The verbal aspect system in OCS

How agnostic should we be?

Jaap Kamphuis

Universiteit
Leiden
The Netherlands

Research question

What does the aspectual system in Old Church Slavonic look like?

Question in this presentation

Where do we start studying the OCS aspect system?

Three levels

- Level of the individual attestation (Dostál 1954)
- Level of the verb (Eckhoff & Janda 2012)
- Level of verb groups (this presentation)

Dostál 1954

- Presupposes the existence of an aspect system like that in modern Slavic
- Starts analysis at the level of **individual attestations**
- Criteria:

  - Greek original (e.g. future tense)
  - His own interpretation of usage
  - Verbal morphology (e.g. iterative verbs)
  - Other attestations of the verb?

Dostál 1954: perfective

Example 1 Matthew 5:33

не въ лъжѫ клѧнеши сѧ . въздаси же гви клѧтвъı твоѭ . (Zo, Mar)

‘You shall not make false vows, but shall fulfil your vows to the Lord’

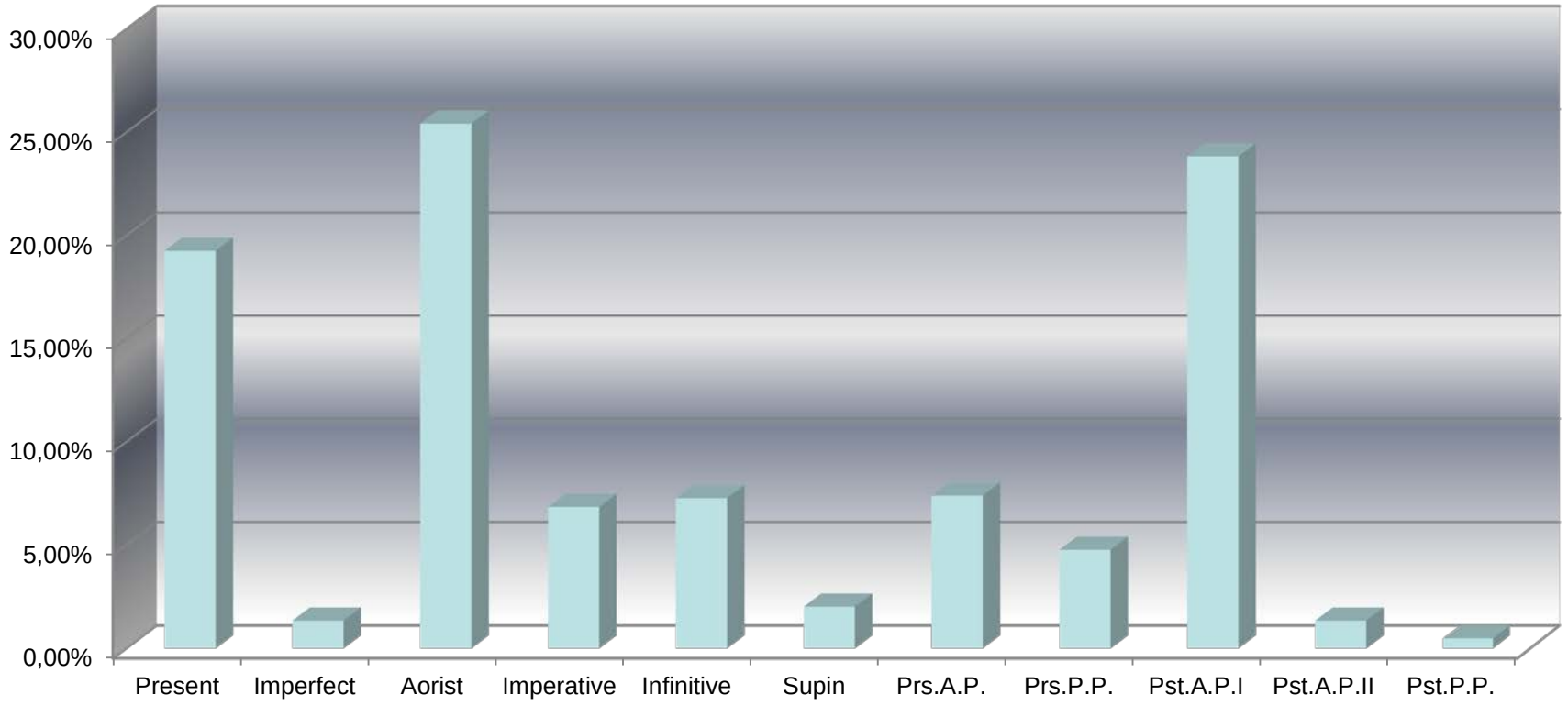
Criteria: - Greek future
- Total action
- *Not derived/lots of aorist attested?*

Eckhoff & Janda 2013 (1)

- Do no presuppose verbal aspect system
- Start at the **level of the verb**
- Use **grammatical profiling** (cf. Janda & Lyashevskaya 2011) to find aspectual distinctions

Grammatical profiling

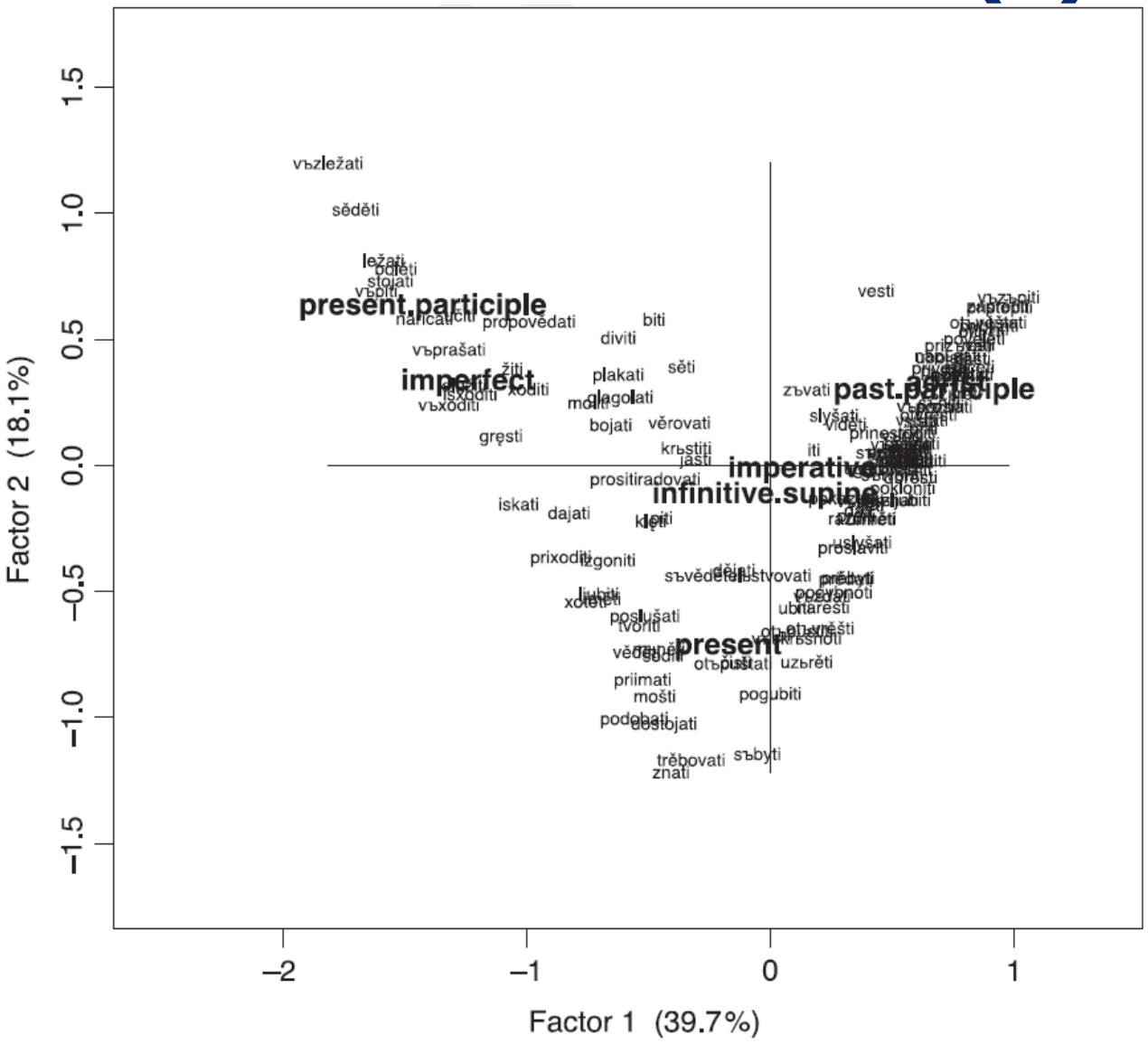
- Example of the profile of **видѣти** ‘see’ (n=1636):



Eckhoff & Janda 2013 (2)

- Find a division in two groups (lefties/righties)
- Find some simplex verbs that show deviant behavior
- Use Dostál's classification to interpret the found division into imperfective/perfective

Eckhoff & Janda 2013 (3)



Some issues and their causes

- Continuum: lexical aspect
- Clustering of prefixed verbs: influence of morphological markers
- Spread of simplex verbs: lack of morphological markers
- Lack of derived verbs: lower frequency of attestation

How to handle these issues?

- How can we control for lexical aspect?
- How can we account for the large spread of simplex verbs?
- How can we include derived verbs?

- Forms **groups** based on the defining **morphological properties** of Slavic verbal aspect: prefixes, suffixes, pairs, triplets etc.
- Use groups for grammatical profiling

Hypothesis

Morphological characteristics are a good indicator of the aspect of a verb

Grouping examples (1)

Simplex no partner		Prefixed with partner		Prefixed suffixed	
блюсти	‘guard’	съблюсти	‘keep safe’	съблюдати	*ibidem*
мꙑслити	‘think’	помꙑслити	‘think’	помꙑшлати	*ibidem*
славити	‘glorify’	прославити	‘glorify’	прославлꙗти	*ibidem*
сълати	‘send’	въсълати	‘send’	въсꙑлати	*ibidem*
сѣти	‘sow’	насѣти	‘sow’	насѣвати	*ibidem*
зъвати	‘call’	призъвати	‘call’	призꙑвати	*ibidem*
плакати	‘cry’	-		-	
видѣти	‘see’	-		-	
плѧсати	‘dance’	-		-	
вѣровати	‘believe’	-		-	
лежати	‘lie’	-		-	

Grouping examples (2)

Anaspectual		PF Prefixed		IPF Prefixed	
блюсти	‘guard’	съблюсти	‘keep safe’	съблюдати	*ibidem*
мъслити	‘think’	помъслити	‘think’	помъшлати	*ibidem*
славити	‘glorify’	прославити	‘glorify’	прославлꙗти	*ibidem*
сълати	‘send’	въсълати	‘send’	въсъылати	*ibidem*
сѣти	‘sow’	насѣти	‘sow’	насѣвати	*ibidem*
зъвати	‘call’	призъвати	‘call’	призъывати	*ibidem*
плакати	‘cry’	-		-	
видѣти	‘see’	-		-	
плѧсати	‘dance’	-		-	
вѣровати	‘believe’	-		-	
лежати	‘lie’	-		-	

Grouping examples (3)

PF Simplex	IPF Simplex
дати	даѭати
авити	авлѭати
пасти	падати
ѭти	имати
коньчати	коньчавати

Other groups include:

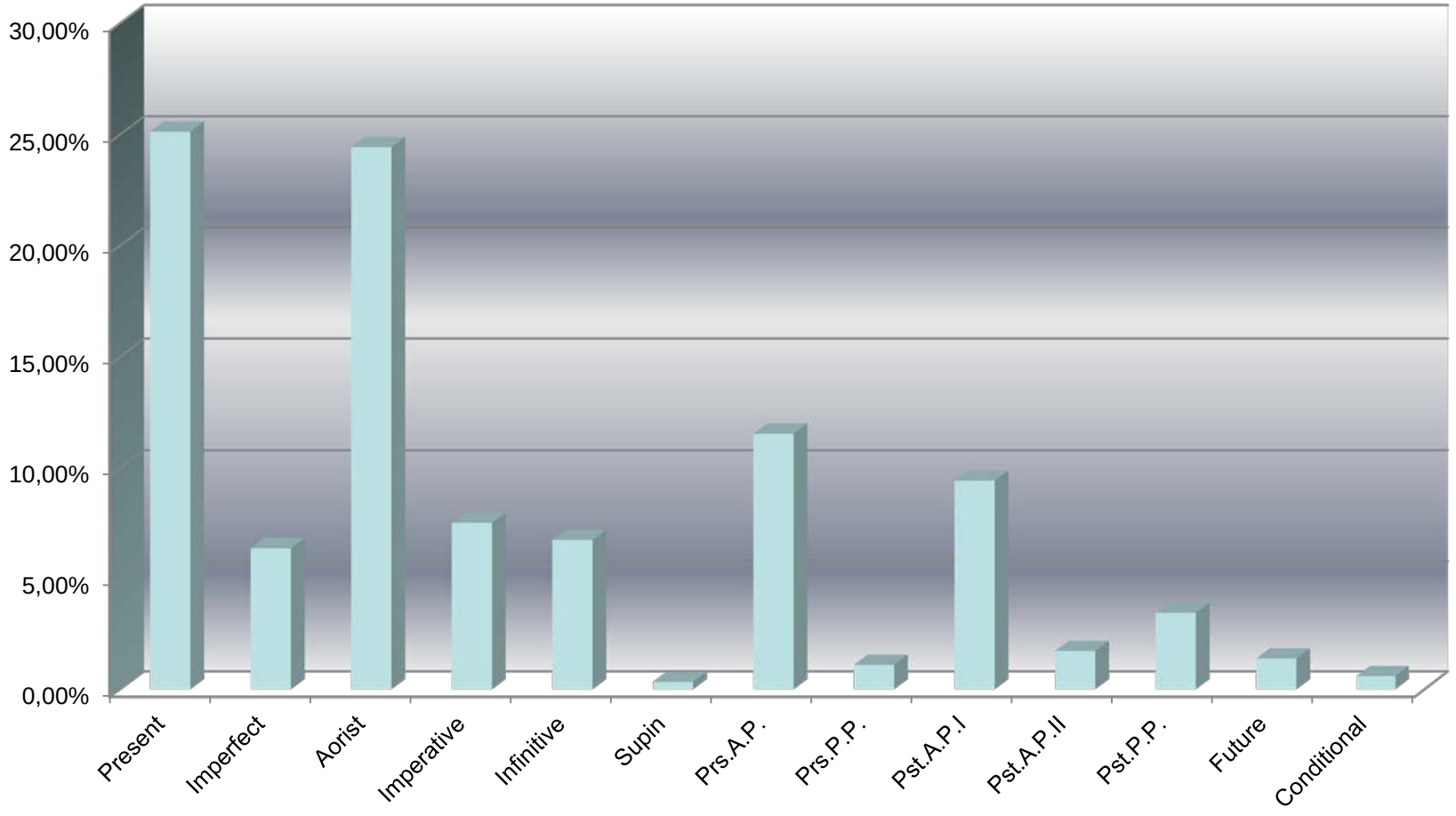
- Simplex verbs of motion (вести-водити)
- Prefixed verbs of motion
- Prefixed verbs without a derived partner
- Pairs with secondary suffixed partner (prefixed-suffixed-secondary suffixed)
- Pairs that share a stem (съказати, исъıпати)
- Бъıти
- etc.

Verb forms in database

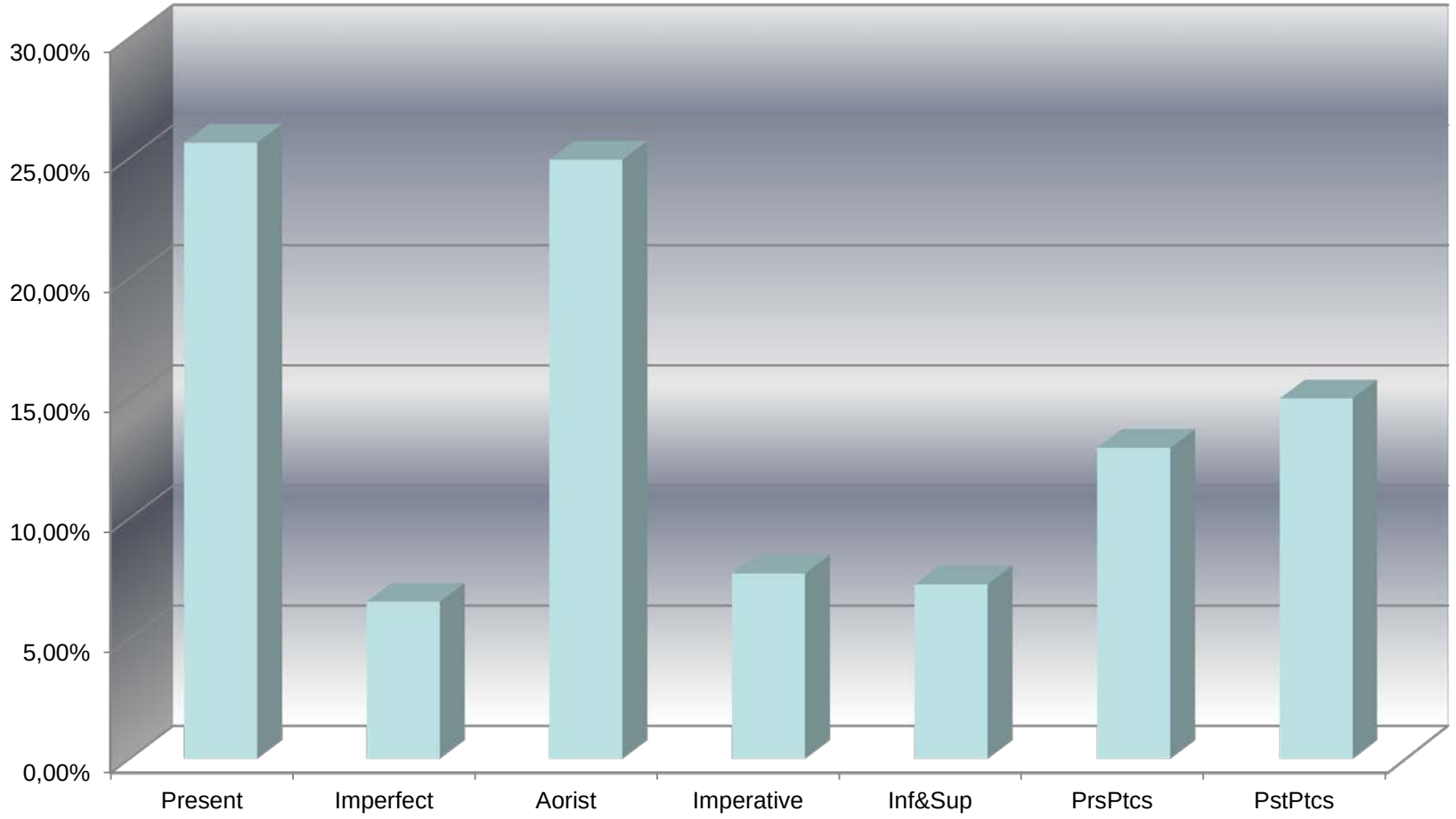
- Based on *Belegstellenverzeichnis* (Aitzetmüller 1977)
- Total number of attestations 79998
- Total number of verbs 2882
- Total of 13 different verb forms

Present	Imperfect	Aorist	Imperative	Infinitive	Supin	Prs.A.P.	Prs.P.P.	Pst.A.P.I	Pst.A.P.II	Pst.P.P.	Future	Conditional
25,13%	6,40%	24,43%	7,55%	6,78%	0,33%	11,56%	1,12%	9,45%	1,75%	3,49%	1,41%	0,60%
20100	5123	19544	6041	5425	266	9249	893	7557	1401	2795	1125	479

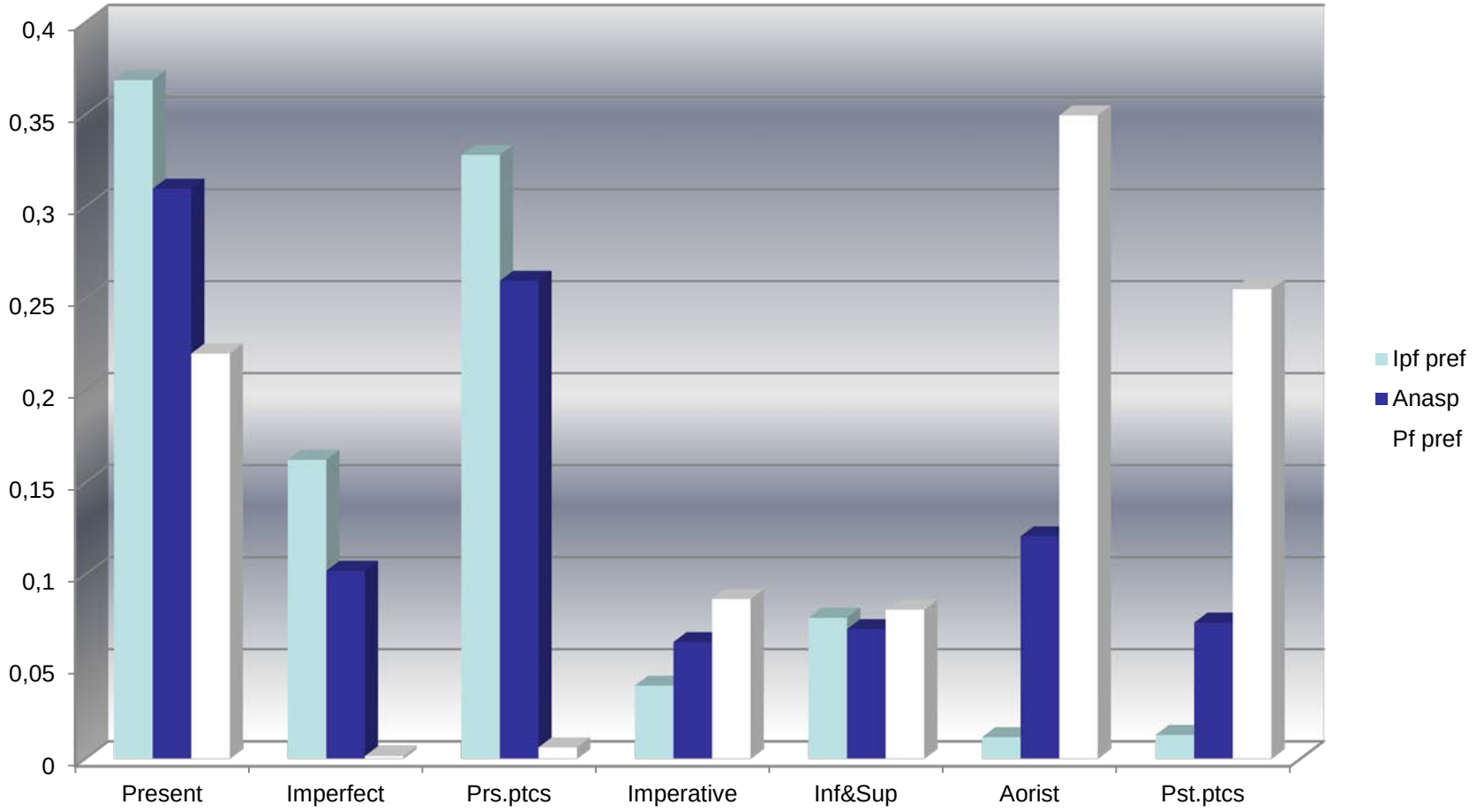
Overall profile of the OCS verb



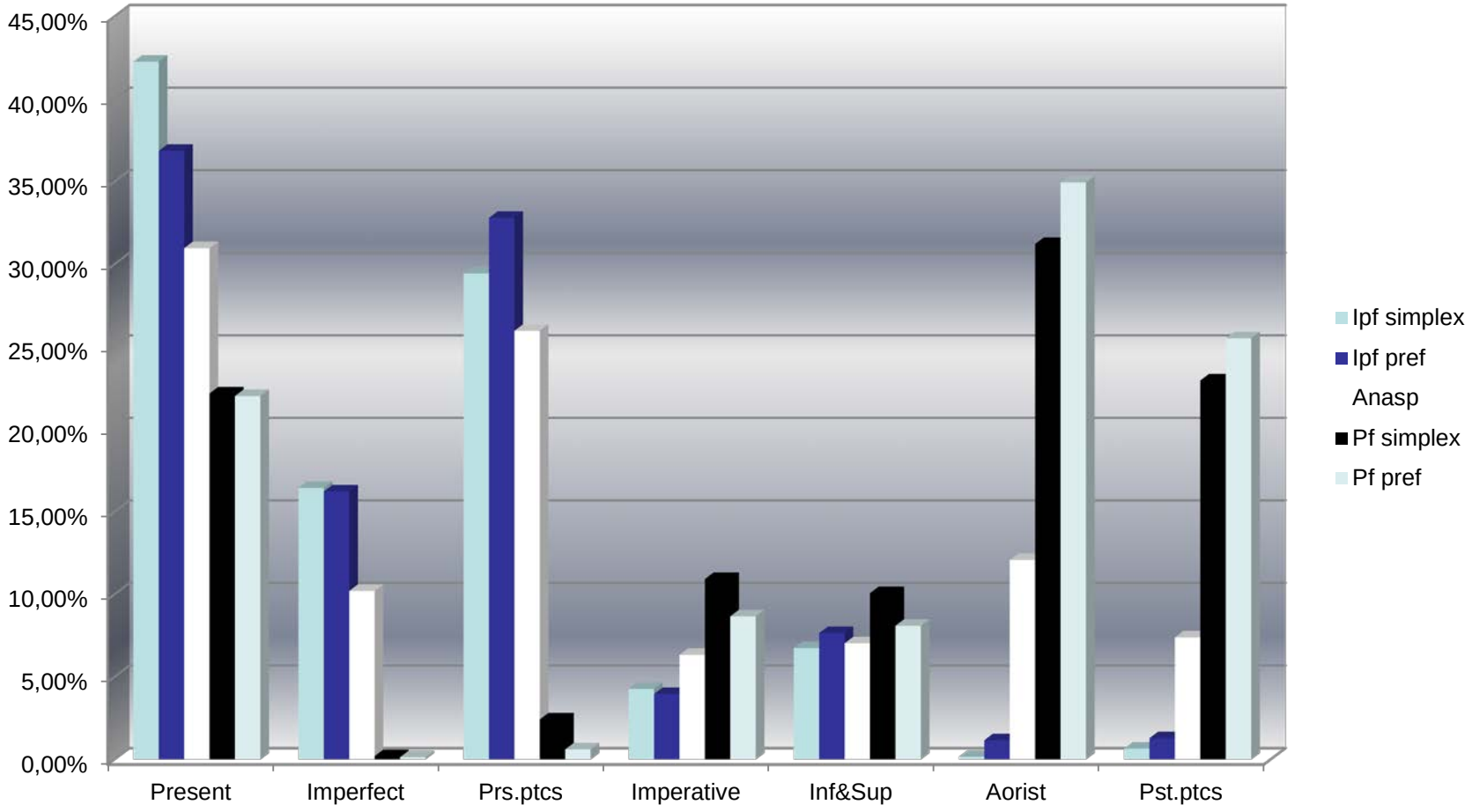
Merged categories



Profile of three groups



Profile of five groups

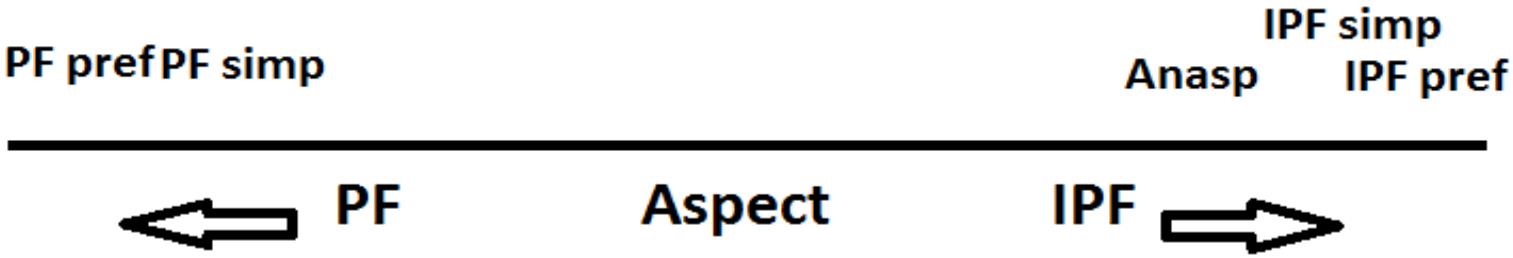


Chi-square test results

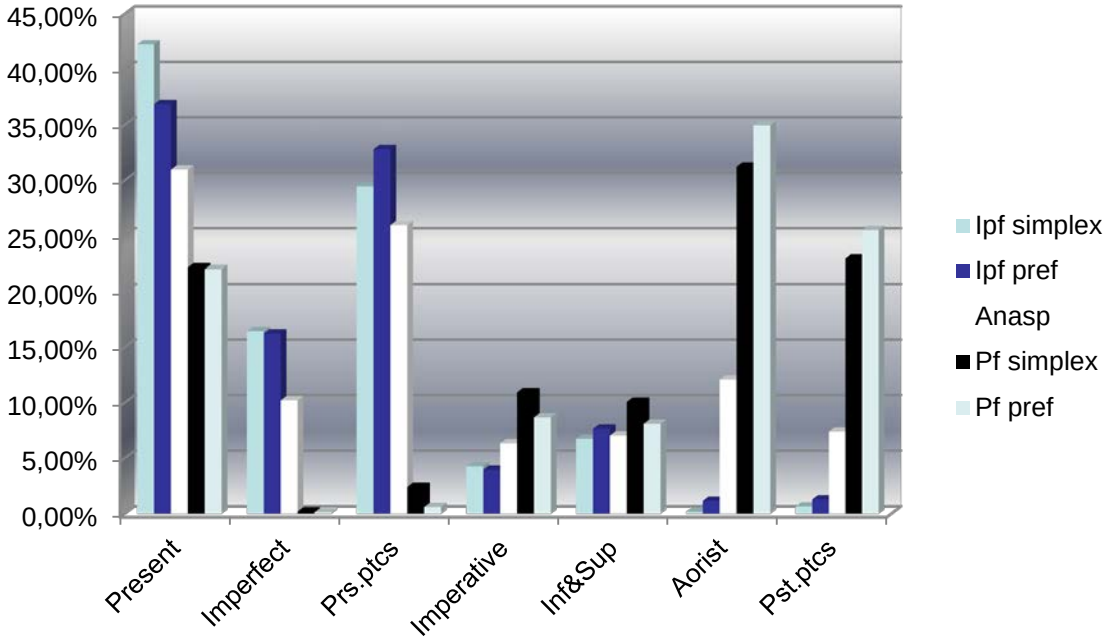
Group	vs	Group	χ^2 results			Cramer's V
PF pref	-	IPF pref	9414.82	df =6	p < 0.0001	0.690
PF simp	-	IPF simp	1389.03	df =6	p < 0.0001	0.627
IPF simp	-	IPF pref	13.30	df =6	p = 0.0385	0.059
PF simp	-	PF pref	135.57	df =6	p < 0.0001	0.083
PF pref	-	Anasp	10374.45	df =6	p < 0.0001	0.516
PF simp	-	Anasp	2429.50	df =6	p < 0.0001	0.309
IPF pref	-	Anasp	678.58	df =6	p < 0.0001	0.162
IPF simp	-	Anasp	161.84	df =6	p < 0.0001	0.084

Cramér's V rule of thumb:
0.5 = Large, 0.3 = Medium, 0.1 = small

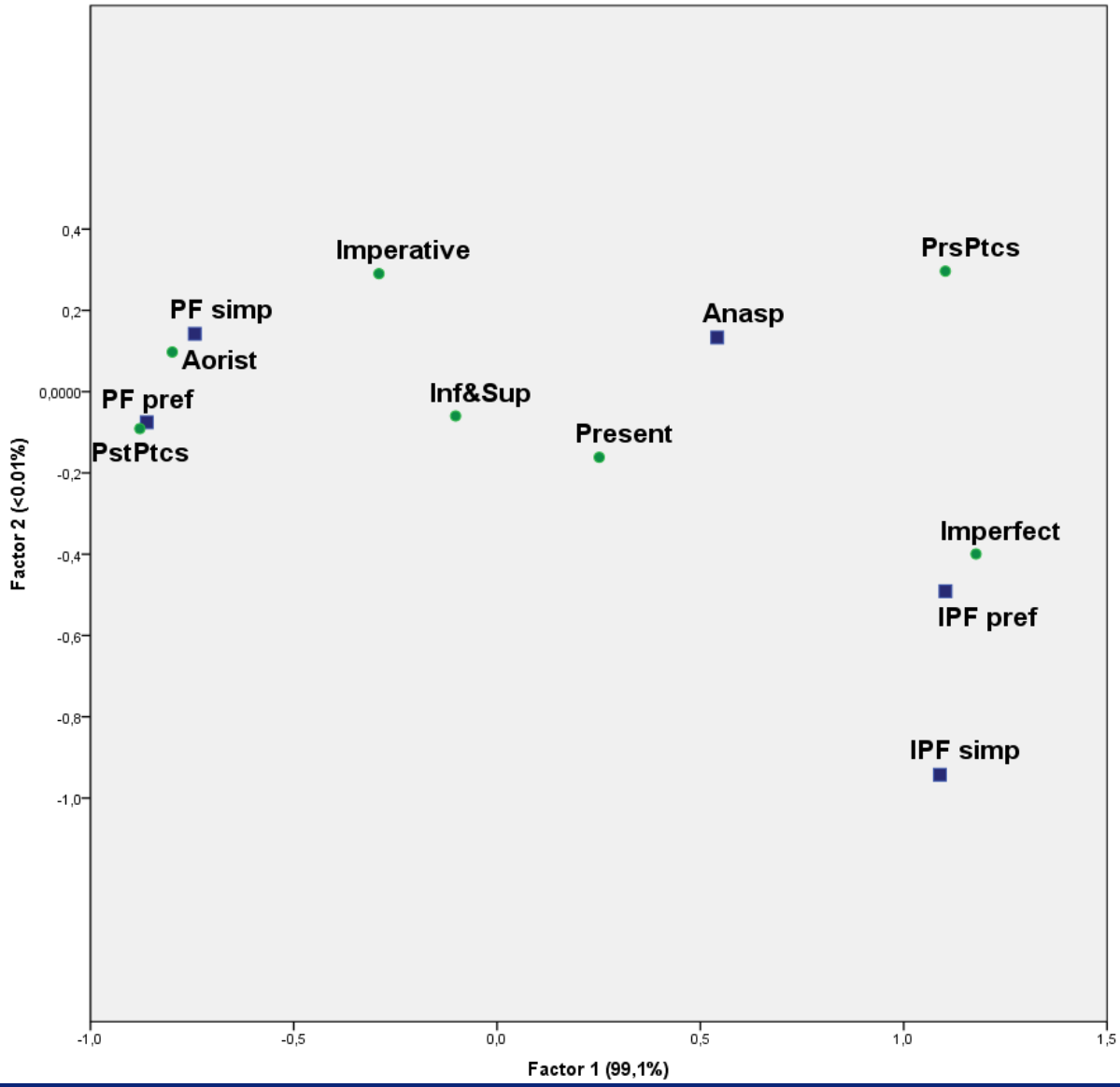
Visualization



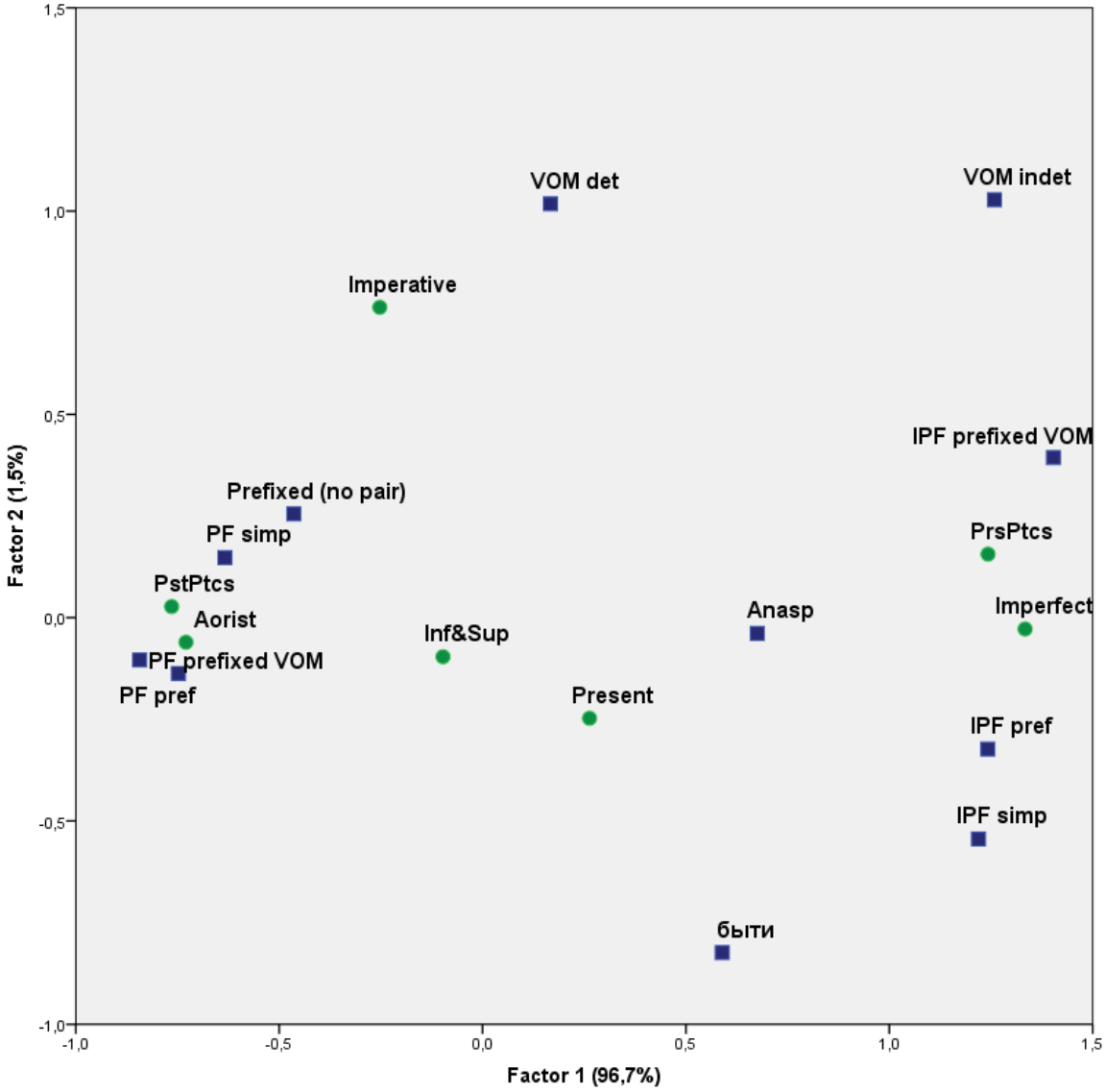
Differs from the “profile picture”:



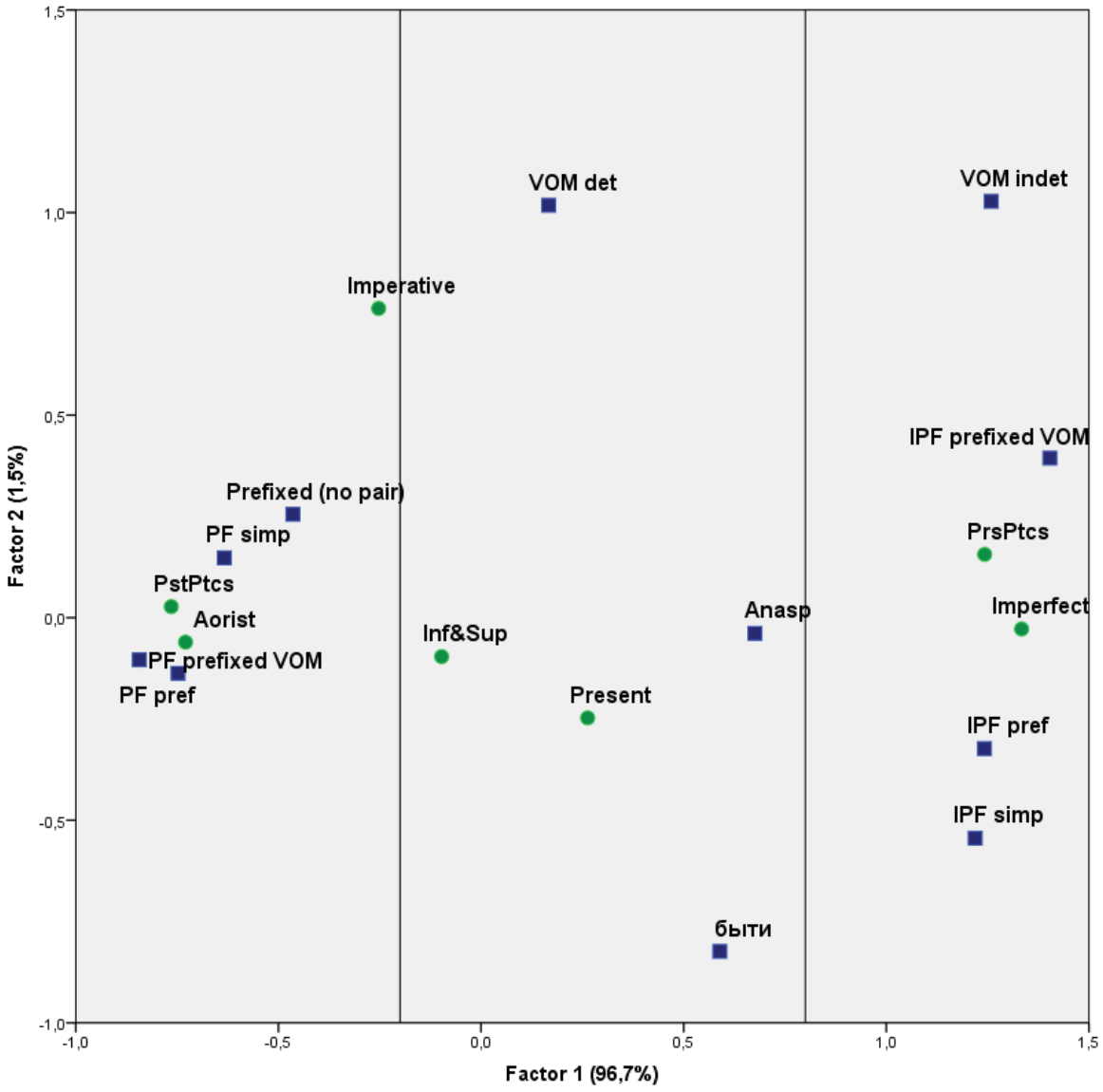
Correspondence analysis I



Correspondence analysis II



Correspondence analysis III



Differing group sizes

Forms	IPF Simplex	Anaspectual	IPF Prefixed
Present	257	6959	1199
Imperfect	100	2294	528
Aorist	1	2715	38
Imperative	26	1423	129
Inf&Sup	41	1582	249
Prs.ptcs	179	5834	1067
Pst.ptcs	4	1661	42
Total	**608**	**22468**	**3252**

Simulation:
What happens when we correct for difference in group size?

Simulation (n= 608 vs n= 22468)

- Original group sizes:
  - χ^2 161.837 (df=6, p<0.001), Cramér's V = 0.084
- Groups equal, N equal (group n 11538):
  - χ^2 2429.717 (df=6, p<0.001), Cramér's V = 0.324
- Groups equal, largest n to smallest n (608)
  - χ^2 128.035 (df=6, p<0.001), Cramér's V = 0.324

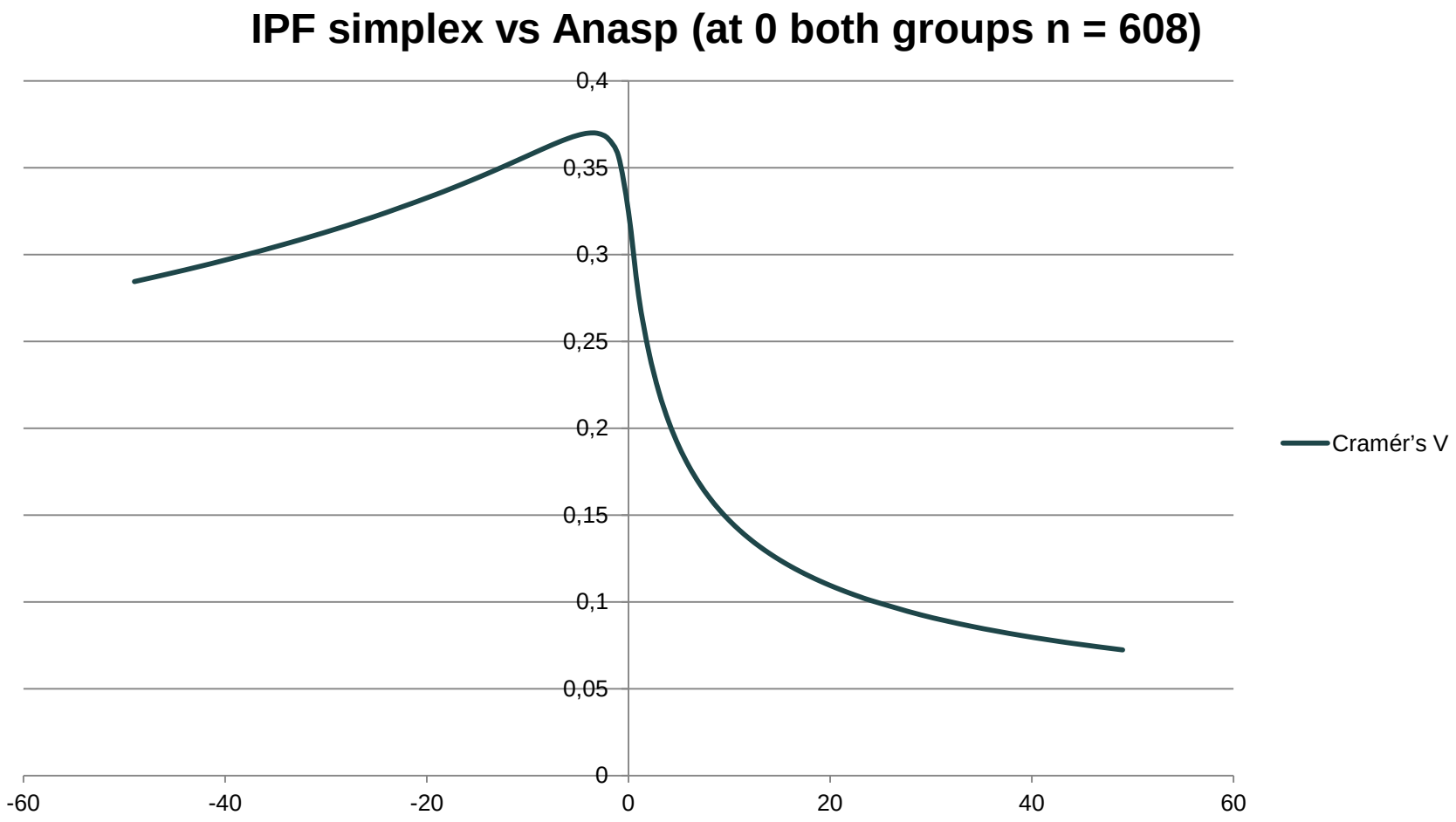
Chi-square results revised

Group	vs	Group	χ^2 results			V max	V old
PF pref	-	IPF pref	3441.98	df =6	p < 0.0001	0.727	0.690
PF simp	-	IPF simp	610.32	df =6	p < 0.0001	0.708	0.627
IPF simp	-	IPF pref	9.63	df =6	p = 0.1411	0.089	0.059
PF simp	-	PF pref	56.16	df =6	p < 0.0001	0.098	0.083
PF pref	-	Anasp	9425.53	df =6	p < 0.0001	0.534	0.516
PF simp	-	Anasp	1428.20	df =6	p < 0.0001	0.494	0.309
IPF pref	-	Anasp	537.53	df =6	p < 0.0001	0.287	0.162
IPF simp	-	Anasp	128.04	df =6	p < 0.0001	0.324	0.084

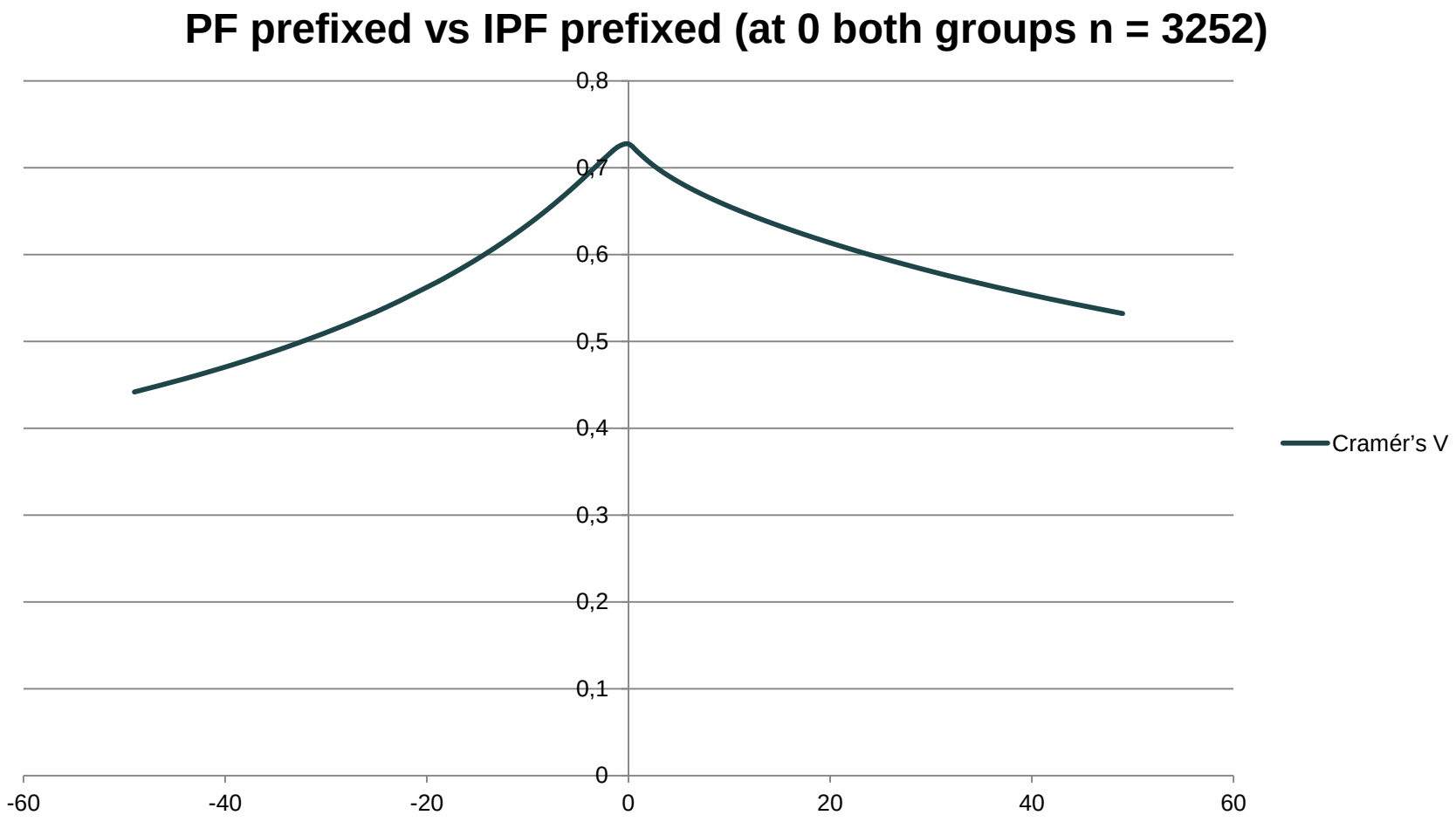
Cramér's V rule of thumb:

0.5 = Large, 0.3 = Medium, 0.1 = small

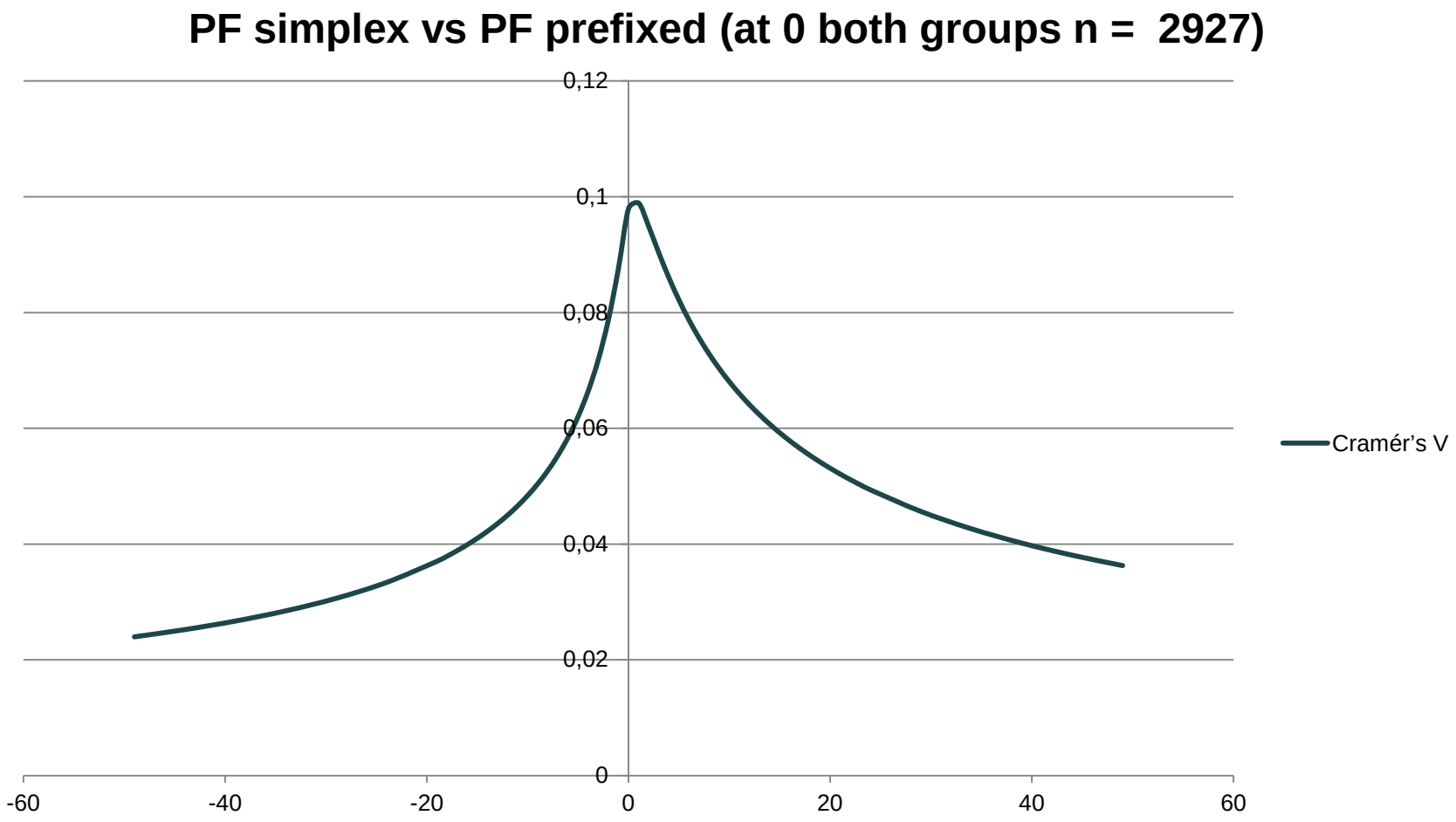
Cramér’s V vs group ratio I



Cramér’s V vs group ratio II



Cramér’s V vs group ratio III



Interpretation

- Morphological markers of aspect add meaning (pf/ipf) to the verb
- At the same time it restricts the way the verb is used
- Absence of morphological markers for aspect means absence of this added meaning and of the restrictions
- With this in mind we are better equipped to interpret individual examples

Dostál 1954 again

Example 1 Matthew 5:33

не въ лъжѫ клънеши сѧ . въздаси же гви клѧтвъı твоıѫ . (Zo, Mar)

‘You shall not make false vows, but shall fulfil your vows to the Lord’

Criterion: no morph. markers -> Anaspectual
Interpretation: generic statement

Verb profile: милосрьдовати

- Meaning: ‘feel compassion’
  - Score on aspect dimension -1 (PF side)

- Example Matthew 15:32

ис же призъвавъ оученикъı своѭ рече имъ . милосрьдоуѭ о народѣ .

‘And Jesus called His disciples to Him, and said, "I feel compassion for the people’

Conclusions

- Morphological characteristics of a verb are strong indicators for the grammatical aspect of the verb

- The absence of morphological indicators in a verb signals the absence of grammatical aspect in a verb
- These verbs have only lexical aspect (like English or Dutch verbs)

There is so much more to say but for now:

THANK YOU