

The Use of Narrative in Social Science Research

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Workshop on "Understanding Narratives for National Security Purposes"

My obsession with measurement of meaning

A story of a long journey in search of the actor...

STRUCTURAL ANALYSIS IN THE SOCIAL SCIENCES 22

From Words to Numbers

Narrative, Data,
and Social Science

Roberto Franzosi

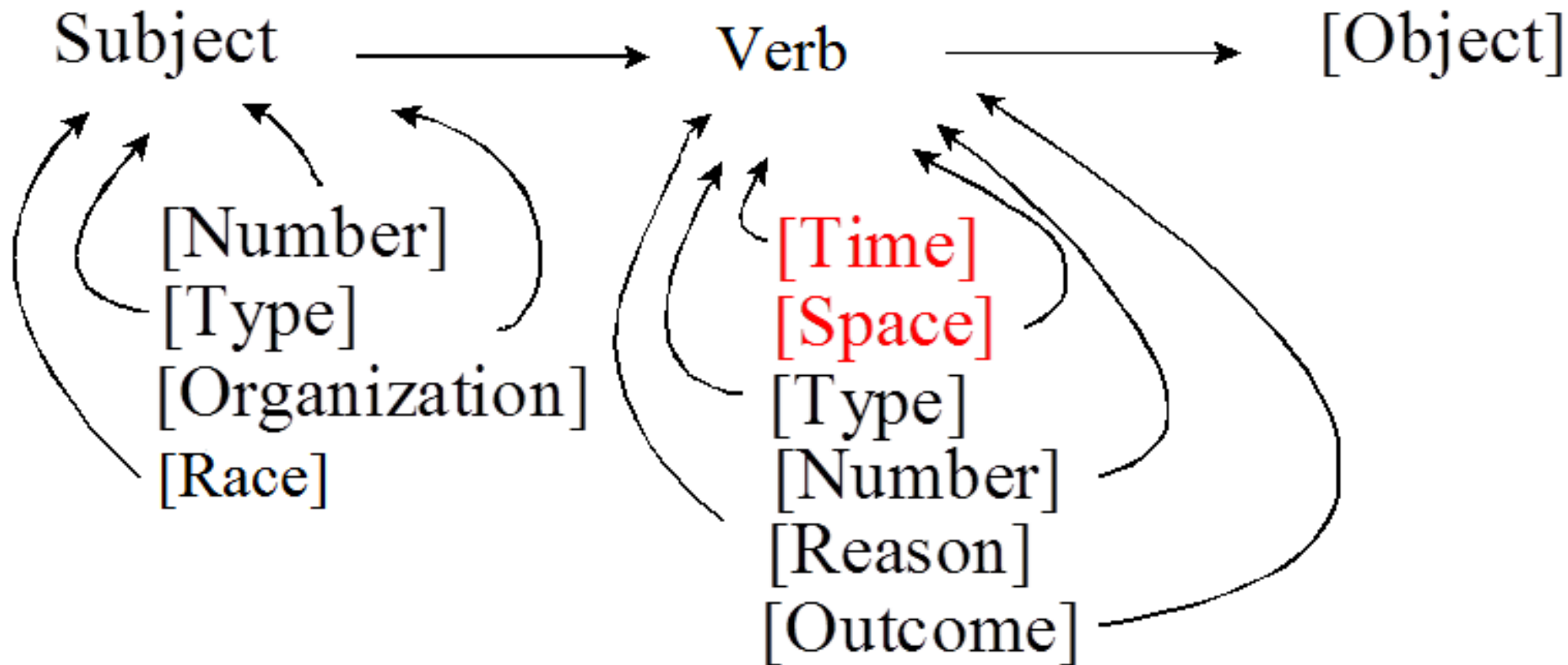
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The Ant and the Cicada	1
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"In the early 1980s, by the end of my dissertation work—an econometric analysis of official strike statistics in the Italian postwar period—I had come to a depressing conclusion. Quantitative strike research had produced an abundant literature in its one hundred years of history—give or take a few years or decades. But ..."

The beginning of my story... (Early 1980s)

Story grammar

The 5Ws + H of Journalism: Who, What, When, Where, Why and How



The 5Ws + H of Journalism

Who, What, When, Where, Why and How

The Arte of Rhetorique (1560) Thomas Wilson (1524-1581)

Seuen circumstaunces, which are to bee considered in diuers matters.

The circumstaun-
ces.

- i. Who did the deede.
- ii. What was done.
- iii. Where it was done.
- iiii. What helpe had he to doe it.
- v. Wherefore he did it.
- vi. How he did it.
- vii. At what time he did it.

¶ *The circumstaunces in Meter.*

Who, what, and where, by what helpe, and by whose :
Why, how, and when, doe many things disclose.

PC-ACE

Program for Computer-Assisted Coding of Events



I USED PC-ACE/QNA IN TWO PROJECTS

THOUSANDS OF NEWSPAPER ARTICLES HAND-CODED IN COMPUTER-ASSISTED QNA

- ▶ *Rise of Italian fascism (1919-1922)*
- ▶ *Lynchings in Georgia (1875-1930)*

My data: PC-ACE coded output

Semantic triplet: [Subject: [Actor... (Name of individual actor: **negro**)] [Action: (Verb phrase: **attacks from behind**) [Time... (Definite date: **October 14, 1896**) [Space..City: (City name: **near Griffin**) (Locality: **woods**)]]] [Object: [Actor... (Name of individual actor: **woman**)] [Name of individual: **Blanche Gray**] [Marital status: **single**]]

Semantic triplet: [Subject: [Actor... (Name of individual actor: **negro**)] [Action: (Verb phrase: **chokes**) [Time... (Definite date: **October 14, 1896**) [Space..City: (City name: **near Griffin**) (Locality: **woods**)]]] [Object: [Actor... (Name of individual actor: **woman**)] [Name of individual: **Blanche Gray**] [Marital status: **single**]]

Semantic triplet: [Subject: [Actor... (Name of individual actor: **negro**)] [Action: (Verb phrase: **rapes**) [Time... (Definite date: **October 14, 1896**) [Space..City: (City name: **near Griffin**) (Locality: **woods**)]]] [Object: [Actor... (Name of individual actor: **woman**)] [Name of individual: **Blanche Gray**] [Marital status: **single**]]

WHAT CAN YOU DO WITH THESE “DATA”?

TABLE 2
Logit Regression Estimates

	Estimate	Standard Error
Intercept	-2.089	0.133
Economic Sector	2.675	0.247
Type of Ownership	1.417	0.286

Data

Intercept	Economic Sector	Type of Ownership	Proportion Offensive
1	Service (1)	Public (1)	0.88
1	Service (1)	Private (0)	0.21
1	Industry (0)	Public (1)	0.34
1	Industry (0)	Private (0)	0.11

Franzosi, “From Words to Numbers: A Set Theory Framework for the Collection, Organization, and Analysis of Narrative Data”, *Sociological Methodology*, 1994

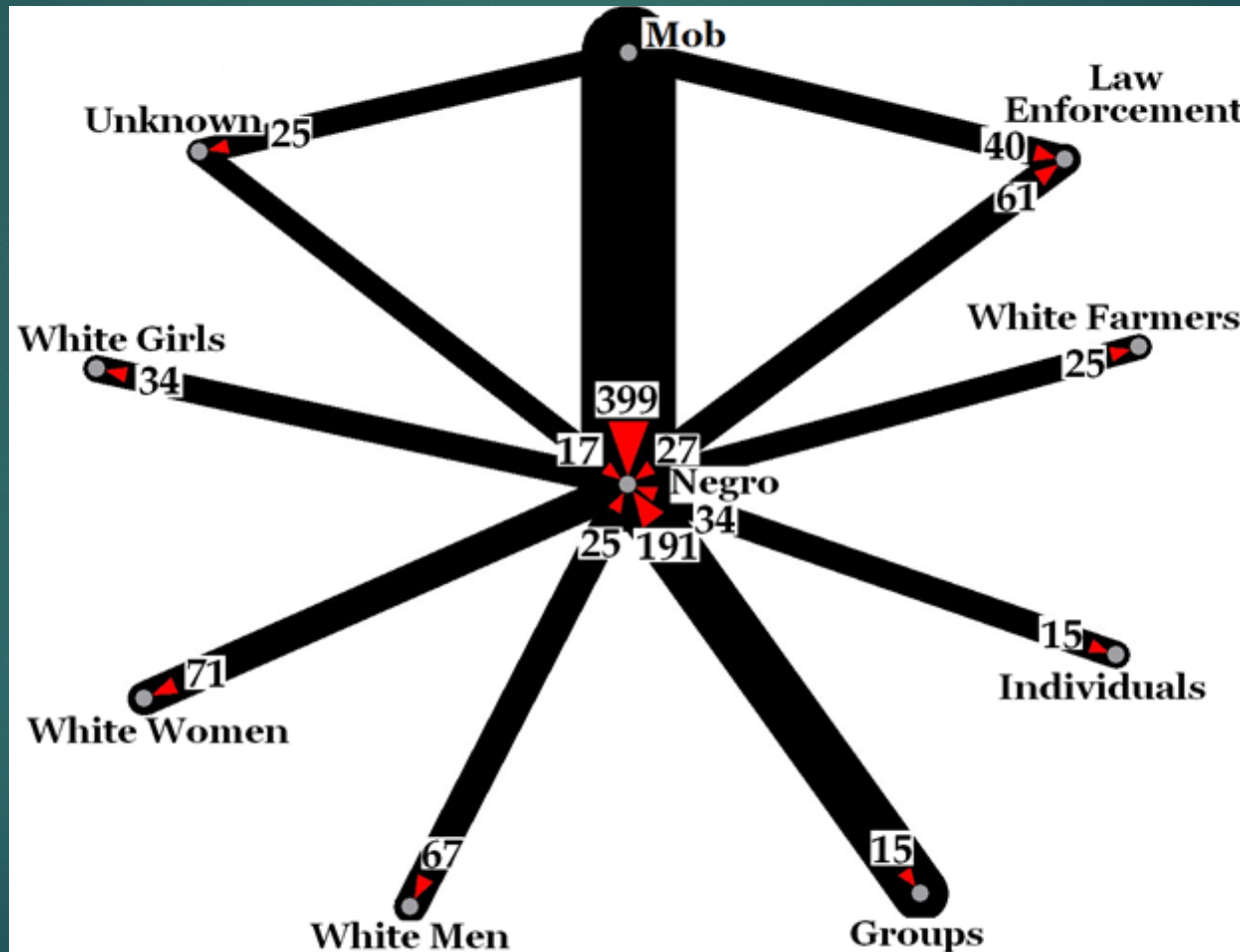
THE NARRATIVE STRUCTURE OF THE DATA



1. Actor-Actions-[Actors] (SVO) → Network Models
2. Time and Space (of SVO) → GIS Models

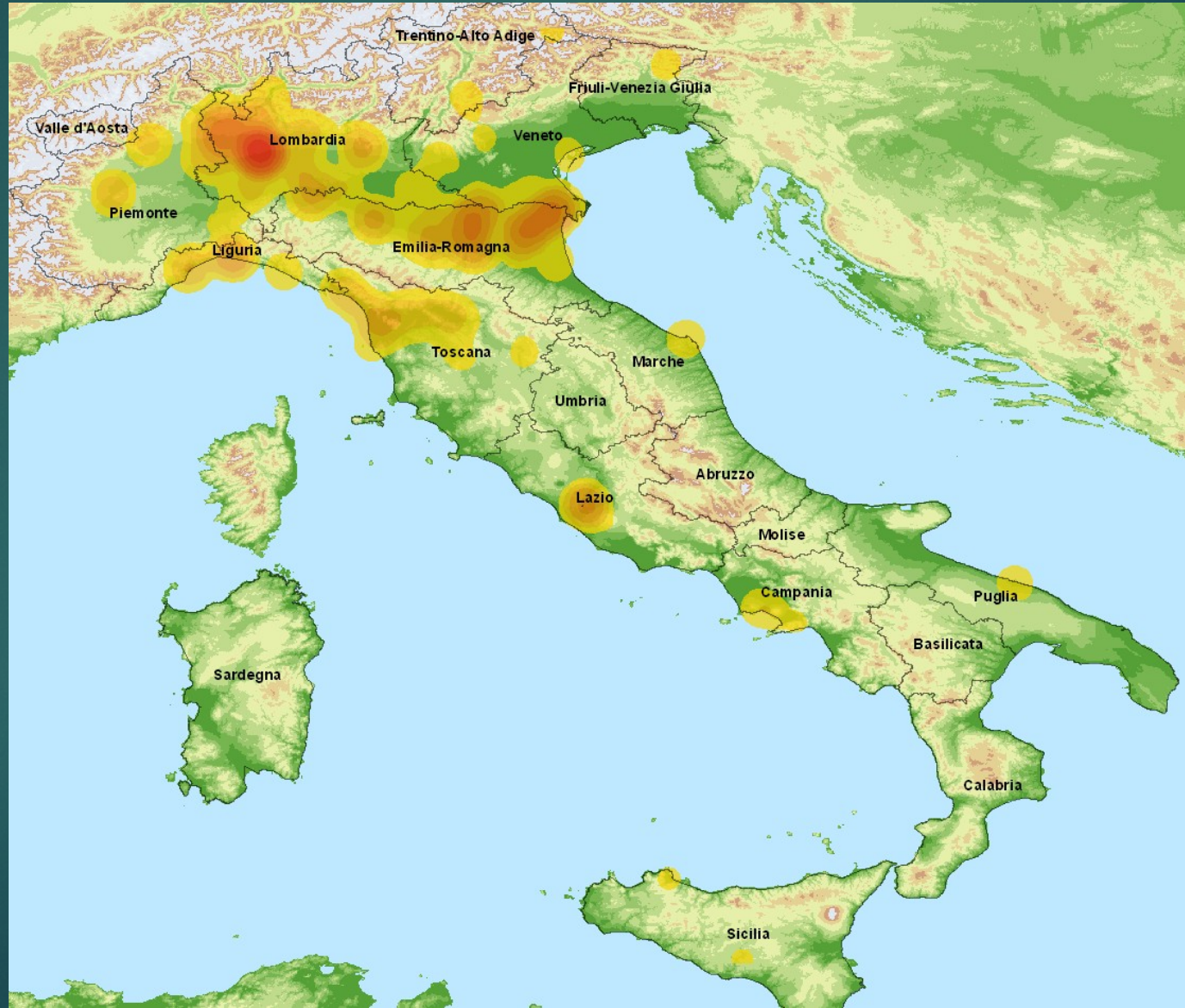
Network Models (Who, What, Who - SVO)

Network of Lynching Violence against People



GIS Models (Where & When)

The geography of conflict & violence (1919-1922)



A Brave New World

Doing away with the pain of hand coding?

Natural Language Processing (NLP)

The end of my story

And that's the end of my story...

