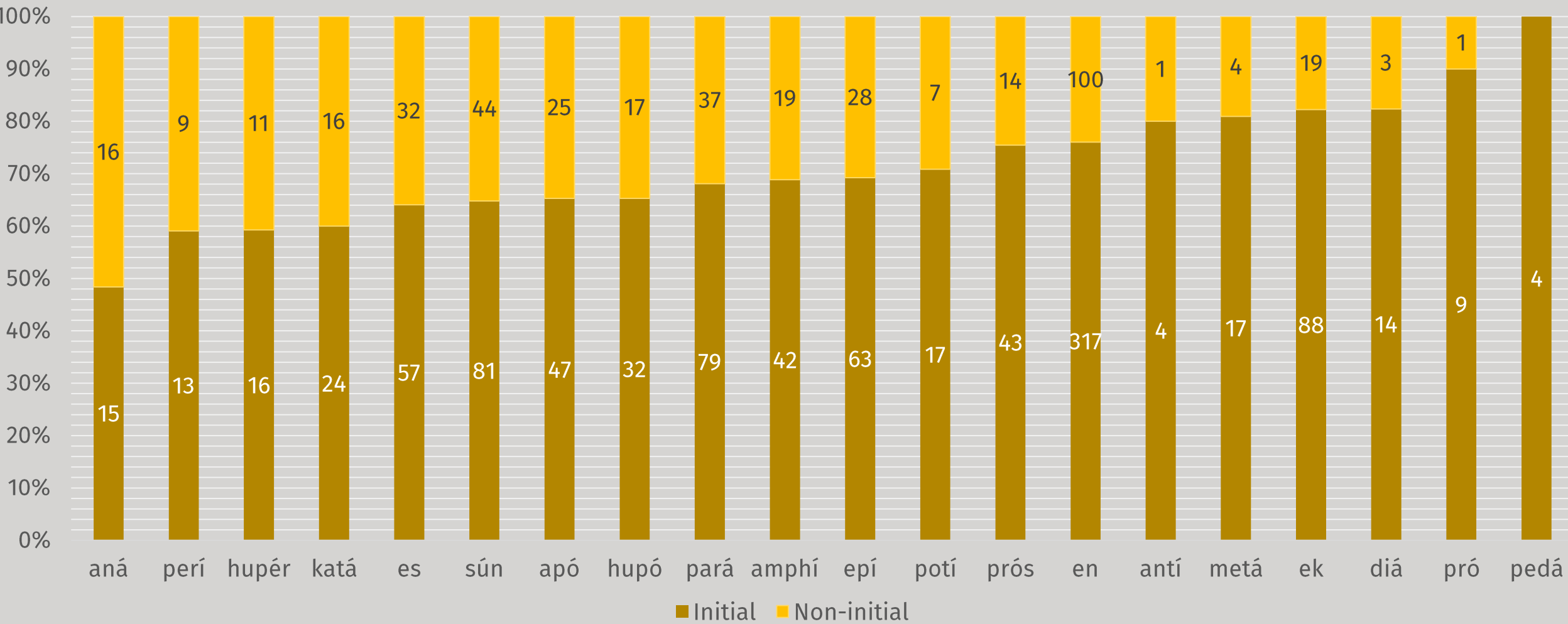
Adposition types



■ Initial ■ Non-initial

$P < 0.0001$

Lexical differences



P < 0.0001

The gamut of AdP configurations: word order (adjectival modifiers)

1. Initial adposition, modifier–noun order
par' *eukléi Dirkāi* (O. 10.85) “next to famous Dirca”
next.to famous Dirca
2. Non-initial adposition, modifier–noun order
khalkéois sùn hóplois (N. 1.51) “with brazen weapons”
brazen with weapons
3. Initial adposition, noun–modifier order
di' *angeliās orthās* (P. 4.279) “through rightful messages”
through messages rightful
4. Non-initial adposition, noun–modifier order
kéleuthon àn katharān (I. 5.23) “along a pure path”
path along pure

The gamut of AdP configurations: word order (genitival modifiers)

1. Initial adposition, modifier–noun order
prò *Dardánou teikhéōn* (O. 13.56) “before the walls of Dardanos”
before of.Dardanos walls
2. Non-initial adposition, modifier–noun order
Krónou sùn paidí (O. 7.67) “with the child of Kronos”
of.Kronos with child
3. Initial adposition, noun–modifier order
en *rhīnōi léontos* (I. 6.37) “in a lion’s hide”
in hide of.lion
4. Non-initial adposition, noun–modifier order
íkhnesin en Praxidámantos (N. 6.15) “in the footsteps of Praxidamas”
footsteps in of.Praxidamas

The gamut of AdP configurations: discontinuous phrases

1. Adposition in the first member

én te *sophoîs* | daidaléān phórminga bastázōn *polītais* (P. 4.29–30)
in and wise ornate lyre clasping citizens
“and, clasping his ornate lyre, among wise citizens”

2. Adposition in the second member

antithéoisin nīsetai | **sùn** *bathuzōnoio didúmois paisì Lēdās* (O. 3.35–36)
divine he.comes with of.deep-belt twin sons of.Leda
“he comes with deep-belt Leda’s divine twin sons

3. Adposition detached from the rest of the phrase

all’ **én** | kékrupto gār *skhoínōi* (O. 6.53–54)
but in he.was.hidden for bed of rushes
“for he was hidden in a bed of rushes”

The gamut of AdP configurations: branching phrases

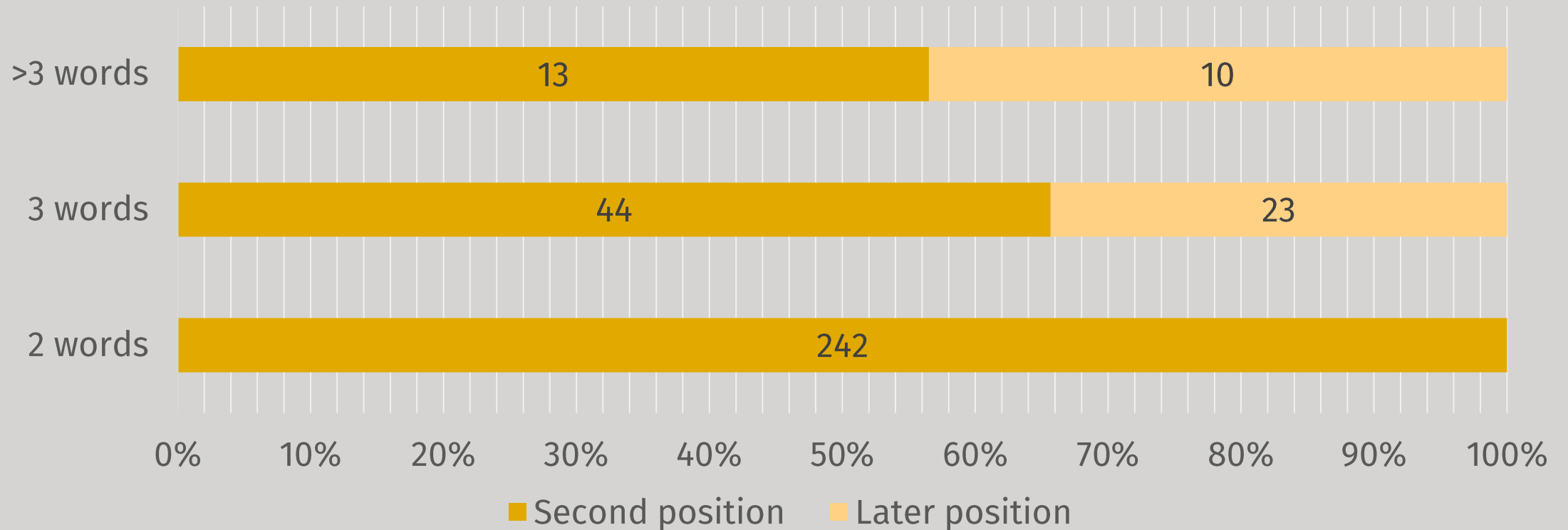
1. Initial adposition in the first member
anà d' *hēmiónois* *ksestāi* t' *apēnāi* (P. 4.94)
on and mules polished and chariot
“on the mules and the polished chariot”
2. Non-initial adposition in the first member
Arkadiās **apò** *deirān* kaì *polugnámptōn* *mukhōn* (O. 3.27)
of.Arkadia from glens and meandering hollows
“from the glens and meandering hollows of Arcadia”
3. Initial adposition in the second member
kteátessi te kaì **perì** *tīmāi* (P. 2.59)
riches and and for honor
“for wealth and honor”
4. Non-initial adposition in the second member
gān te kaì *pónton* **kat'** *amaimáketon* (P. 1.14)
earth and and sea over unyielding
“over the earth and the unyielding sea”



2 Adpositions as postpositives

Wackernagel position

Position of the adposition in the phrase
(only continuous AdPs)



P < 0.001

Wackernagel position

Some of the later positions might be explained by different factors:

- Preceding genitive (19×)

1. *Herakléos olbíān pròs aulān* (N. 4.24) “towards the rich courtyard of Herakles”
of.Herakles rich towards courtyard

- Second position in the line (6×)

2. *teletaîs | hōríais en Palládos* (P. 9.97–98) “in the seasonal rites of Pallas”
rites seasonal in of.Pallas

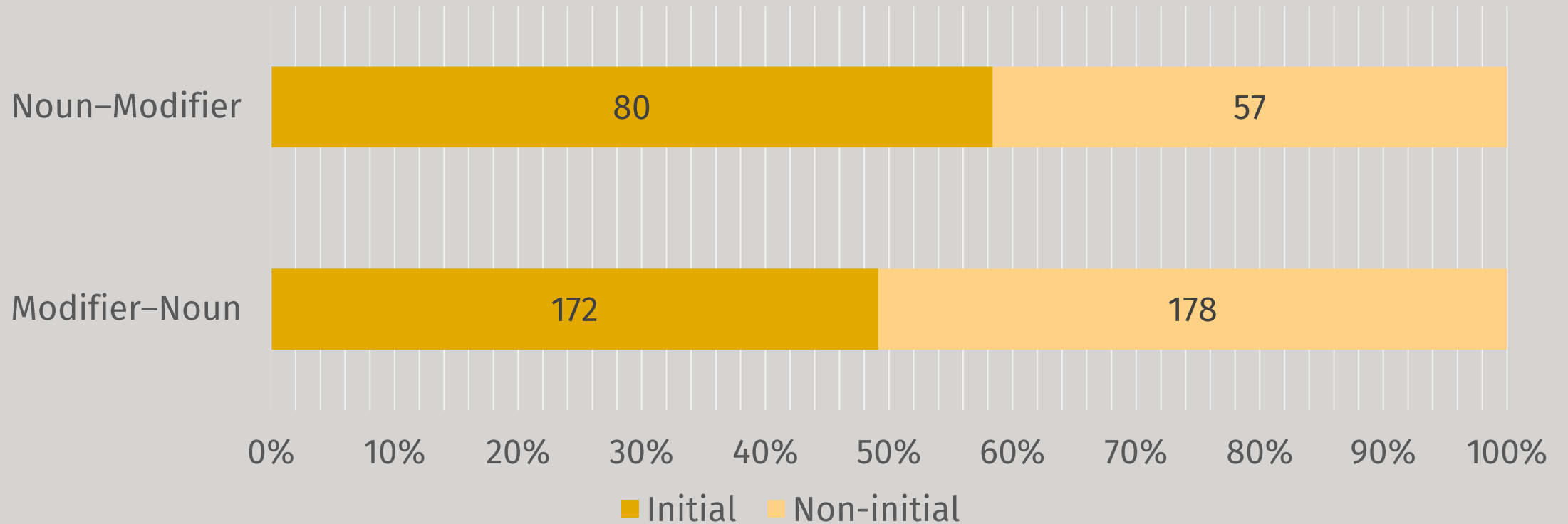
- Cases where other clues indicate second positions (3×):

3. *mantin Oikleídān pot' es Amphiárēon* (O. 6.13) “to the Oikleid seer Amphiaraus”
seer son.of.Oikles once to Amphiaraus

4. *patéros Athānaíā koruphān kat' ákrān* (O. 7.36) “Athena, at her father's utmost summit”
of.father Athena summit at utmost

Cross-categorial position

Word order in the NP



P = 0.06

The paradox of postpositive adpositions

- If non-initial adpositions are postpositive, one might assume that they cliticize to the first word of the phrase.
 - That would entail that a position at the end of the phrase is easily accessible
1. *kasignētou pēri* (N. 10.85) “because of your brother”
of.brother because
 2. *klutās | aiōnos akrān bathmídōn āpo* (P. 5.6–7) “from the first steps of your famous life”
illustrious life first steps from
- However, adpositions are only seldom last in their phrase (Irigoin 1954): only 12 out of 1487 (0.81%)!
Why is it so?



3 Triggers of postponement

Movement across the adposition? Splitting

1. Pied-piping with raised noun

phanerān **en** *pelágei* Rhódon émmen *pontiōi* (O. 7.58)

visible in sea Rhodes to.be marine

“that Rhodes be visible in the marine sea”

2. Pied-piping with raised modifier

en *heptapúlois* | áion *Thēbais* (P. 3.90–91)

in seven-gate they.heard Thebes

“they heard [it] in Thebes of the Seven Gates”

3. Stranding with raised noun

teíkhei thésan **en** *ksulínōi* (P. 3.38)

wall they.put in wooden

“they put [her] on the wooden wall”

4. Stranding with raised modifier

hín' *āthanátois* Ainēsidāmou | paîdes **en** *tīmaîs* émikhthen (I. 2.29–30)

where immortal of.Ainesidamo children in honors mingled

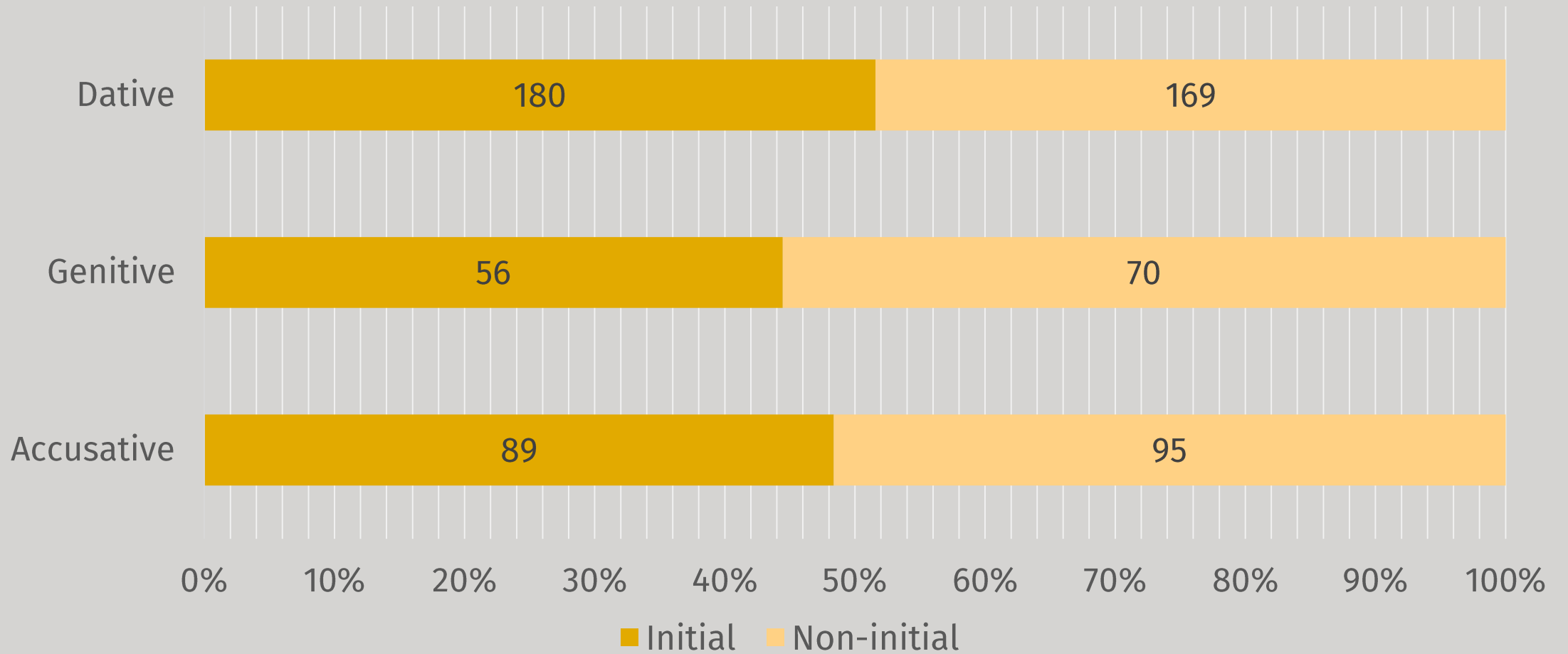
“where Aindesidamos’ children mingled in immortal honors”

Movement across the adposition?

Article

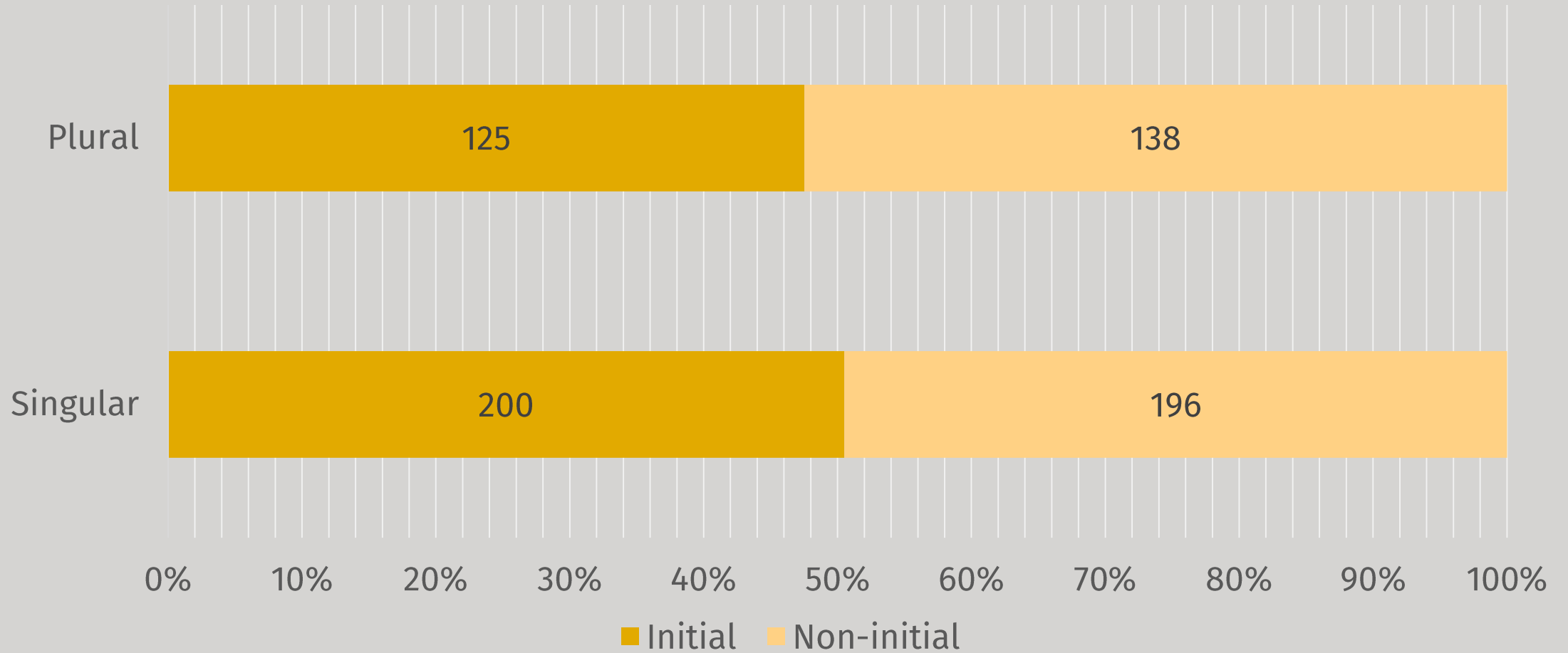
1. **en** taîs *hieraîs* *Athānais* (fr. 75.4)
in the holy Athens “in holy Athens”
2. taîs *liparaîs* **en** *Athānais* (I. 2.20)
the radiant in Athens “in radiant Athens”
3. **dià** tòn *hāduēpē* genésth’ *Hómēron* (N. 7.21)
through the sweet-word happen Homer “[it] happened thanks to sweet-word Homer”
4. *taîs *liparaîs*... **en** *Athānais*
the radiant in Athens “in radiant Athens”
5. *paîs* ho *kissophóros* (O. 2.27)
child the ivy-bearer “the ivy-bearer child”
6. **Athānais* **en** taîs *liparaîs*
Athens in the radiant “in radiant Athens”
7. ***en** *Athānais* taîs *liparaîs*
in Athens the radiant “in radiant Athens”

Semantics: Case



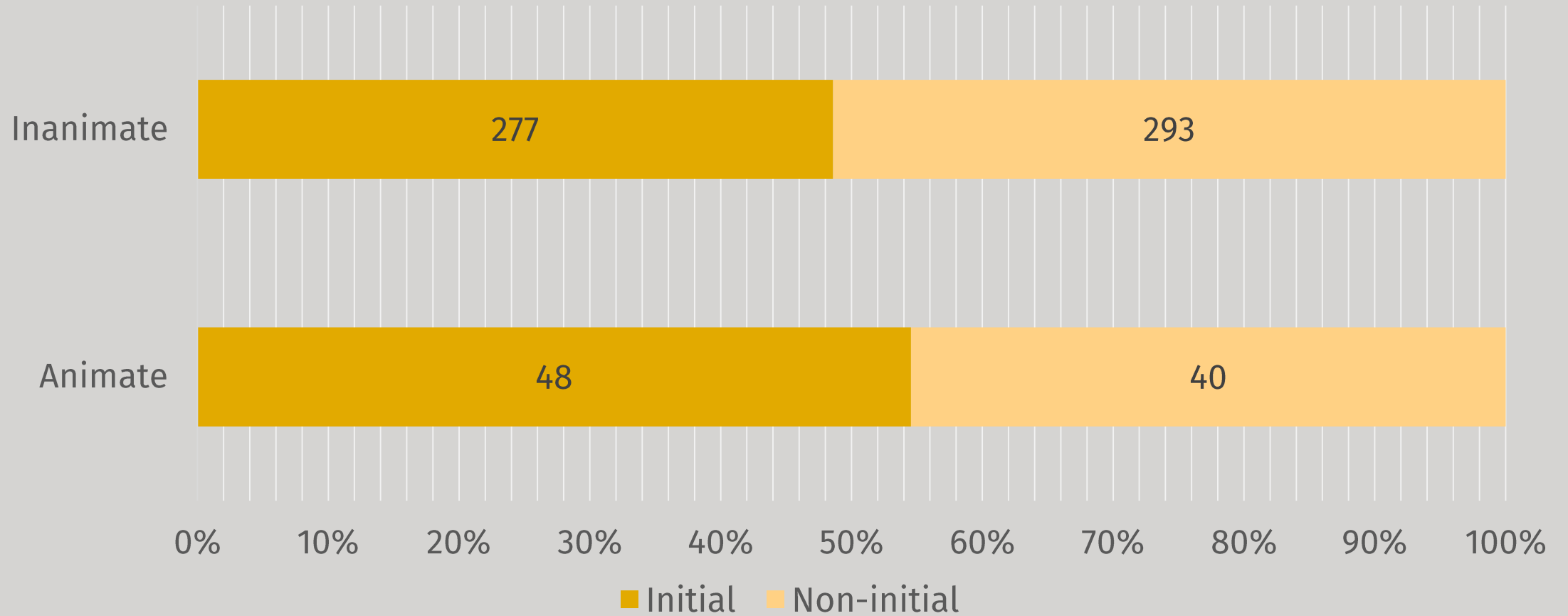
P = 0.37

Semantics: Number



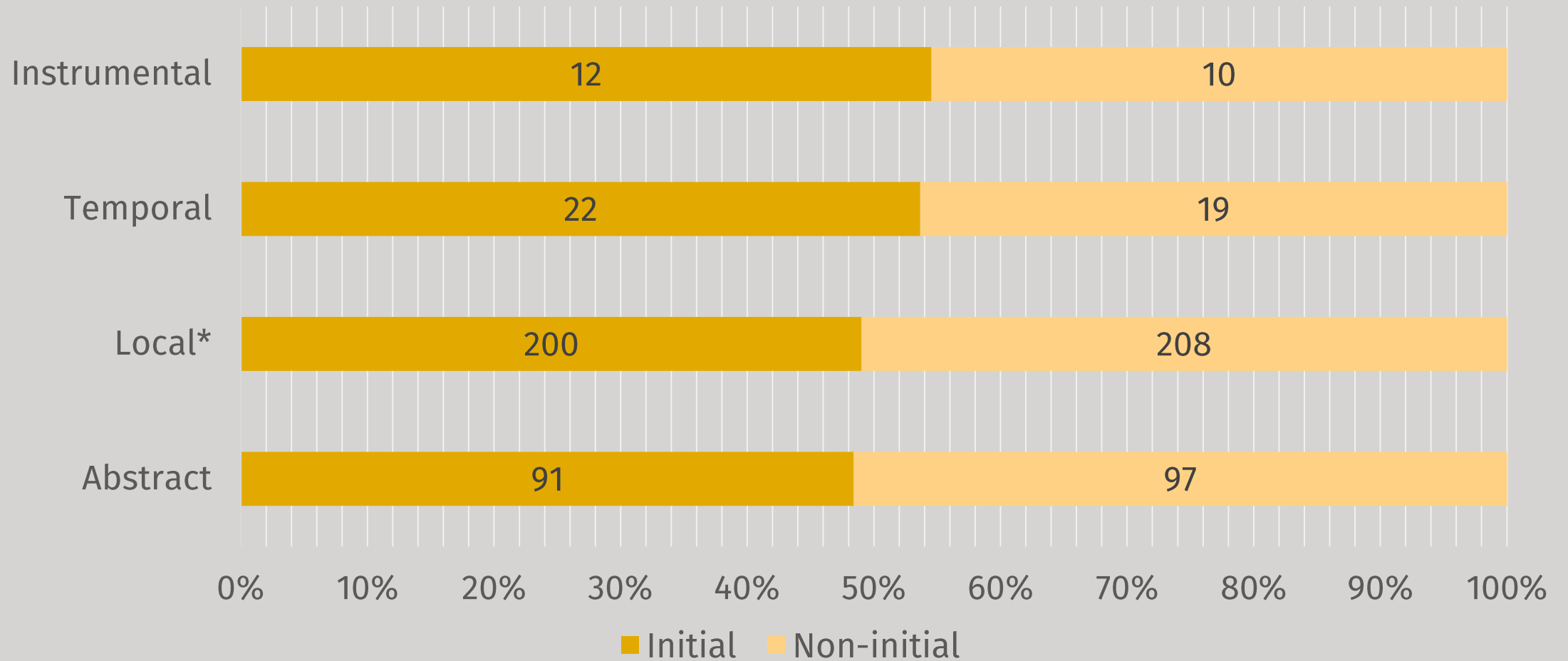
P = 0.45

Semantics: Animacy



P = 0.30

Semantics: Adposition



*Including rare metaphorical uses

P = 0.89



4 A conflict between syntax and prosody

Assessing prosodic cohesion: principles

- Assumption: metrical lines reflect the **prosodic outfit of speech** (at least partially) (Devine & Stephens 1994)
- This holds in Pindar as well: for instance, clitics are never separated from their host by a line break (Hajdú 1989) and clause boundaries tend to coincide with line ends.
- We need a **fine-grained hierarchy of prosodic breaks**.
- In stichic verse, **regular caesurae** can be used as a tool to assess prosodic chunking and constituency.
- In lyric verse, **responsion** (repeating metrical line patterns) can be used as a tool to measure the strength of prosodic breaks at a given position in the line.
- **Hierarchy of metrical breaks** in lyric verse:
 - Stanza-end
 - Line-end
 - Line-internal breaks:
 - Strong internal break
 - Weak internal break

Assessing prosodic cohesion: algorithm

- Divide each line in syllables
- At each syllable break, attribute points in the following way:
 - Intraword syllable break: **0**
 - Interword syllable break: **1**
 - Before an enclitic word or after a proclitic word: **0.5**
 - Finite clause boundary: **1.5**
- At each position in the metrical structure, take an average of those points to obtain a metrical break score.
- We can then distinguish between
 - strong internal breaks : score **>.5**
 - weak internal breaks : score **≤.5**

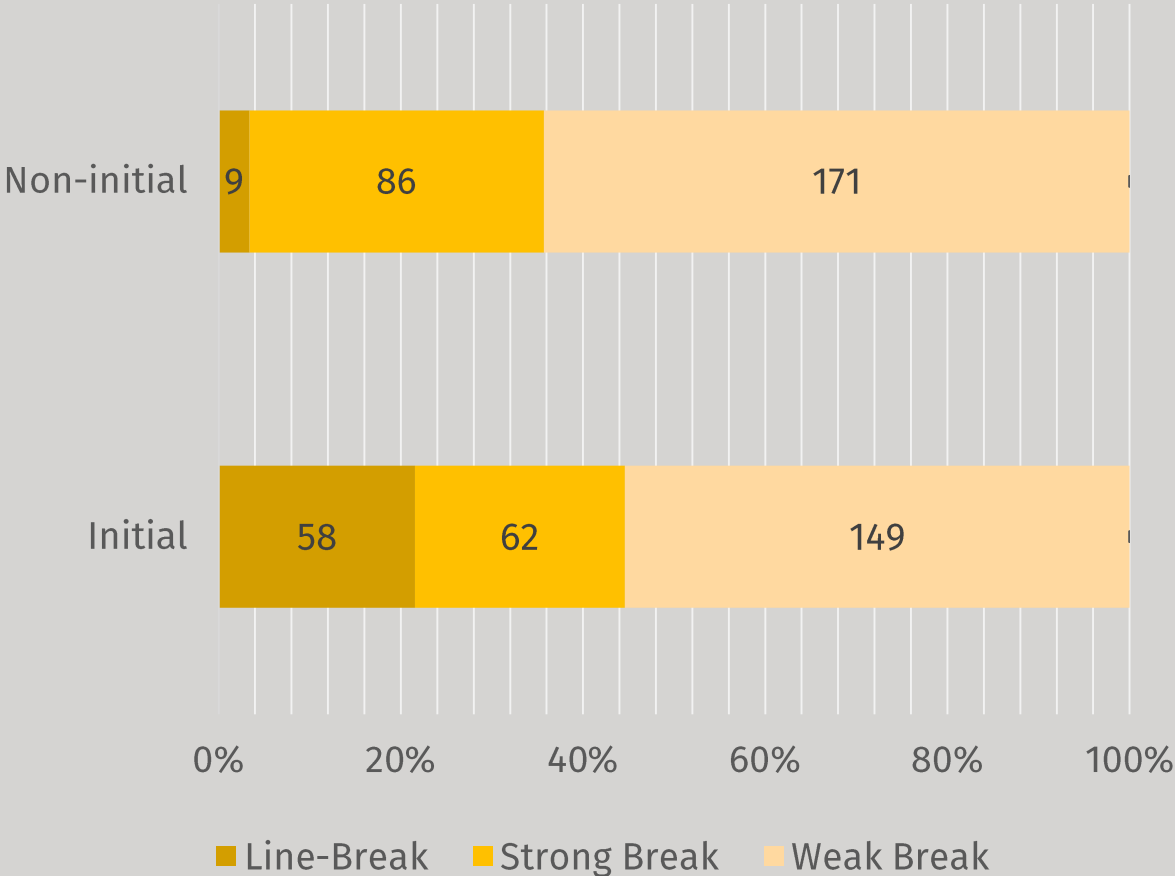
Prosodic breaks: Seventh Olympian Ode

2.	énédon	ampé-	lou	kakhán-	zō-	prēsōi	0	lou	1	ka-	0	khlá-	0	zōi-	san	drō-
8.	sōi	ān-	rās-	pém-	pōn,	glukùn	1	ka-	1	rpon	0	phrénos,	1			
21.	an-	nō-	drá-	sin-	pém-	pōn,	1	glu-	0	kùn	0	kar-	0	pōn	1	phré-
21.	ksunō-	angellōn	diorthō-	sai	lógon,	0	1	glu-	0	kùn	0	kar-	0	pōn	1	phré-
27.	ksu-	gār-	Al-	kmenās	1	kasignēton	0	lōn	1	di-	0	or-	0	thō	0	sai
27.	ka-	gār-	Al-	kmenās	1	kasignēton	0	lōn	1	di-	0	or-	0	thō	0	sai
40.	ka-	mellon	éntē-	len	phulaksasthai	khreos	0	nās	1	ka-	0	síg-	0	nē	0	ton
40.	mél-	lon	én-	tei-	len	0	1	ka-	0	síg-	0	nē	0	ton	1	nó-
46.	ka-	pare-	l-	kei	prāgmátōn	orthān	1	len	0	phu-	0	lák-	1	sas	0	thai
46.	ka-	pare-	l-	kei	prāgmátōn	orthān	1	len	0	phu-	0	lák-	1	sas	0	thai
59.	ka-	rhā-	n-	khōrās	0.5	aklarōton	1	lipōn	0	prāg-	1	má-	0	tō-	0	n or-
59.	ka-	rhā-	n-	khōrās	0.5	aklarōton	1	lipōn	0	prāg-	1	má-	0	tō-	0	n or-
65.	kheiras	anteinai,	theōn	d' órkon	megan	0	rās	1.5	a-	0	klā-	1	rō-	0	ton	1
65.	khe-	ra-	an-	te-	nai,	0	1	a-	0	klā-	1	rō-	0	ton	1	
78.	histatai	Tirunthion	arkhagetai	0	0	0	0	the-	0	ōn	1	d' ór-	0	kon	0	mé-
78.	his-	ta-	ai	0	0	0	0	the-	0	ōn	1	d' ór-	0	kon	0	mé-
84.	erga kai	Thebais,	agonēs	t' énnomoi	0	0	0	run-	1	thí-	0	ō-	0	n ar-	1	khā-
84.	ér-	ga	ka-	Thē-	bai-	s, a-	gō-	nés	1	t' én-	no-	moi				



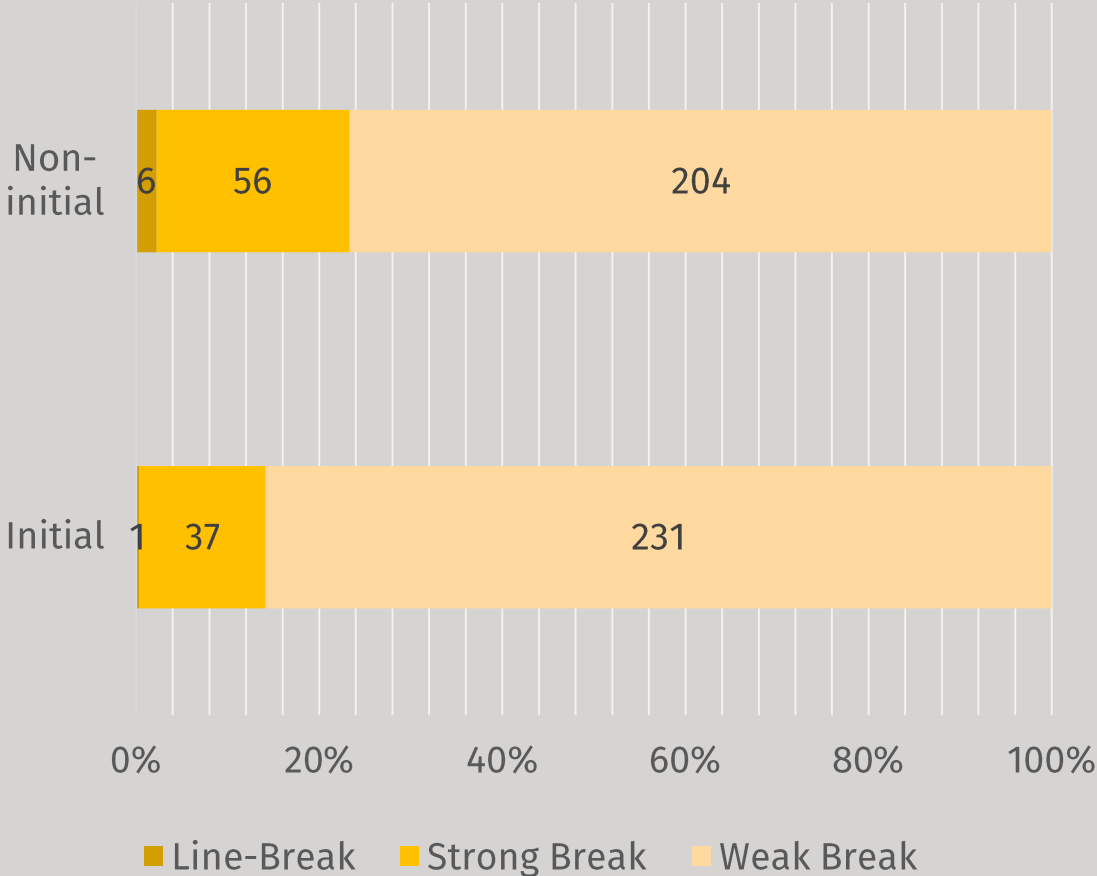
Prosodic breaks and adpositions

BEFORE ADPOSITION



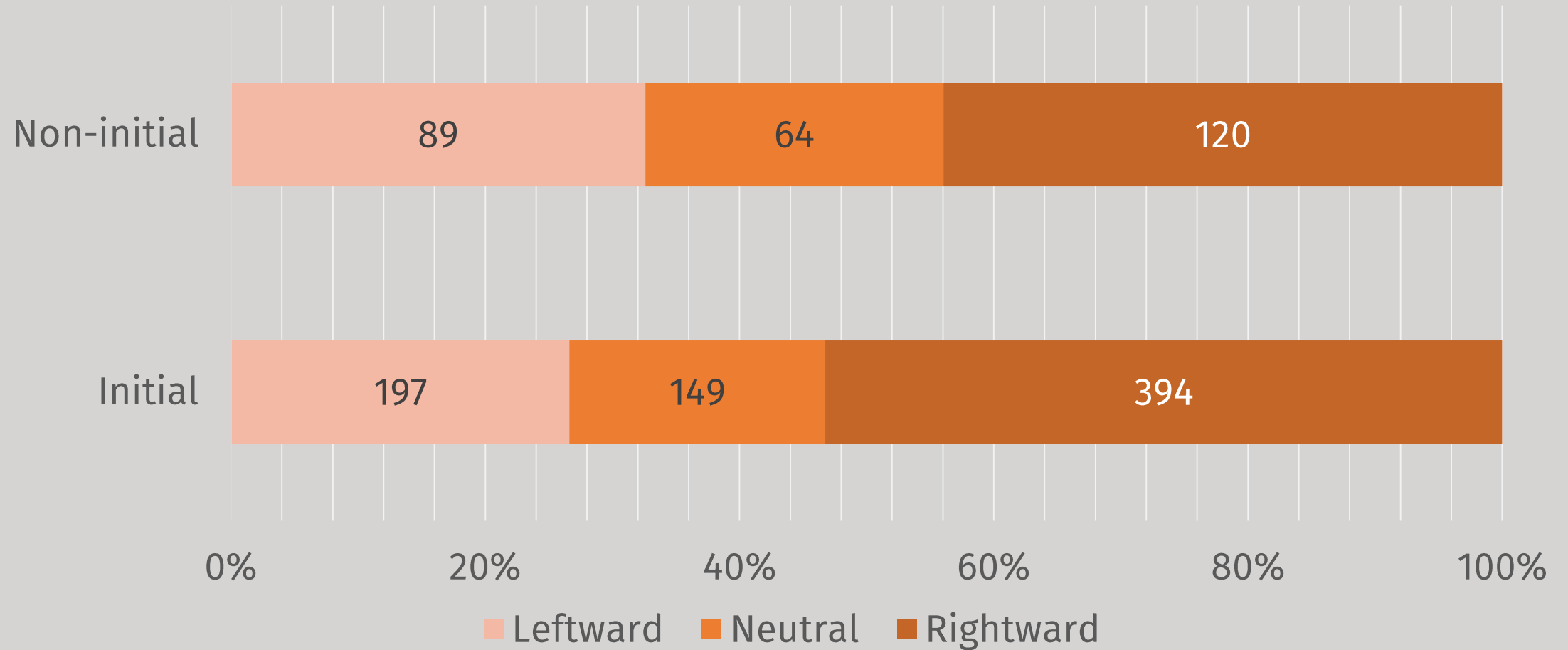
P < 0.001

AFTER ADPOSITION



P = 0.016

Direction of clisis



P = 0.002

Syntax vs. prosody

- Adpositions inherited the ability to be **postpositive**: they could cliticize to the first word of their syntactic domain.
- However, they started to behave as proclitics in spoken Greek (as early as Homer).
- They ended up being **syntactically postpositive** in the linear order but **phonologically proclitic**.
- This paradox explains why they can be freely postponed to the first word of the AdP, but only when they do not end up last in the phrase, because in that situation they would cliticize to a word outside of their syntactic domain.
- AG Adpositions underwent a **reversal of clisis**, similar to what happened to clitic pronouns in later Greek, changing from strictly enclitic to strictly proclitic.
- Pindar's poetry is a **transitional phase** where inherited second position is still available, but adpositions are already prepositions.

Conclusion



- Adpositions in AG verse can freely behave as **postpositive words** (accessing the Wackernagel position).
- **No semantic triggers** can explain this postponement.
- **Syntactic movement** is not able to explain all the different configurations attested in Pindar, especially the restriction on phrase-last adpositions.
- A prosodic analysis shows that non-initial adpositions are still **proclitic**, which explains the (almost absolute) ban on the last position in the phrase.
- Dictum: **For adpositions in Pindar, second is fine, last is not!**
- Additionally, it confirms that the methodology for assessing the strength of metrical breaks in Pindar leads to **new results** on the phrasing of AG.



Σας ευχαριστώ!

Nicolas BERTRAND



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