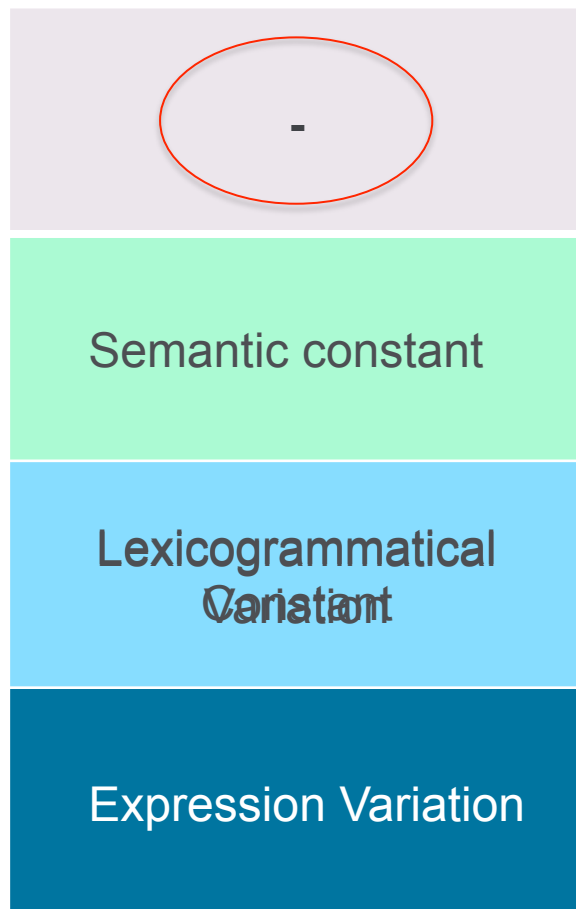


# Codal Variation Analysis as a Forensic Tool

Andrea Nini

Dialectal Variation	Codal Variation	Registerial Variation
-	<b>Contextual Constant</b>	<b>Contextual Variation</b>
Semantic constant	Semantic Variation	Semantic Variation
Lexicogrammatical Variation	Lexicogrammatical Variation	Lexicogrammatical Variation
Expression Variation	-	-

“Different ways of saying the same thing”



He is working

He working

Social Class

The car is broken

The automobile is broken

Ethnicity

Gender

The girl is singing

The girl is singin'

Age



Put the helmet on!

Can you put the helmet on?

Put the helmet on or you will not use your bike.

Put the helmet on because it can save your life.

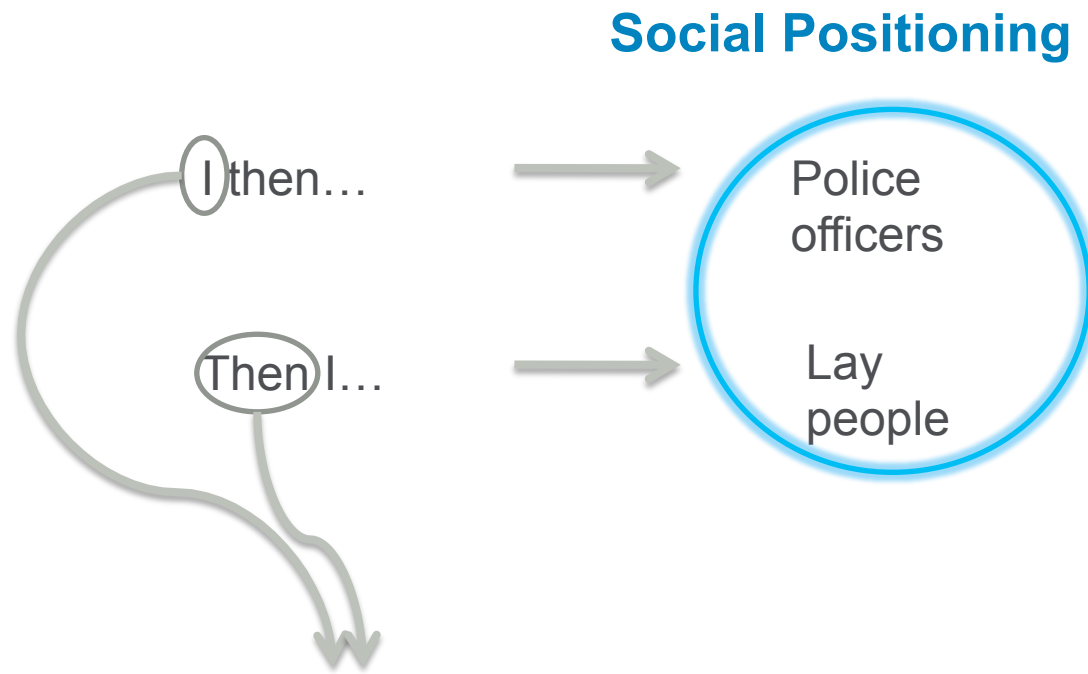
Can you put it on?

Contextual Constant

Semantic Variation

Lexicogrammatical  
Variation

-



Clausal Theme = Textual Semantics

Ideology  
(way of understanding  
the context)

Contextual Constant  
[Statement]

Semantic Variation  
[Textual Meaning]

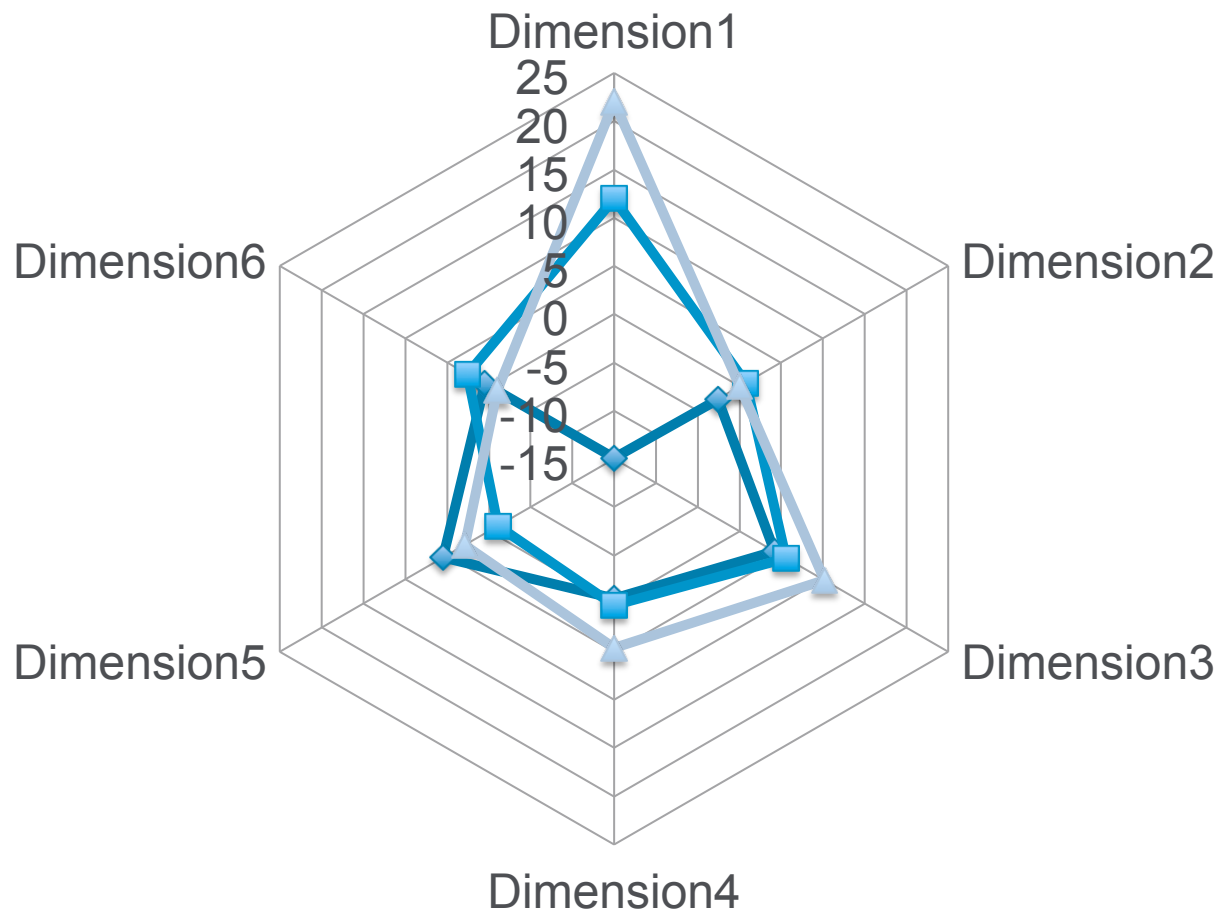
Lexicogrammatical  
Variation [Position of  
*then*]

-

## Biber's Multidimensional Analysis

- ▶ How do we objectively quantify these patterns?
  - ▶ SFL analysis is at times subjective
- ▶ How can we calculate the distinctiveness of these patterns?

# Biber's Multidimensional Analysis



**1000 words**

Linguistic feature	Mean	Minimum value	Maximum value	Range	Standard deviation
...	...	...	...	...	...
Infinitives	19.8	16.0	23.0	7.0	2.6
WH relatives: pied pipes	0.2	0.0	1.0	1.0	0.4
Sentence relatives	0.2	0.0	1.0	1.0	0.4
Adv. Subordinator – cause	2.7	0.0	4.0	4.0	1.4
...	...	...	...	...	...



## Conclusions

- Codal variation can be useful for profiling anonymous authors and for authorship attribution
- Biber's MD is a valid tool to measure codal variation
- Corpus analysis but theoretically motivated!

# Thank you

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