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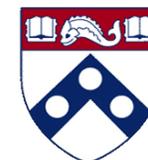
# Probing the vertical and horizontal signal of parametric syntax

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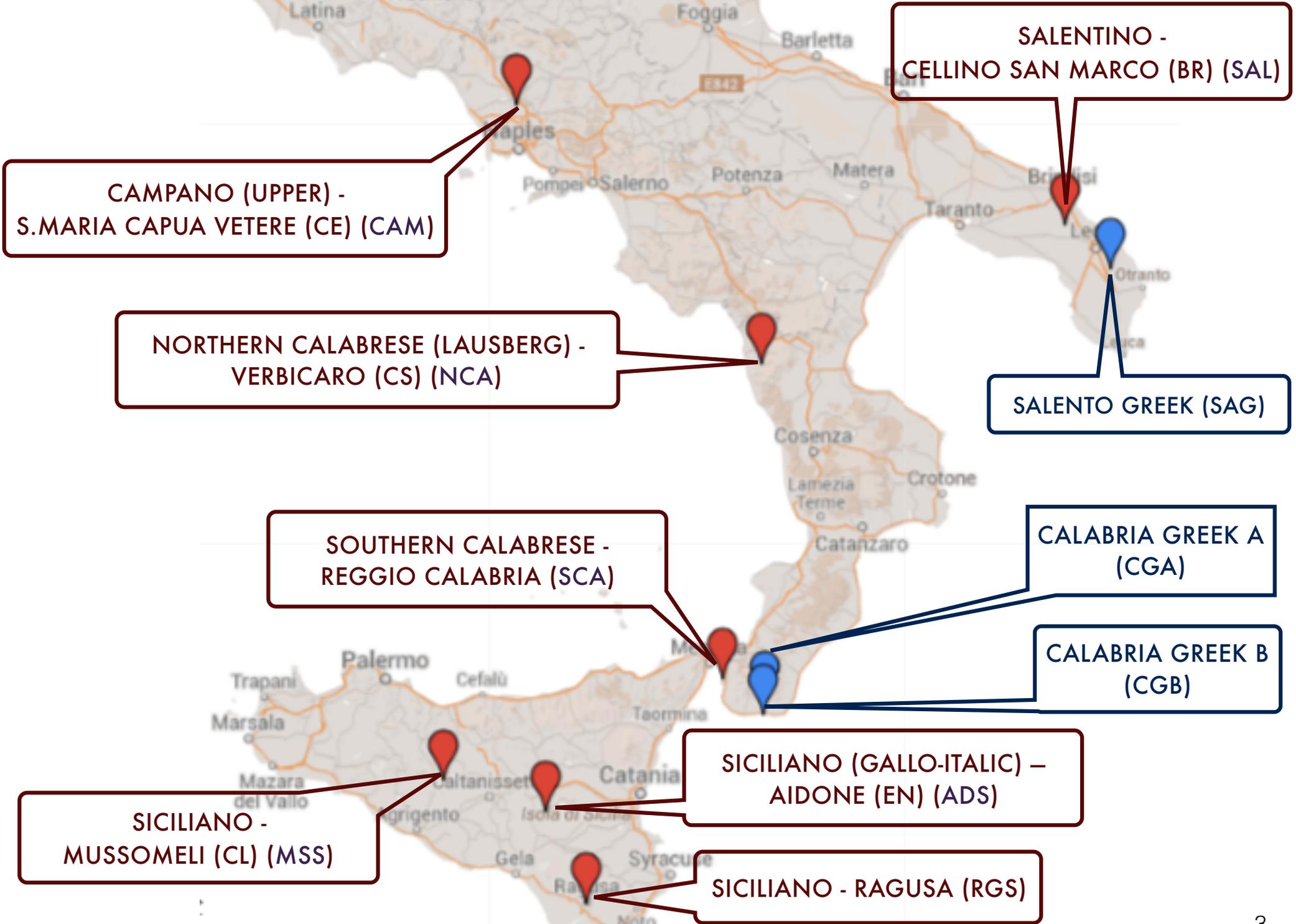
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# Microvariation

A map of Southern Italy and Sicily with several colored pins. Red pins are located near Naples, Potenza, and Catania. Blue pins are located near Brindisi and Messina. The map shows major cities and roads in the region.

1. The set-up of **genealogically very close** languages  
(*Extreme and Upper Southern Romance dialects*)
2. The **variability** across languages belonging to distinct genealogical groups, which have been in **close contact** for a **long time** in a **limited geographical area**  
(Greek and Romance)
3. The **sociolinguistic stratification** of small minority communities (Greek)



FRENCH (FR)

ROMANIAN (RM)

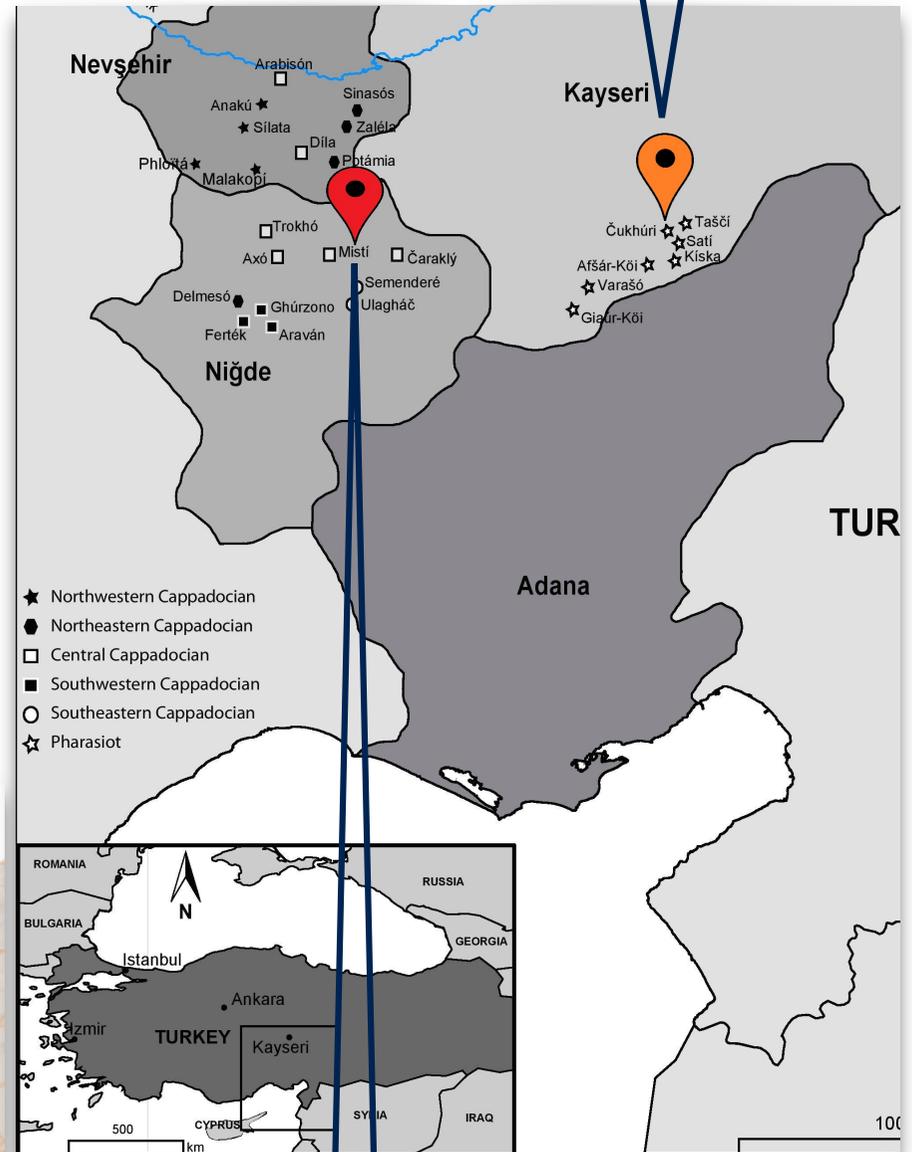
PHARASIOT GREEK (PHA)



SPANISH (SP)

PORTUGUESE (PTG)

(STANDARD) ITALIAN (IT)



Kayseri

- ★ Northwestern Cappadocian
- Northeastern Cappadocian
- Central Cappadocian
- Southwestern Cappadocian
- Southeastern Cappadocian
- ☆ Pharasiot

ROMEYKA PONTIC GREEK (RPG)

CYPRIT GREEK (CYG)

STANDARD GREEK (GRK)

CAPPADOCIAN GREEK (CAP)



# 83 binary parameters

(Guardiano et al 2016)

- **Not all parameters have the same stability:** the distribution of parameter values reflects **different degrees** of
  - **genealogical depth**  
[most parameters whose values are genealogically uniform also exhibit a **deep deductive structure**, i.e. are responsible for a **wide range of superficial variation crosslinguistically**]
  - variability under **secondary convergence**
  - microvariation at the **local level**

# Parameter type 1

## Parameters with a deep phylogenetic signal

- 1\***. Parameters **uniformly set** in all the Romance and the Greek languages of the sample **(27/83)**
- 1\*\***. Parameters **uniformly set** in some Romance and Greek languages of the sample and non-set (as a consequence of cross-parametric implications) in others **(10/83)**
- 1\*\*\***. Parameters **uniformly non-set** (as a consequence of cross-parametric implications) in any Romance or Greek language of the sample **(15/83) [irrelevant for taxonomic purposes]**

## Parameter type 2

### Group-individuating (clusters of) parameters

**2\***. **Group-uniform** parameters: the two groups display **opposite but internally-uniform** values **(1/83)**

**2\*\***. The **more recent varieties** of each group display **different values** than the most ancient ones, and end up with identical values **as the other group (2/83)**

**2\*\*\***. The **most ancient varieties** of both groups display **one and the same value**. Instead, the **more recent varieties** of each group display **different values** than the ancient ones, and **follow different paths than the other group (3/83)**

## Parameter type 3

### Group-internally variable (clusters of) parameters

**3\***. Parameters whose values are **variable within only one group but uniform in the other (13/83)**

**3\*\***. Parameters whose values are **variable within both groups (8/83)**

**3\*\*\***. Parameters whose values are **variable within both groups and such variation is likely to depend on horizontal convergence (5/83)**

## Parameter type 2<sup>\*\*</sup>: *Articles*

The **more recent varieties** of each group display **different values** than the most ancient ones, and end up with identical values **as the other group**

**grammaticalized article** >> from Latin (-) to Romance (+)

**strong article** >> from Ancient Greek (-) to (all) Modern Greek varieties (+)

### **Implicational condition** between

Grammaticalized article and Strong article:

the latter can be set only if the former is set to (+)

	Latin	Romance	Classical and <i>koinè</i> Greek	Greek
<b>Grammaticalized article</b>	-	+	+	+
<b>Strong article</b>	0	+	-	+

# Parameter type 2\*\*\*: *Genitives*

**Three main positions** for nominal arguments of the noun (**genitives**) crosslinguistically

(D) **GenS** Adjs **GenO** N **FreeGen** (Longobardi et al 2016)

**Latin and Classical Greek:** GenS, GenO, FreeGen (inflected) >> **Uniform Gen**

**Romance:** Prepositional, postnominal, iterable (no differences in the interpretation with multiple genitives) >> **Free Gen**

- 1) a. la fotografia **di Gianni di Maria** [*lit. the picture of Gianni of Maria*]  
b. la fotografia **di Maria di Gianni** [*lit. the picture of Maria of Gianni*]

**Greek:** Inflected, non-iterable, after structured adjectives >> **GenO**

- 2) i prosektiki analysi **tu glosologu** (\***tu fenomenu**)

[*lit. the careful analysis the.GEN linguist.GEN (\*the.GEN phenomenon.GEN)*]

**Why postnominal? N-movement over GenO**

## Parameter type 3\*\*\*

### “horizontally” variable (clusters of) parameters

Varieties belonging to one well-defined **language area**

develop **one and the same parameter value,**

no matter of which group they belong to

**article-checking N >> Circumpontic generalization**

**restrictions on prenominal adjectives >> Southern Italy**

**(NO) article on “all” >> Southern Italy (with exceptions)**

# Parameter type 3\*\*\*: **article-checking N**

The **definiteness marker** (*article*) is a **bound morpheme**  
**cliticizing on N**

**Romance:** Romanian **YES**, the other languages **NO**

3) Studentul a citit cartea [*lit. the student has read the book*]

**Greek:** Asia Minor **YES**, the other languages **NO**

4) to askemon t'Ali to muxteron [*lit. the ugly the Alis.GEN the cow*]

“[Asia Minor Greek] has [...] developed an **affixed definite article** of the sort found in Bulgarian and Romanian, though **proclitic rather than enclitic**.” (Guardiano et al 2016, 35)

## Parameter type 3\*\*\*: **article-checking N**

	Lat	Italy Fr	Sp Ptg	Rm	CIG NTG	Grk CyG CGA	SaG CGB	RPA RPB Pha	Cap	Blg	Abk Kab Ub
<b>article-checking N</b>	<b>0*</b>	-	-	+	-	-	-	+	+	+	+

\* **Implicational condition** between gramm. art and art-check. N: the latter can be set only if the former is set to (+)

**+article-checking N**: Romanian (**IE Romance**); Romeyka Pontic, Pharasiot, Cappadocian (**IE Greek**); Bulgarian (**IE Slavic**); Abkhaz, Kabardian, Ubyk (**NW Caucasian**), ...

>> all the languages spoken **around the Black Sea** that happen to have a definite article (no matter of their genealogical affiliation) have a **clitic** one

**Circumpontic generalization** (Guardiano et al 2016)

**article-checking N** is set to (+) if the language is

+Grammaticalized article AND +Circumpontic area

## Parameter type 3<sup>\*\*\*</sup>: *prenominal adjectives*

Patterns of Noun-Adjective(s) ordering >> **structured adjectives\*** and N-movement

\* base-generated prenominally and universally ordered according to the following hierarchy:

**High > Manner 1 > Manner 2 > Argument**

PARAMETER	CONDITION(s) FOR THE PARAMETER TO BE SET	EMPIRICAL EVIDENCE (for + value)	A	B	C	D
<b>N over M1 adjectives</b>	can be set only if the language has structured adjectives	<b>Manner 1</b> adjectives surface systematically postnominally (no prenominal M1 adjectives)	-	-	-	<b>+</b>
<b>N over M2 adjectives</b>	can be set only if N over M1 adjectives is set to (-)	<b>Manner 2</b> adjectives surface systematically postnominally (no prenominal M2 adjectives)	-	-	<b>+</b>	<b>0</b>
<b>N over (argument) adjectives</b>	can be set only if N over M2 adjectives is set to (-)	<b>Argument</b> adjectives surface systematically postnominally (no prenominal argument adjectives)	-	<b>+</b>	<b>0</b>	<b>0</b>

# Parameter type 3\*\*\*: *prenominal adjectives*

## Romance

Microvariation with respect to the classes of adjectives which can appear in prenominal position >> **certain adjectives** (e.g. M2 and Argument in Italian) **are never prenominal**

**5)** la grande (\*rossa) (\*tedesca) **macchina** rossa tedesca  
[lit. the big (\*red) (\*German) car red German]

## Southern Italy Romance

**Restrictions on prenominal adjectives** (only a few adjectives can be prenominal) (Guardiano and Stavrou 2014)

**6)** Ggiovanni jàvi na (\*rànni) **kàsa** rànni  
[lit. Giovanni has a big house]

## Parameter type 3\*\*\*: *prenominal adjectives*

### Greek

#### No restrictions on prenominal adjectives

7) to megàlo kòkino jermanikò aftokìnito

*[lit. the big red German car]*

### Italiot Greek

Restrictions on prenominal adjectives (only a few adjectives can be prenominal) (Guardiano and Stavrou 2014)

8) ìda ton (\*gioveno) àntrepo giòveno

*[lit. I saw the (\*young) man young]*

## Parameter type 3<sup>\*\*\*</sup>: *prenominal adjectives*

	CONDITION(s) FOR THE PARAMETER TO BE SET	Italian	Southern Italy Romance	Non- Italiot Greek	Italiot Greek
<b>N over M1 adjectives</b>	can be set only if the language has structured adjectives	-	+	-	+
<b>N over M2 adjectives</b>	can be set only if N over M1 adjectives is set to (-)	+	0	-	0
<b>N over adjectives</b>	can be set only if N over M2 adjectives is set to (-)	0	0	-	0

**+N over M1 adjectives:** Sicilian, Salentino, Southern and Northern Calabrese (Romance), Calabria Greek, Salento Greek (Greek)

**>> No N-movement over structured adjectives in** (other varieties) of **Greek**

**Southern-Italy generalization** (Guardiano et al 2016)

**N over M1 adjectives is set to (+)** if the language is

+Structured adjectives and +Southern Italy

# On syntactic borrowing

- **Syntactic borrowing** >> **limited nature**
- **Why?** >> intrinsic **resistance** by the most internally structured systems to accept changes even when they are motivated by external pressures (*Inertia*)

# The mechanisms of syntactic borrowing

## Resistance Principle

*The **resetting** of a parameter under **interference** is possible only if a **subset of the triggers expressing the new value** is already present in the language*

*(but this subset is **not sufficient** on its own to **unambiguously set the new value**)*

**Consequence** >> **interference** data in parametric syntax must appear at least in part as “**familiar**” in a language, in order to be used as triggers

## Parameter resetting in Italiot Greek: **N over M1 adjectives**

- **Assumption:** the parameter in Italiot Greek had originally the value (-), like the rest of Greek
- As a consequence of **horizontal convergence** with Southern Italy Romance, the value has been reset to (+)
  - [As a consequence of the value (+), the parameters **N over M2 adjectives** and **N over adjectives** become irrelevant]
- **Conditions/Triggers for resetting** >> availability, in both groups, of **superficially postnominal adjectives**, with different underlying representations:
  - **Greek:** free reduced relatives
  - **Romance:** free reduced relatives AND N-movement

# Taxonomic Results

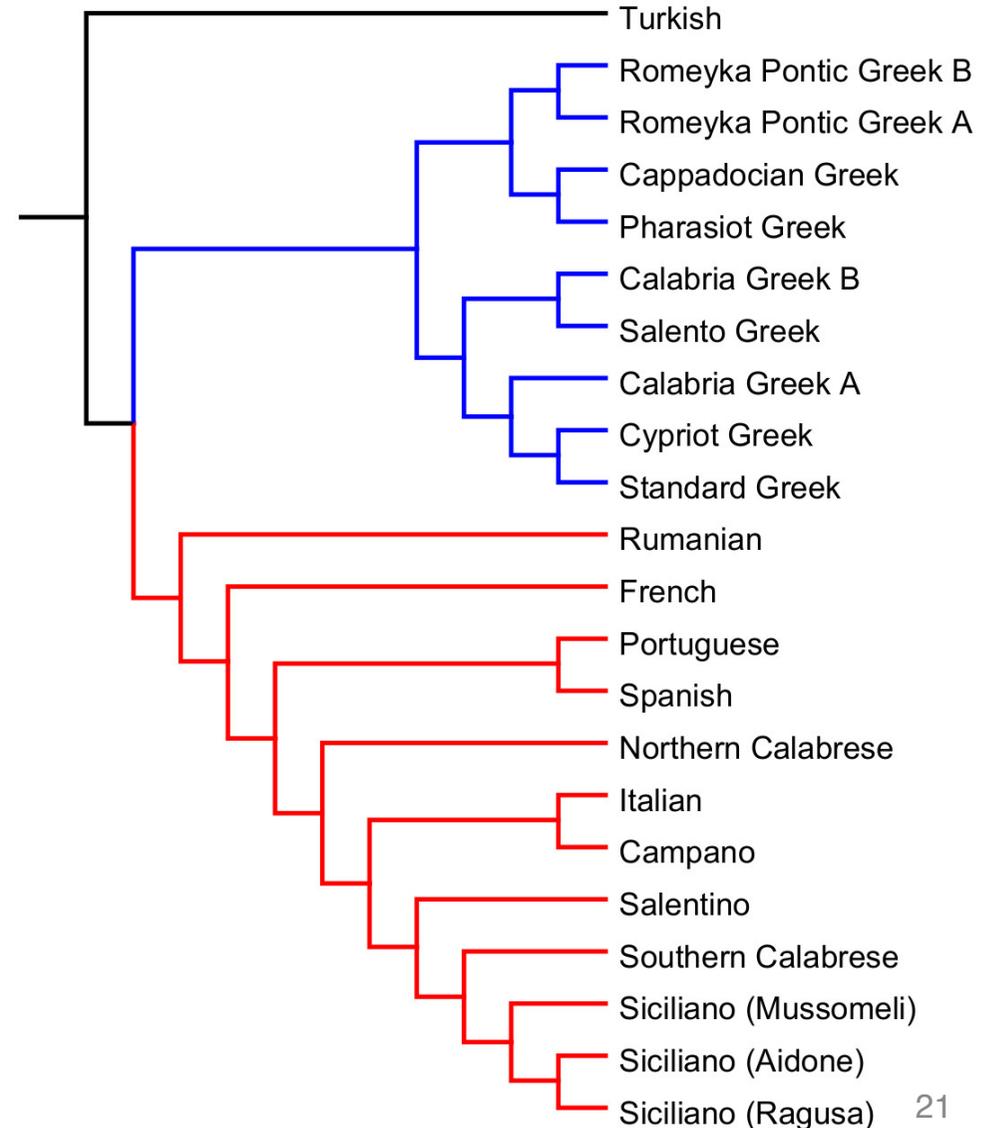
All the experiments performed so far

(trees, networks, PCA, [Guardiano et al 2016](#)) are **stable** and **consistent**

A. **Vertical relations**, which reflect the phylogenetic structure of the two genealogical groups

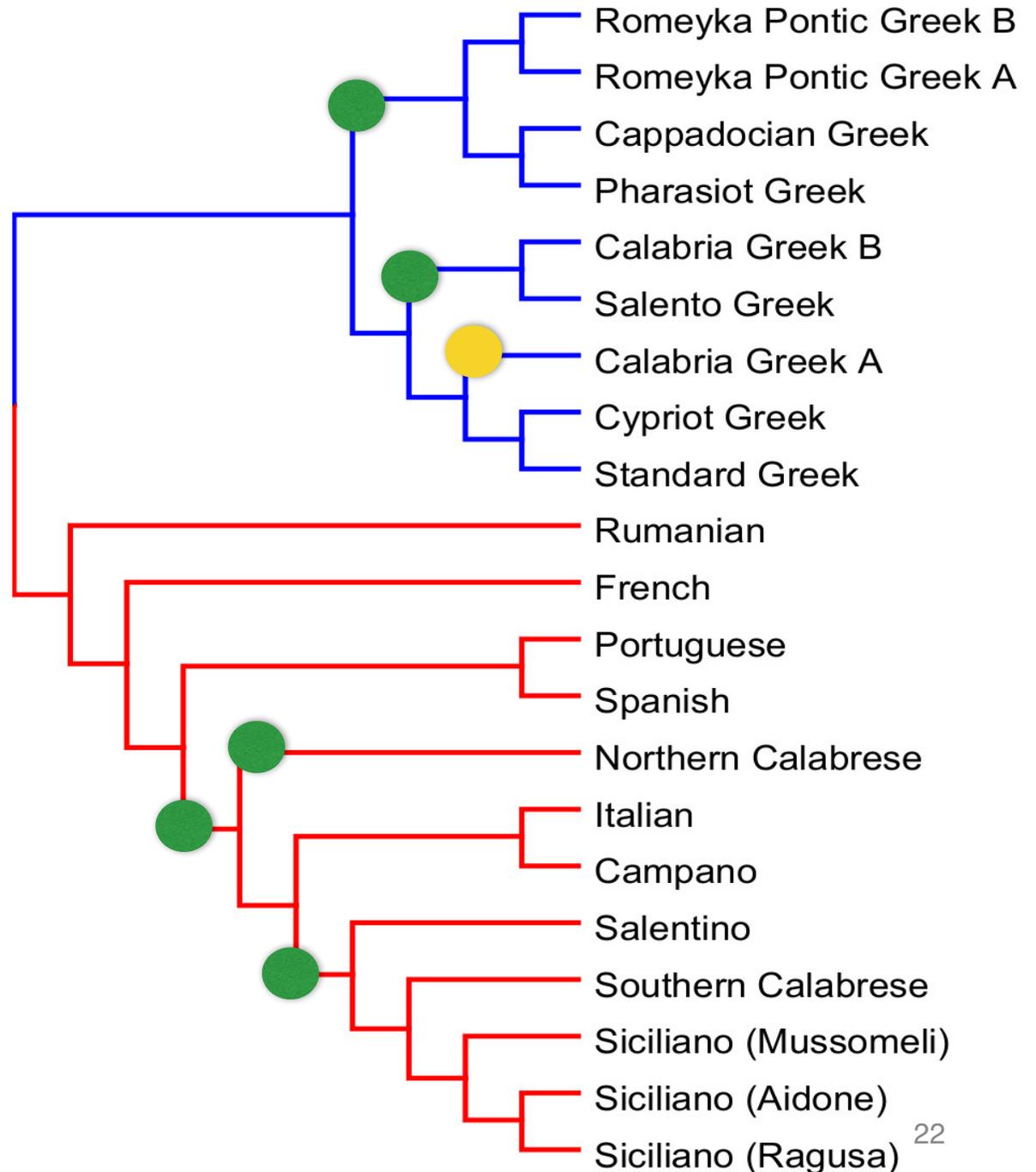
**(Romance vs Greek)**, are neatly identified

In spite of Romance / Turkic influence, respectively, Italiot and Asia Minor Greek are unmistakably identified as Greek, and kept **separated** from Romance/Turkish



# Taxonomic Results

B. **The internal (= dialectal) sub-articulation** of the two families is captured, and it corresponds to the history of the dialects and to the geographical structure of the areas involved (**Extreme Southern Italy Romance, Lausberg area, Asia Minor Greek, ...**).



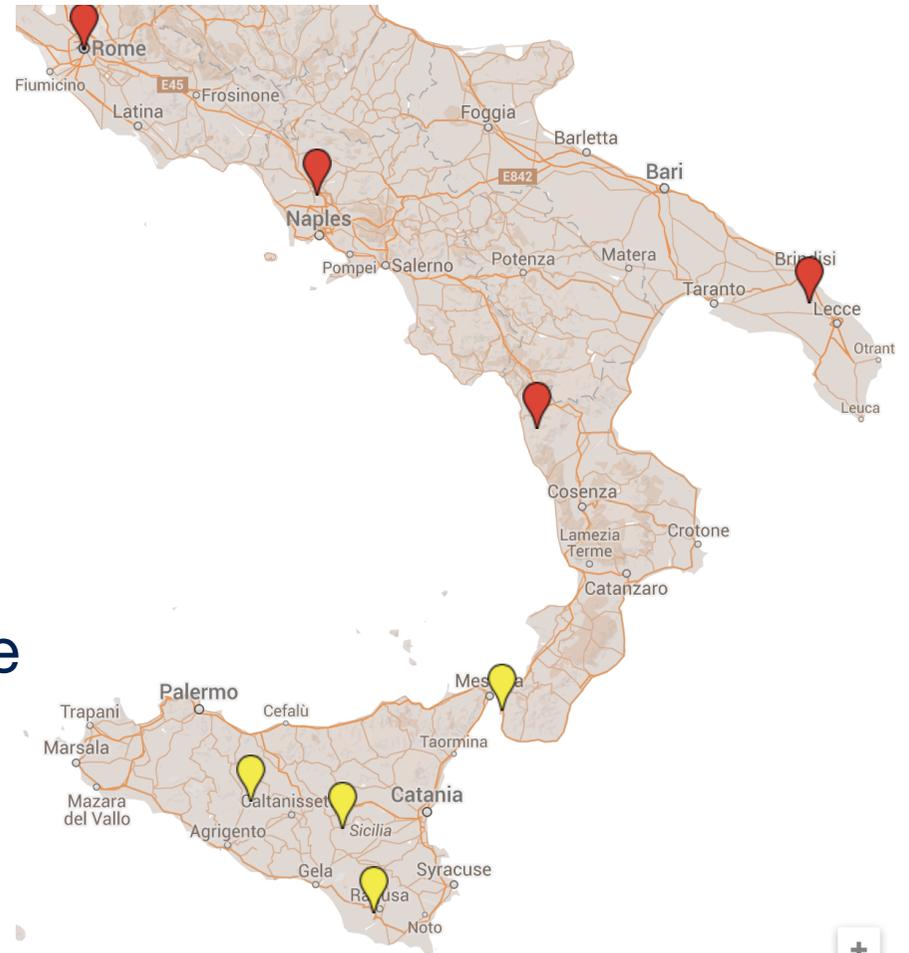
# A closer look at syntactic distances: Southern Italy Romance

- **Southern Calabrese** (topologically well-classified in the Extreme group)
  - **Sharp contrast** between
    - distances from the dialects of **Sicily**  
(**0.0182** with Ragusa and Aidone, **0.0364** with Mussomeli)
    - distances from **non-Sicilian languages**  
(**0.0943** Campano, **0.0727** with N.Calabrese and Salentino)
- **Salentino** (topologically well-classified as the outlier of the Extreme group)
  - Distances with its closest relatives and with the other two dialects are **well-balanced**
    - Campano, Ragusa = **0.0566**
    - Northern, Southern Calabrese = **0.0727**

# A closer look at syntactic distances

**(a)** Innovations radiating from **Naples** reached **Salento** much more easily than Reggio Calabria

**(b)** Innovations radiating from **Sicily** reached **Reggio Calabria** much more easily than Salento



# Geographical distances and physical barriers

	Campano (S.M. Capua Vetere)	Salentino (Cellino S.Marco)	Southern Calabrese (Reggio Calabria)
Campano (S.M. Capua Vetere)		<b>402 KM</b>	<b>518 KM</b>
Salentino (Cellino S.Marco)	<b>0.0566</b>		454 KM
Southern Calabrese (Reggio Calabria)	<b>0.0943</b>	0.0727	



Efficient **road connection** from  
Naples to Apulia (via Appia)  
from 312 BC

# Geographical distances and physical barriers

## Geographical factors are reflected in syntactic distances

1. Physical barriers seem to play a significant role in syntactic transmission
2. Such cases do **not affect** the overall syntactic phylogenies/taxonomies

### → Question/conjecture

- *is the effect of geographical distances and barriers (proportionally) **higher on syntax** than on more traditional levels of linguistic analysis (i.e. lexicon, etymological criteria, ...)?*
- *if yes, is this related to the **non-arbitrariness and higher variability** of syntactic diversity, constrained empirically by principles like Inertia (Keenan 1994, Longobardi 2001) and theoretically by maximum limits for variation like Guardiano and Longobardi's (2005) Anti-Babelic Principle?*

# Conclusions

(1) Does **dialectal syntax** retain a significant **historical signal**?

**YES: dialect articulation** resulting from syntax **parallels** widely accepted **phylogenetic classifications** >> the PCM can successfully be applied to **classify very closely-related languages**

(2) Does dialectal syntax retain a **horizontal signal**?

**YES: cases of very plausible syntactic borrowing** arise, but **never disrupt the genealogical signal**

(3) Does the distribution of **syntactic diversity** correlate with sociolinguistic and **geographical factors** on the micro-comparative scale?

**YES: parametric syntax retrieves a sociolinguistic structure** fully compatible with the traditionally established ones; the relation between the syntactic distances and geographical factors requires deeper exploration

# *In a nutshell*

Using **syntactic parameters**,

it is **possible**

to reconstruct fragments of non-obvious

linguistic, cultural and social history

even at a micro-variationist level of analysis



## Thanks to our consultants!

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