Piötòst Ché Nièn t, Mèi Piötòst - A Manually Revised Lombard-Italian Parallel Corpus

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Outline

1. Linguistic background
2. Related work
3. Methodology
4. Corpus
5. Limitations and future work

Some linguistic background...

Many think that the Italian linguistic landscape looks like this:

Some linguistic background...

Or like this:

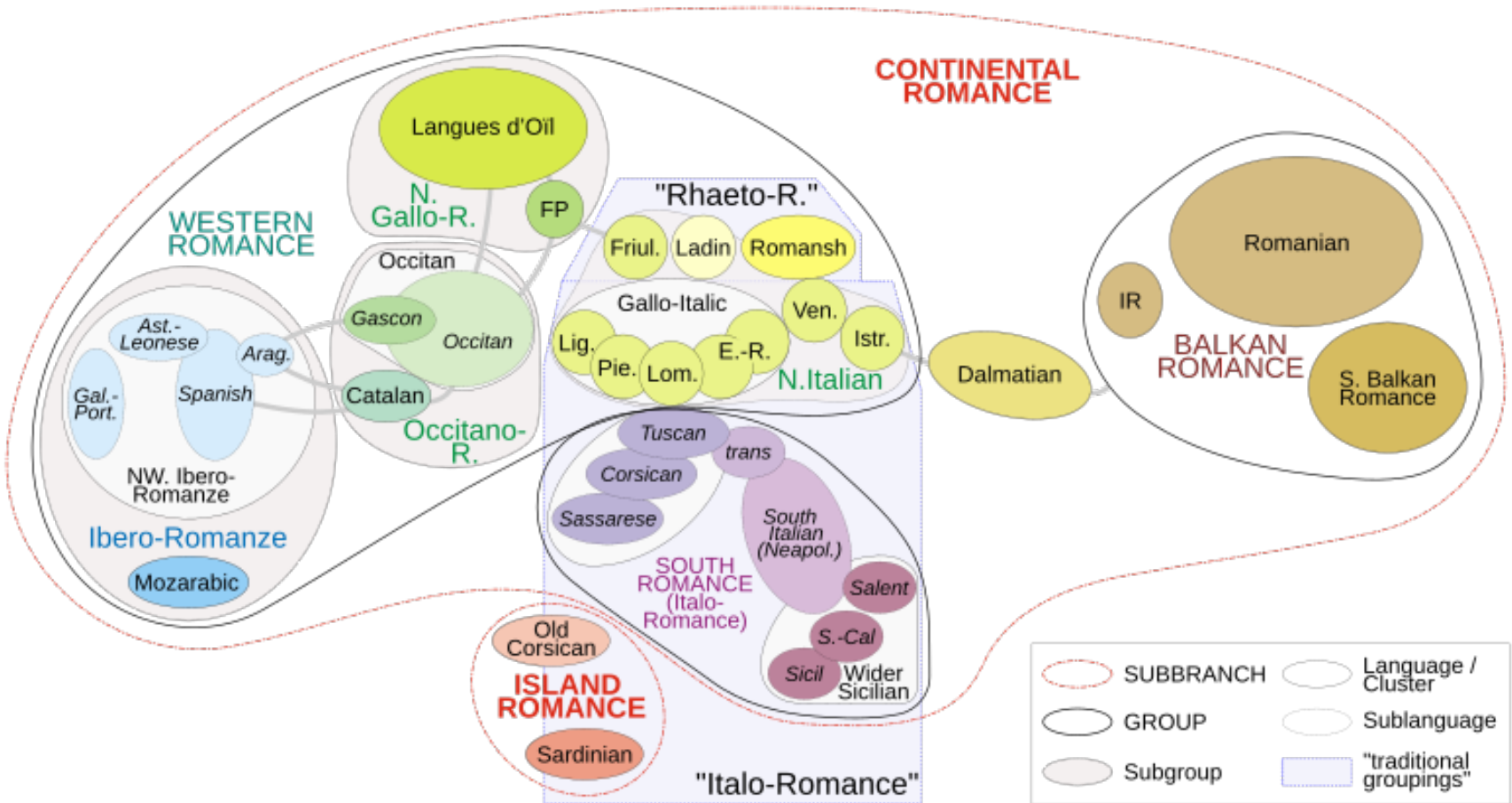
Some linguistic background...

When, in fact, it is more like this:

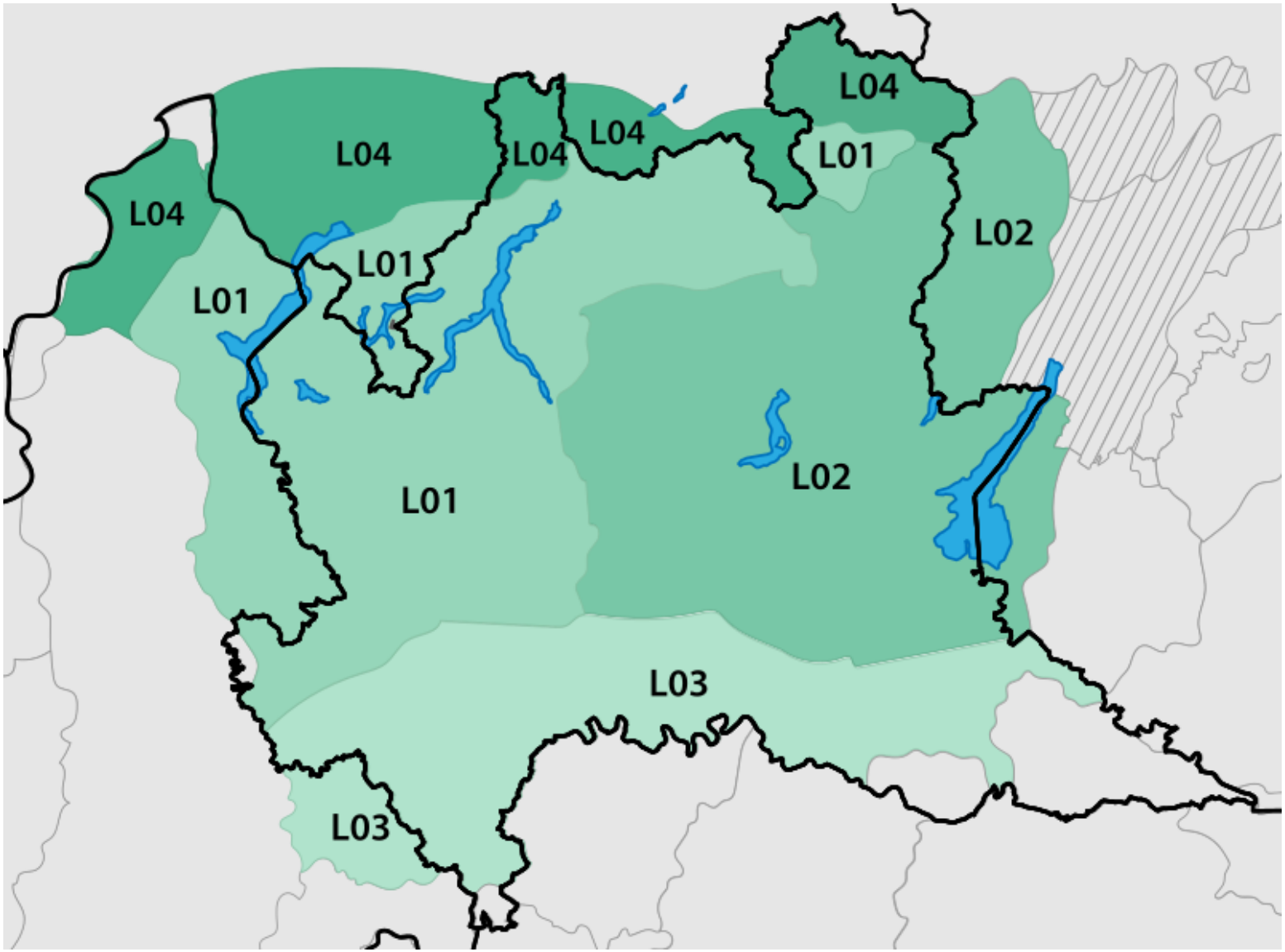
Some linguistic background...

- "Language" of Italy (it. *lingua*) vs "Dialect" of Italian (it. *dialetto*)
- Widespread diglossic bilingualism

The Lombard language



The Lombard language



The Lombard language

- 3.5 million speakers in Lombardy and the neighboring regions
- "Definitely Endangered" according to the UNESCO
- No unified orthography, but several standardization attempts

La mèrla

I mèrli ’na ólta i ghìa le pène biànche, ma chèl envéren lé l’éra stàt en bèl envéren e lé, la mèrla, la gà dìt: "Zenér de la màla gràpa, per tò despèt gó i uzilì ’ndela gnàta." A lü, ’l Zenér, gh’è nìt adòs ’n pó de ràbia, e ’l gà dìt: "Spèta, mèrla, che te la faró mé adès a té, e se te sét biànca mé te faró ègner négra." E pò dòpo ’l gà dit amò: "Dù ghe i ó e giü ’n prèstet el töaró e se te sét biànca, mé te faró ní négra." E alùra ’l gà fàt nì fò ’n frèt che se n’ìa mài vést giü compàgn.
Lé la mèrla la saìa piö che fà cói sò uzilì ndèla gnàta, e isé l’è nàda a rifügiàs endèla càpa del camì; dré al camì va sö ’l föm e lùr i uzilì i è déentàcc töcc négher, e quànche i è nicc fò de là, la mèrla la gh’ìa mìa piö le pène biànche, ma la ghe i éra négre. Alùra Zenér, töt sudisfàt, el gà dìt: "Tò mèrla, che te l’ó fàda mé staólta: se te se stàda biànca mé t’ó fàt ní négra e isé te làset lé de seghetà a tiràm en gìr."

The She-Blackbird

Once upon a time blackbirds had white feathers, but in that time winter had been mild and a she-blackbird scorned January saying: "Bad-headed January, in spite of you I have got a brood in my nest." Hearing this, January got angry and he said: "Just wait a bit, you she-blackbird, I will fool you and I will turn you from white into black." Then he said: "I have got two, and I will borrow one, and I will turn you from white to black." And he brought forth a cold as there had never been before.
The she-blackbird did not know how to cope with her brood in the nest, so she sheltered in the hood of a chimney, and the smoke turned all the birds black; so when they came out the blackbirds did not have white feathers anymore, but black ones. And January, very happy, said: "This time it was me that fooled you, blackbird: you were white and I turned you black, this will teach you to stop teasing me."

Linguistic research

- Linguistic research and dictionaries from the 19th century up to 2021
- Sociolinguistics and revitalization
- Lexical atlases

NLP resources

- lmo resources are part of bigger multilingual projects:
  - lmo sections of Wikipedia [1, 2, 3] (monolingual)
  - **lmo-xx parallel corpora on OPUS** [4]
- these are automatically aligned and quite noisy
- Other are cleaner:
  - FLORES-200 [1]
- Lombard fits the definition of "(very) low-resource language"

[1] https://github.com/facebookresearch/flores/tree/main/flores200

Revision process

- Manual revision of lmo-it alignments on OPUS
- Preliminary evaluation: 157/500 (31.4%) alignments were wrong
- Five Italian-Eastern Lombard bilingual annotators
- Alignments judged as wrong were removed
- Easy fixes (e.g. partial alignments) were manually corrected

Revised corpus

Total	Correct		Removed		Modified	
10.533	4915	*46.67%*	5227	*49.62%*	391	*3.71%*

Table 1: Number of correct, removed, and modified alignments against the starting total.

Posso capire perché pensò a me.	A gh'è nissün che 'l pensa a mì.

Figure 1: Example of a removed sentence pair.

Limitations

- No standard orthography for Lombard, the language is mostly spoken.
- Thus, the annotators had different levels of proficiency with written Lombard.
- Accordingly, corrections were limited to the Italian side, to avoid injection of subjective spelling.
- The corpus was small, and now it is tiny.

Future work

- **expand the corpus** by scraping, crowdsourcing, and digitalization of texts (literary works, social media, developing L2 community, OCR)
- partial (and sometimes wrong) alignments hint to the possibility of extracting more data from Wikipedia
- explore the feasibility of a **MT system**

Conclusions

- we focused on **Lombard**, **a regional language** of Northern Italy
- and **revised** the only readily available **Lombard-Italian parallel corpus**.
- More than **half** of the (already small set of) alignments **was** judged as **wrong**
- thus, we need **better automatic alignment methods**,
- but also **data collection, documentation, NLP resources and tools**, ...

And to close on a happy tone:

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[2] Rudolf Rosa. *Plaintext Wikipedia dump 2018*. LINDAT/CLARIAH-CZ digital library at the Institute of Formal and Applied Linguistics (ÚFAL), Faculty of Mathematics and Physics, Charles University. 2018. URL: http://hdl.handle.net/11234/1-2735.

[3] Holger Schwenk et al. "WikiMatrix: Mining 135M Parallel Sentences in 1620 Language Pairs from Wikipedia". In: *CoRR* abs/1907.05791 (2019). arXiv: 1907.05791. URL: http://arxiv.org/abs/1907.05791.

References II

[4] Jörg Tiedemann. “Parallel Data, Tools and Interfaces in OPUS”. In: *Proceedings of the Eighth International Conference on Language Resources and Evaluation (LREC’12)*. Istanbul, Turkey: European Language Resources Association (ELRA), May 2012, pp. 2214–2218. URL: http://www.lrec-conf.org/proceedings/lrec2012/pdf/463_Paper.pdf.

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