



Multilingual Codeswitching in Letters

Gisella and Lena
Istanbul, 1951



Sept. 10th 1962

Milan tam Italyan avec grand dolce far niente et les gens qui sortent le soir pour le plaisir de flaner.

‘Milan fully Italian with big sweet do nothing and the people who go out in the evening for the joy of strolling.’



Minach family

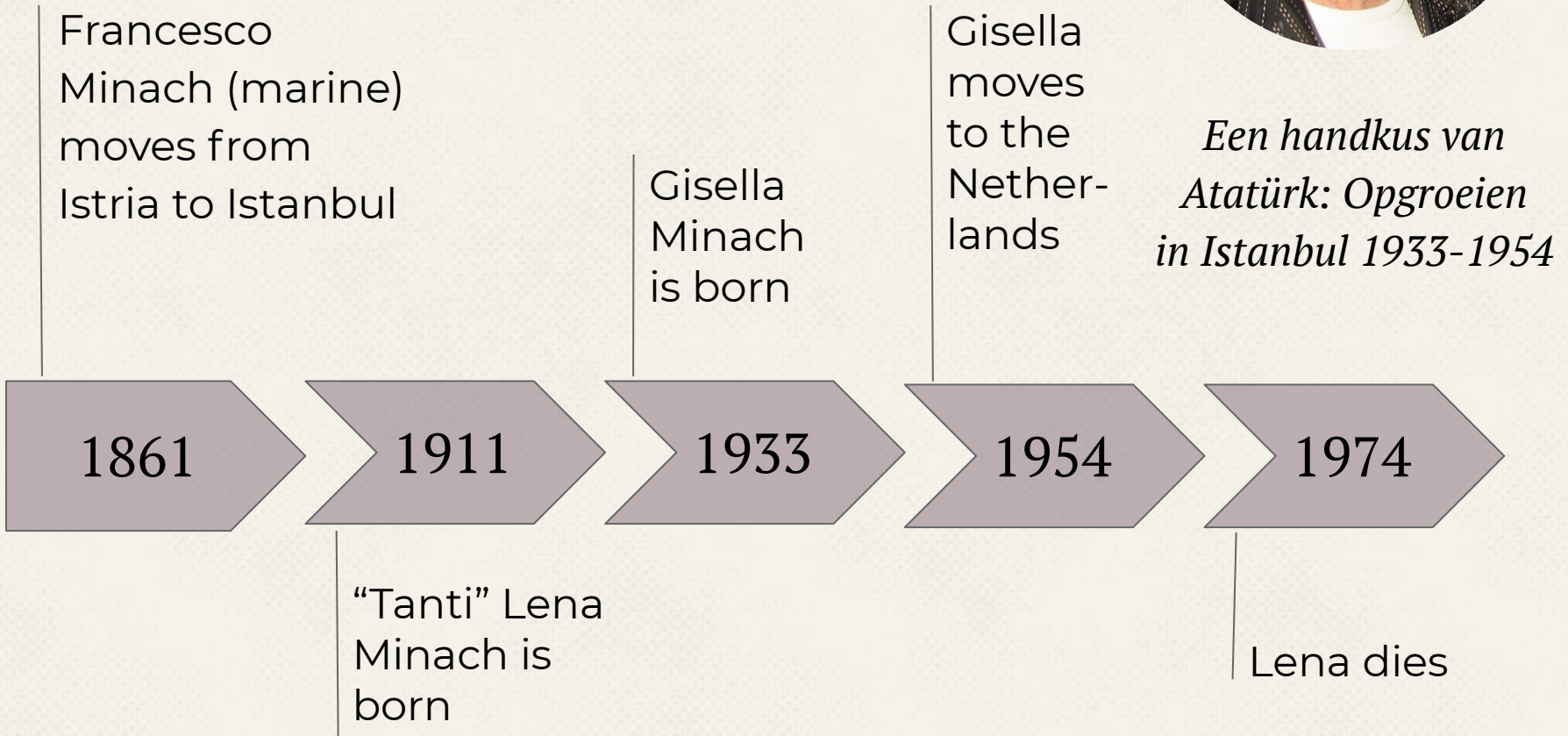
Burgaz, 1968

Sept. 24th 1962

*Manitchka avec entertainment de guest pendant
15 jours est definitely over-tired.*

‘Manitchka with entertainment of guests during
15 days is definitely over-tired.’

History of *Tanti's* letters



333 letters

From 1958 to 1974

—○ **333 letters**

From 1958 to 1974

—○ **225k words**

About 230 per page

333 letters

From 1958 to 1974

225k words

About 230 per page

> 5 languages

Englisch, French, Turkish, Greek, Dutch

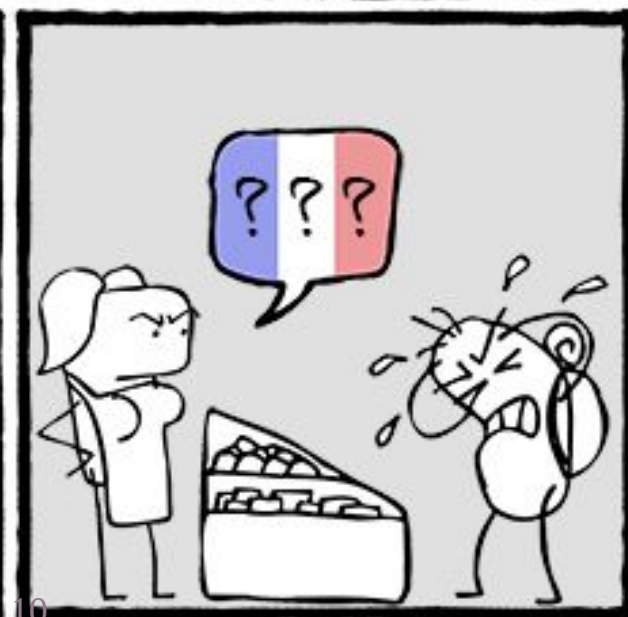
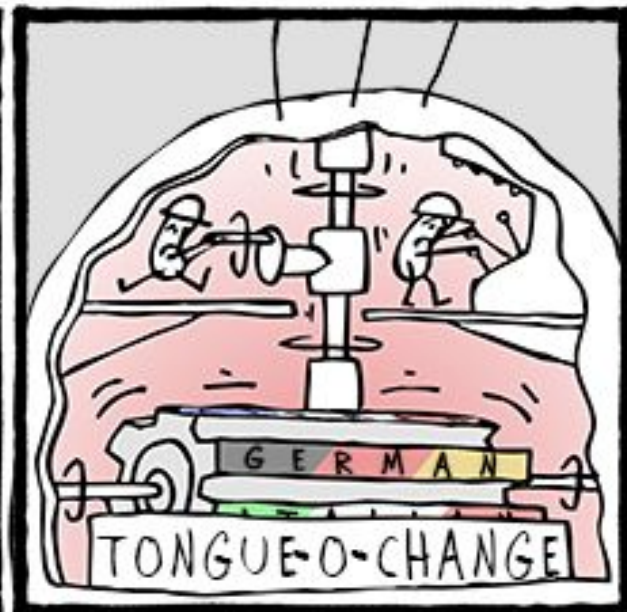


CONTENT

CONTENT

- Codeswitching
- Language Choice
- Language Identification
- Corpus Analysis
- Discussion

ITCHY FEET





CODESWITCHING

Terminology and theory



The most **general definition of codeswitching** is this: the use of two language varieties in the same conversation.

Myers-Scotton 2006

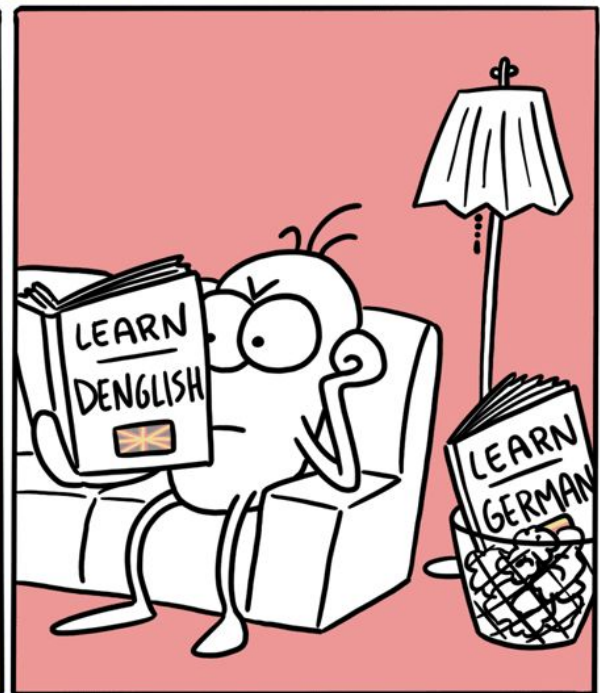
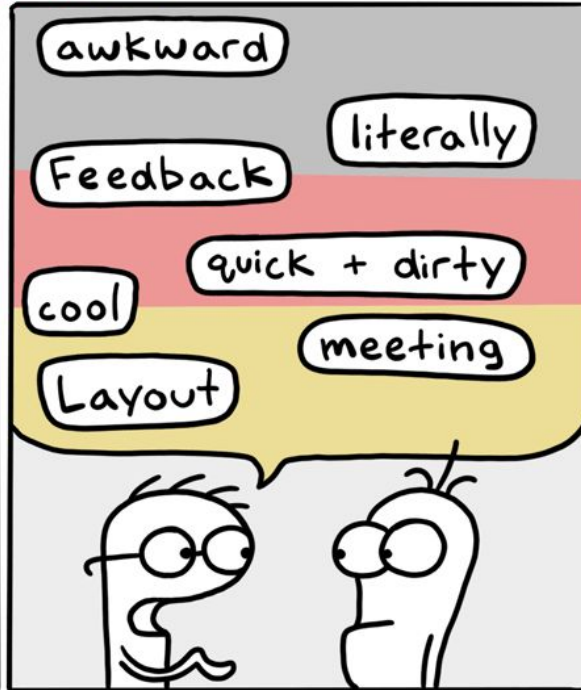
CODESWITCHING

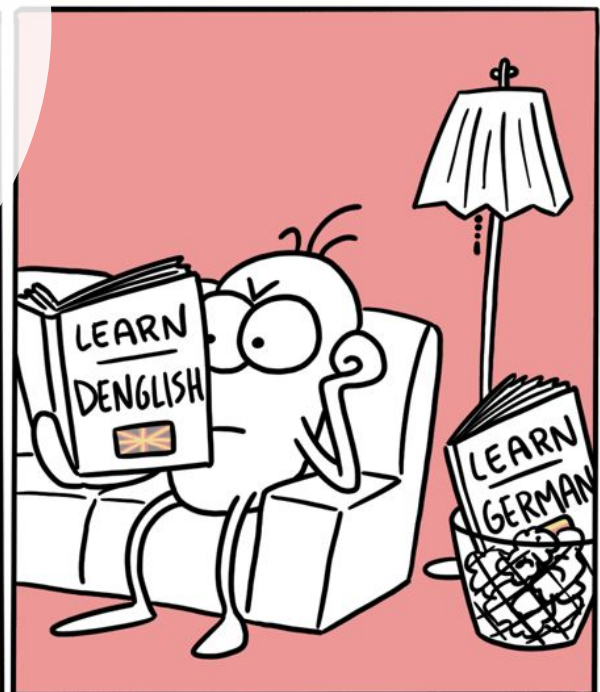
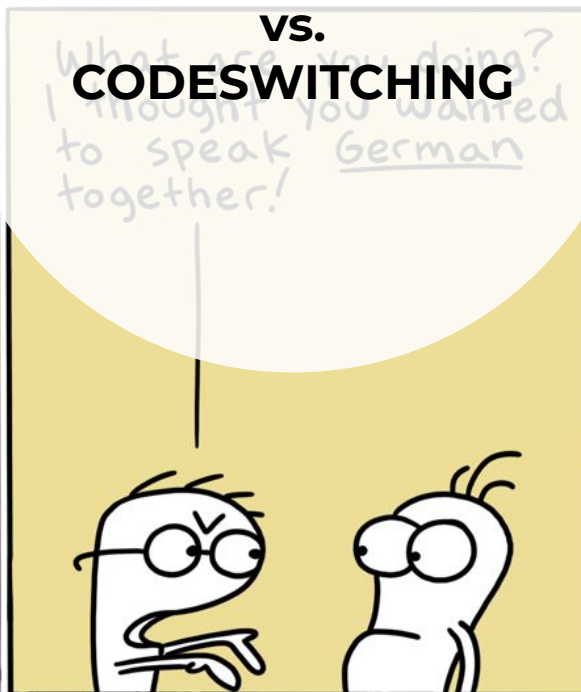


Code-
Switching

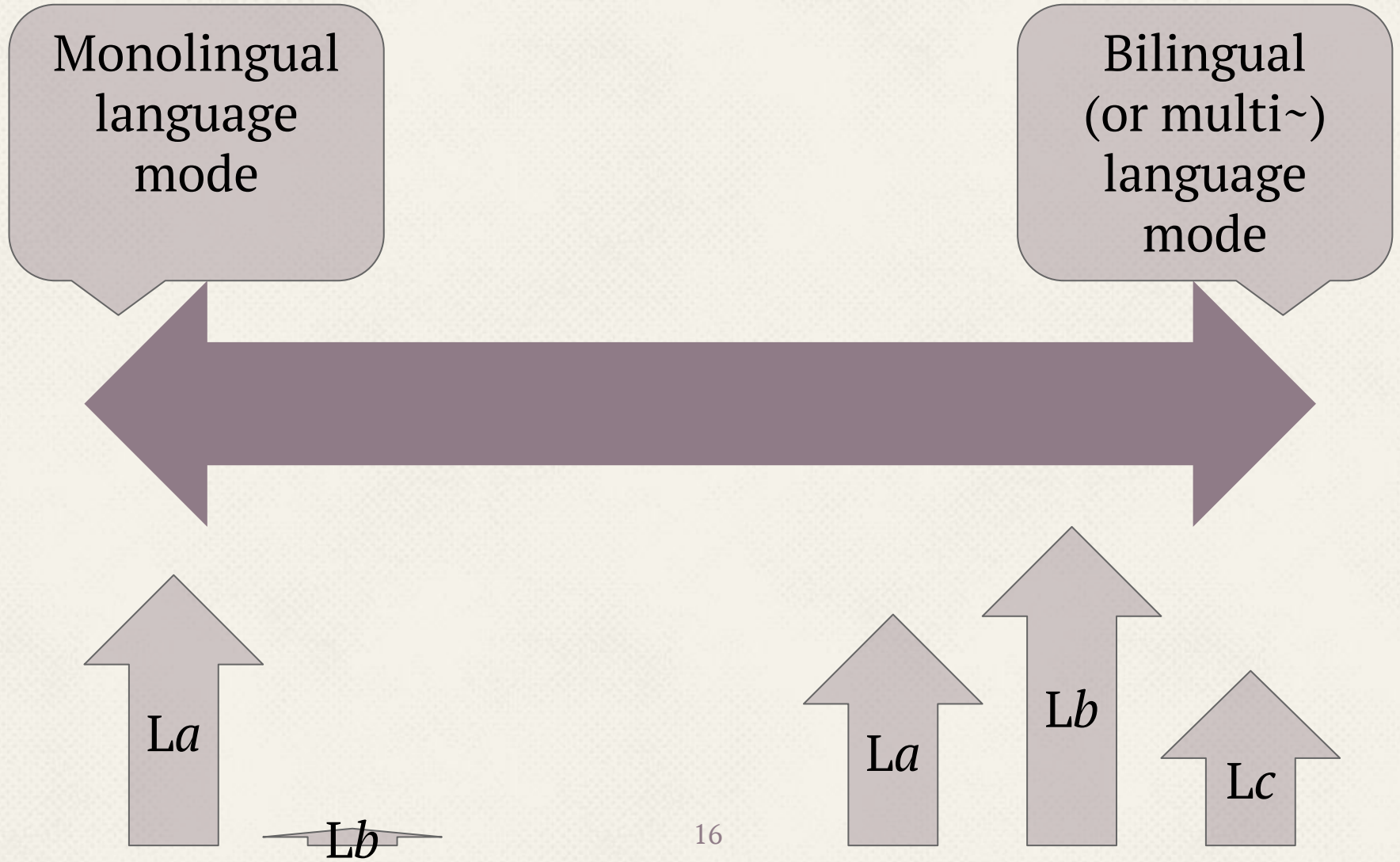
Code-
Mixing*

Borrowing





CODESWITCHING





LANGUAGE CHOICE

Theory and application

LANGUAGE CHOICE



Participants

Proficiency of both

Language history

Attitude towards language or group

LANGUAGE CHOICE



Participants

Always Gisella

Who is being talked about

Quotes

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Situation

Location

Formality

Presence of monolinguals

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Situation

Location: at home/in Istanbul

Presence of monolinguals

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Le mot juste

Frequent lexical items in one language

Rare in the other language(s)

Specific connotation

(Grosjean 2010)

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Le mot juste

Frequent lexical items in one language

Rare in the other language(s)

Specific connotation



Content of discourse

Cooking

Housework

Shopping

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Content of discourse

Cooking

Housework

Shopping



Le mot juste

Frequent lexical items in one language

Rare in the other language(s)

Specific connotation



Function of the interaction

Exclude someone

Request, command, etc.

(Grosjean 2010)

LANGUAGE CHOICE



Participants

Who is being talked about

Quotes



Content of discourse

Cooking

Housework

Shopping



Le mot juste

Frequent lexical items in one language

Rare in the other language(s)

Specific connotation



Function of the interaction

Request to write/send something

Express affection

LANGUAGE CHOICE

Domain- or
semantic
specificity

*(Backus 2001, Grosjean
2010)*

Motivation for CS

LANGUAGE CHOICE

Domain- or
semantic
specificity

*(Backus 2001, Grosjean
2010)*

Individual
preference,
creativity

*(Ben-Rafael 2001,
Myers-Scotton 2006)*

Motivation for CS

LANGUAGE CHOICE

Domain- or
semantic
specificity

*(Backus 2001, Grosjean
2010)*

Individual
preference,
creativity

*(Ben-Rafael 2001,
Myers-Scotton 2006)*

Cognates as
triggers

(Broersma 2009)

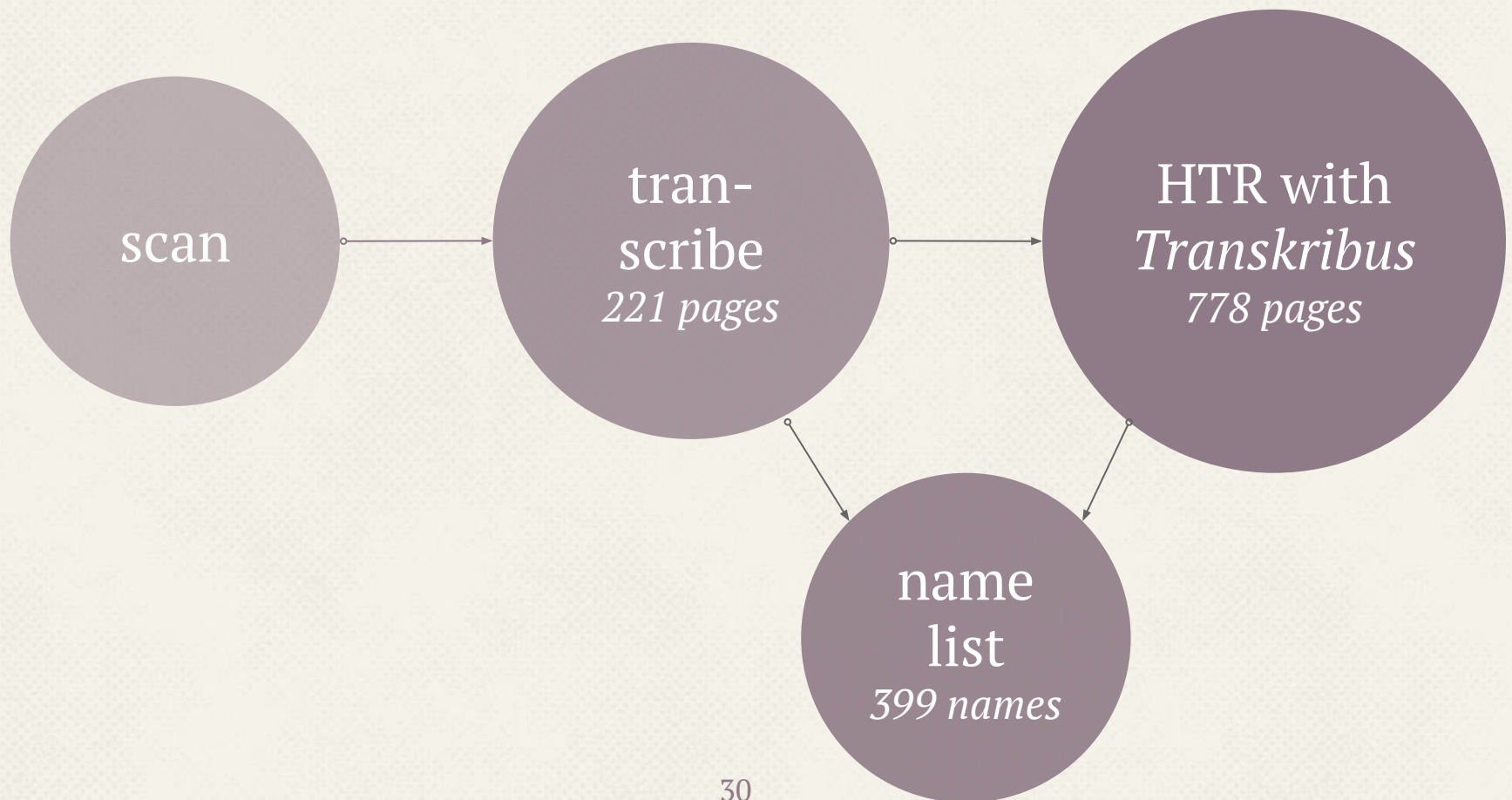
Motivation for CS



LANGUAGE IDENTIFICATION

Preparation of the corpus

CORPUS BUILDING



CORPUS BUILDING

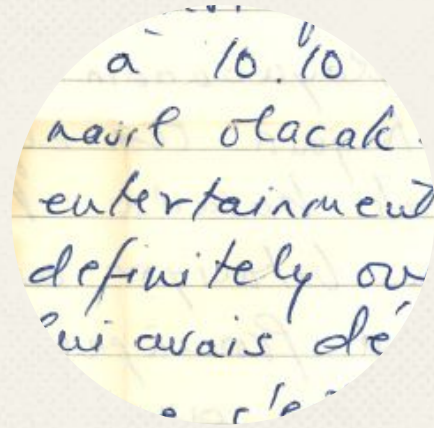
Unfortunately j'ai fait un peu de pisbojazlık. pisboğazlık. The porters wofe
broughet porter's wife brought me some lovely nuts sent to her from her
village. I took two which were just delicions. delicious. Je me retiens pour ne
pas continuer. Wweight Weight goes down with the die diet and then flies up to
Holt 140lb again at the week-end, so conte coute que coute il faut se retenie
retenir pendant la semaine. Tmorrow Tomorrow

Unfortunately j'ai fait un peu de pisbojazlık. The
porter's wife brought me some lovely nuts sent to
her from her village. I took two which were just
delicious. Je me retiens pour ne pas continuer.
Weight goes down with the diet and then flies up
to 140lb again at the week-end, so coute que coute
il faut se retenir pendant la semaine. Tomorrow

LANGUAGE IDENTIFICATION

LID in *Tanti's Letters*

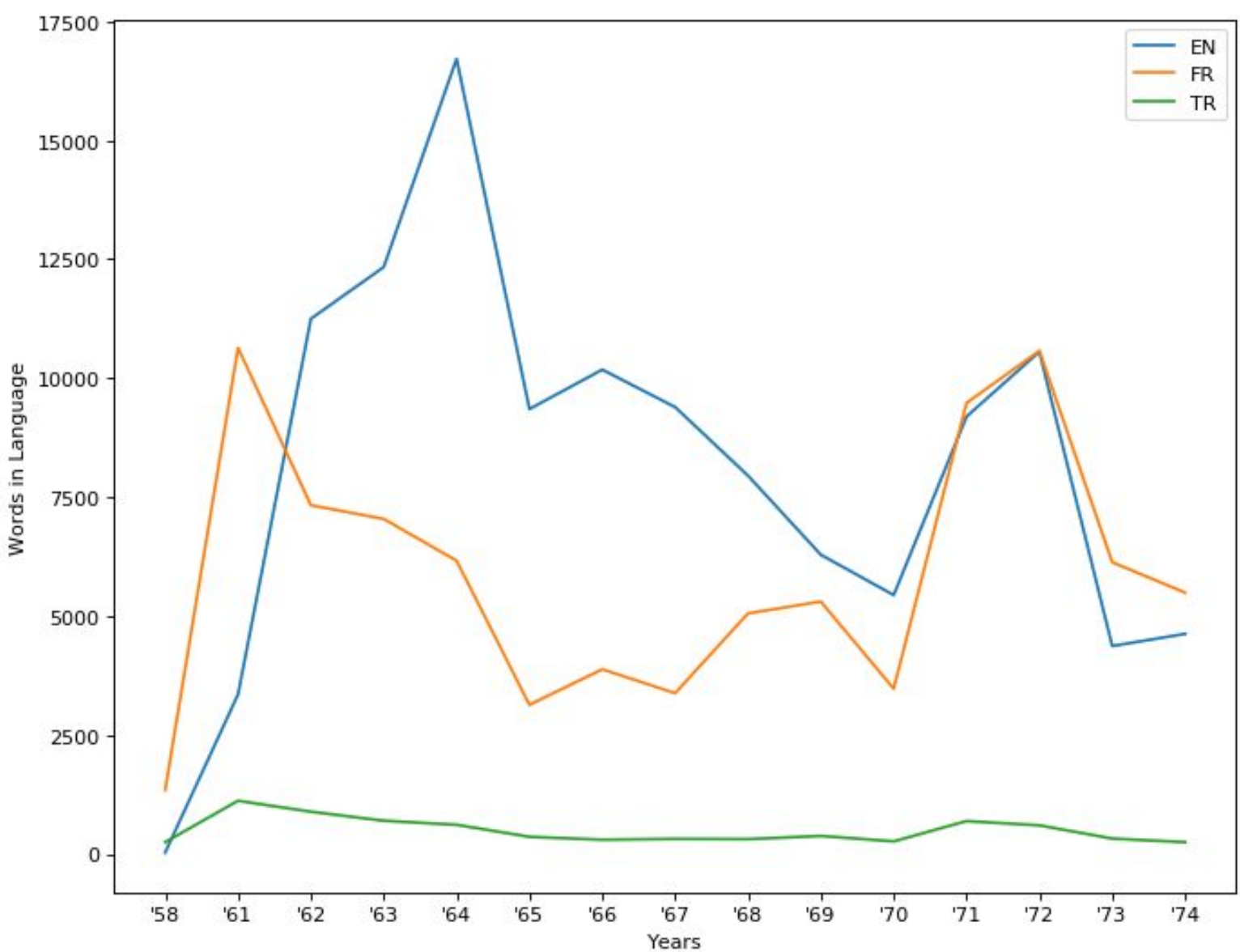
- Preprocessing and NE (name list)
- LangDetect and Langid
 - Manual annotation of Greek, Dutch, German, Spanish, Italian, Minach terms
 - Set languages to EN, FR (TR)
 - Word n-grams
 - Classifier combination (highest confidence)



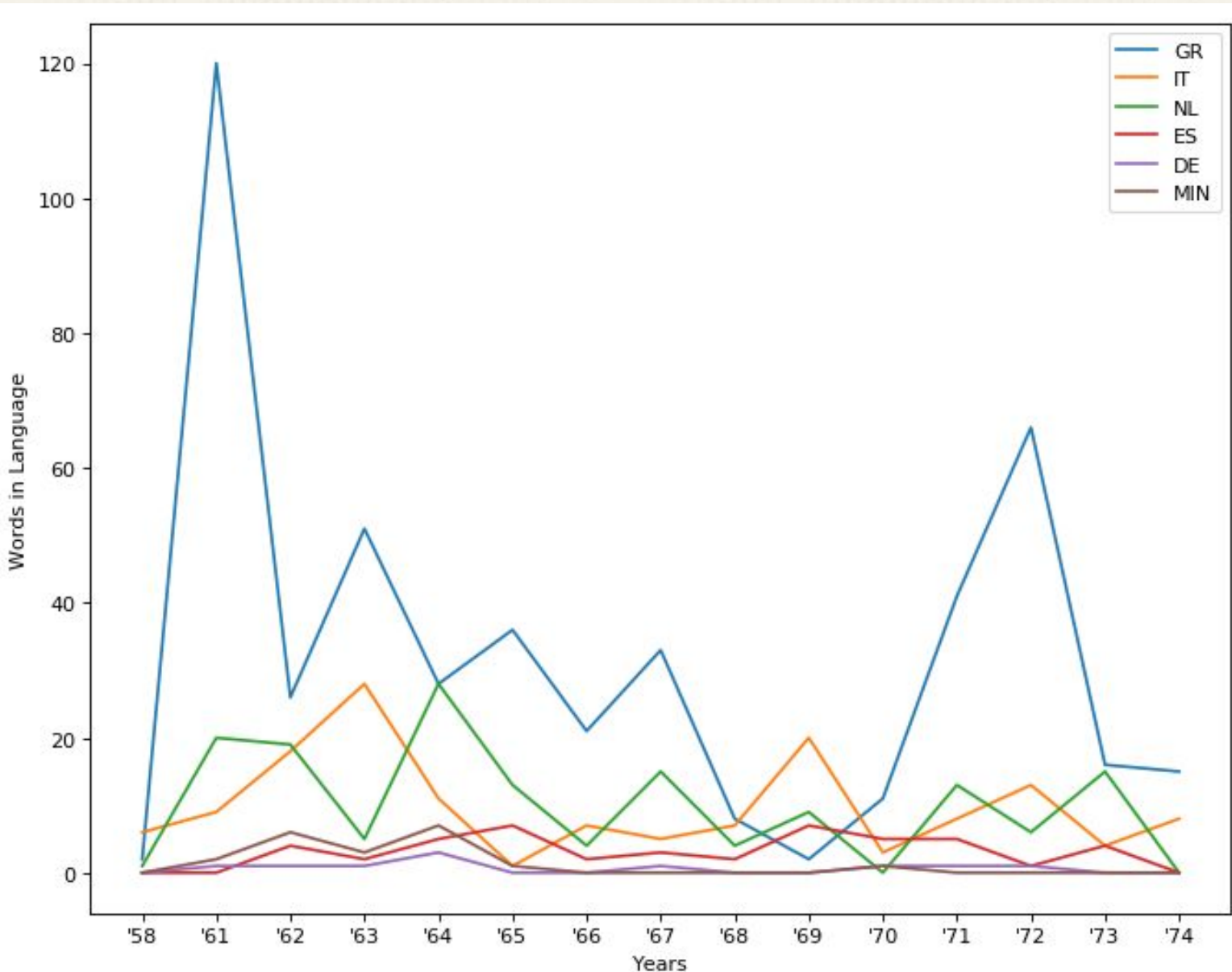
CORPUS ANALYSIS

Results

OBSERVATIONS



OBSERVATIONS



OBSERVATIONS

Languages	Words	Mean Length	Max Length
English	121 035	6.35	41
French	88 422	6.07	42
Turkish	7 342	1.59	9
Greek	476	3.26	23
Dutch	152	1.52	8
Italian	148	1.50	9
Spanish	47	1.04	3
German	10	1	1
Minach	20	1.05	2
total	217 652	5.64	42

Methods



- ▷ visual inspection of names per dominant context language

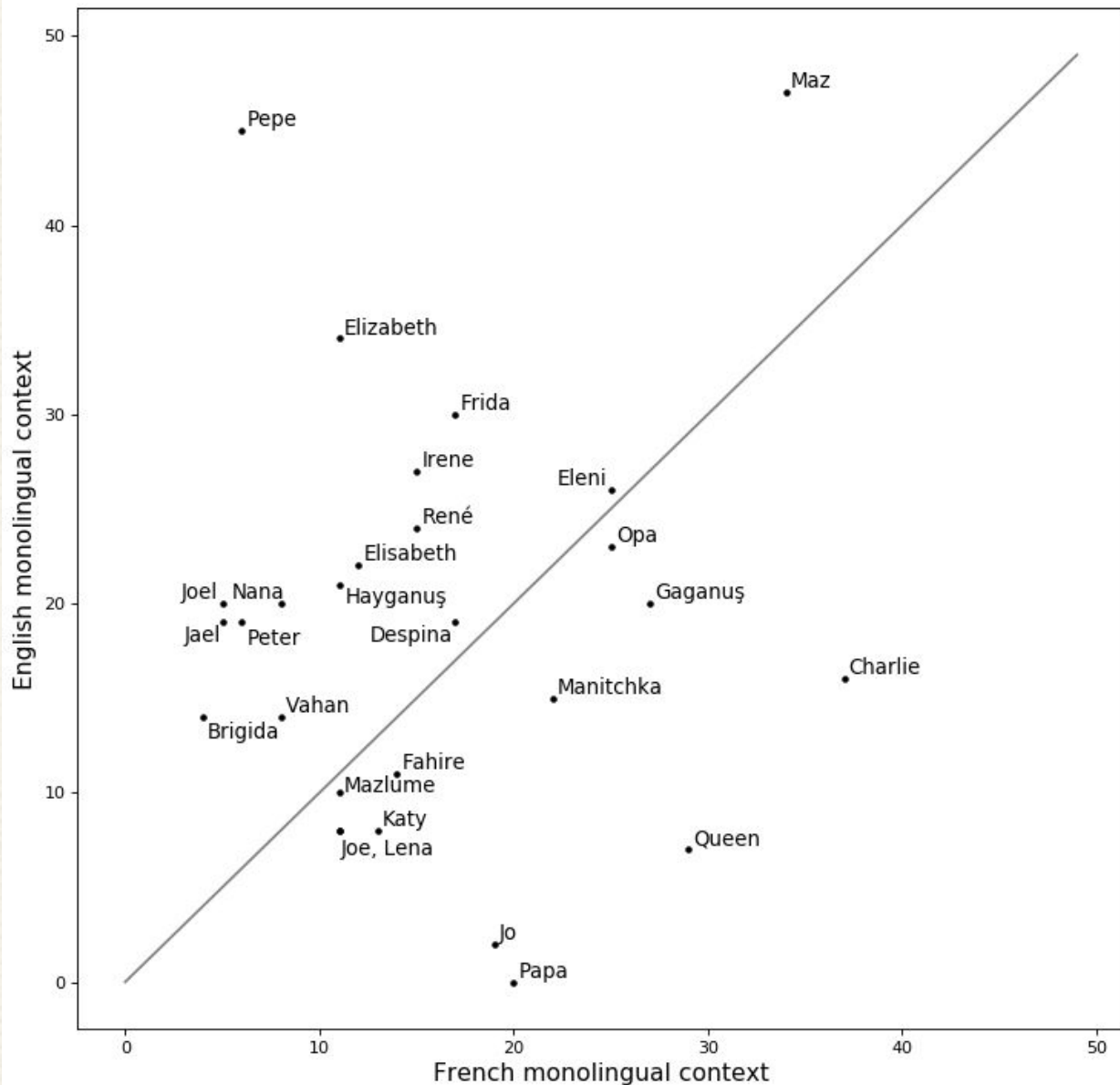


- ▷ linear mixed effects regression model with word fields (*affection, request, cooking, work, etc.*) and dominant context language



- ▷ inspection of the use of minor languages

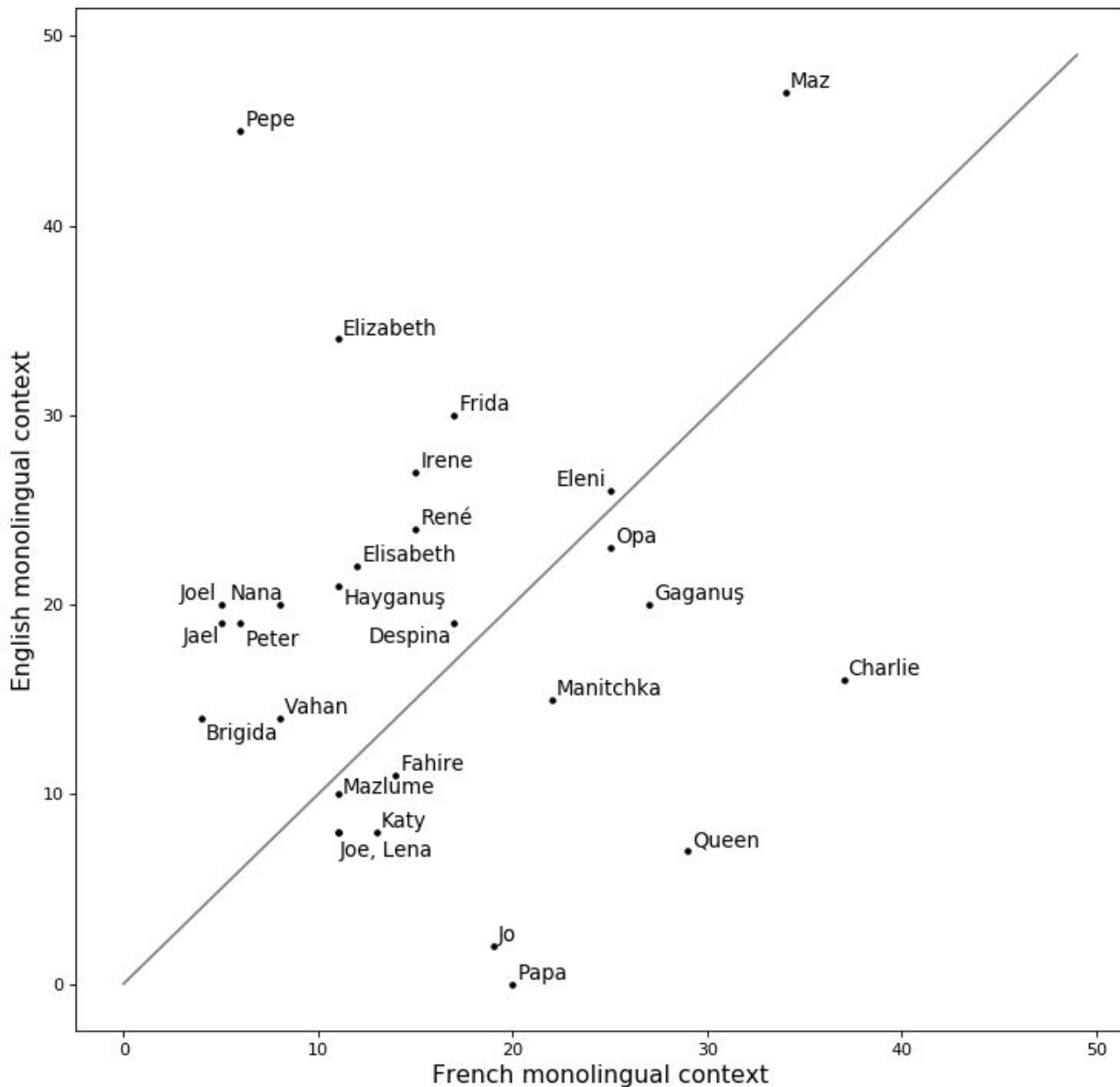
LANGUAGE CHOICE



Tendencies:

- nicknames FR

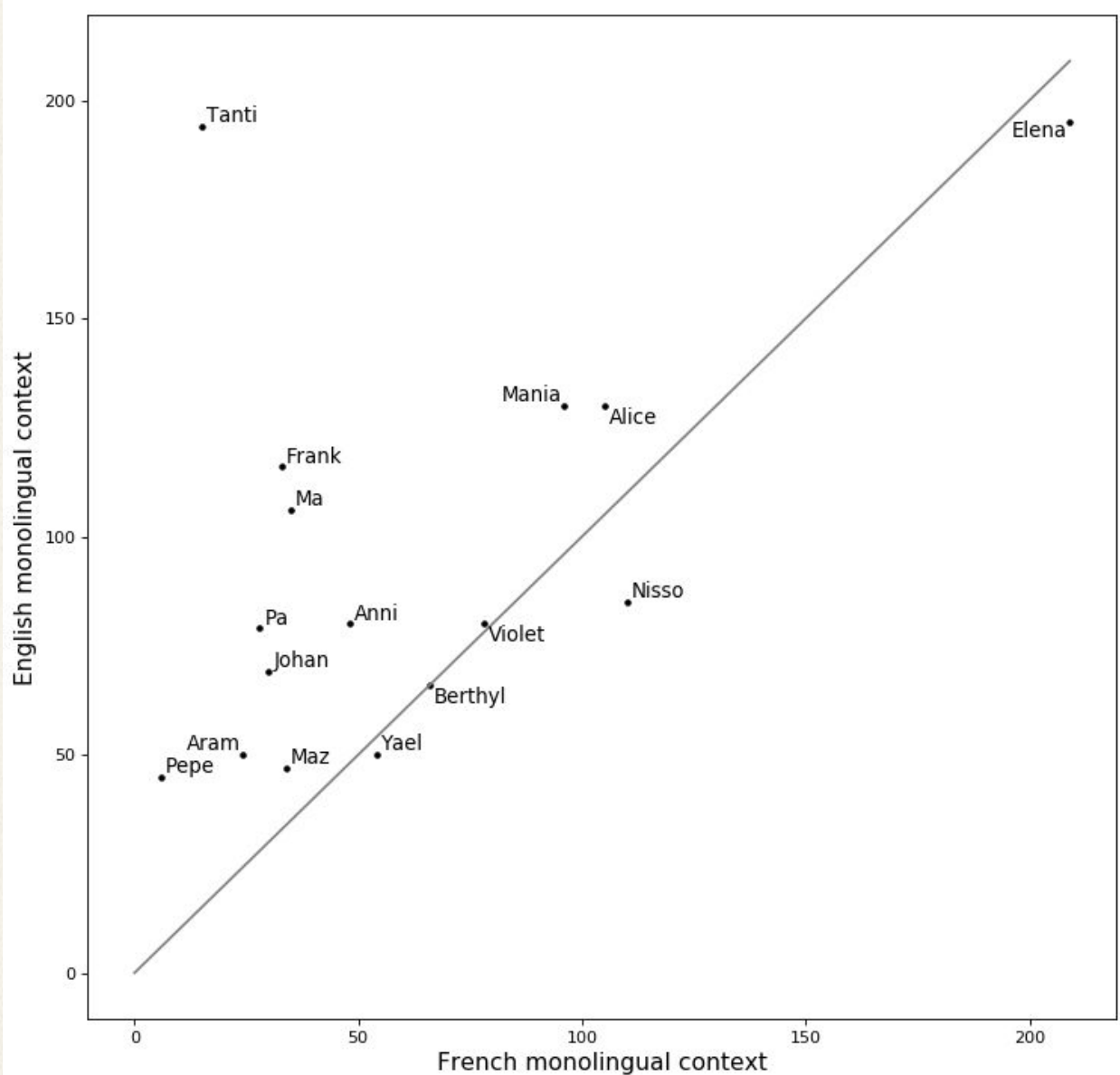
LANGUAGE CHOICE



Tendencies:

- nicknames FR
- locals EN
- Europeans EN

LANGUAGE CHOICE



Tendencies:

- nicknames FR
- locals EN
- Europeans EN
- most frequent EN & FR

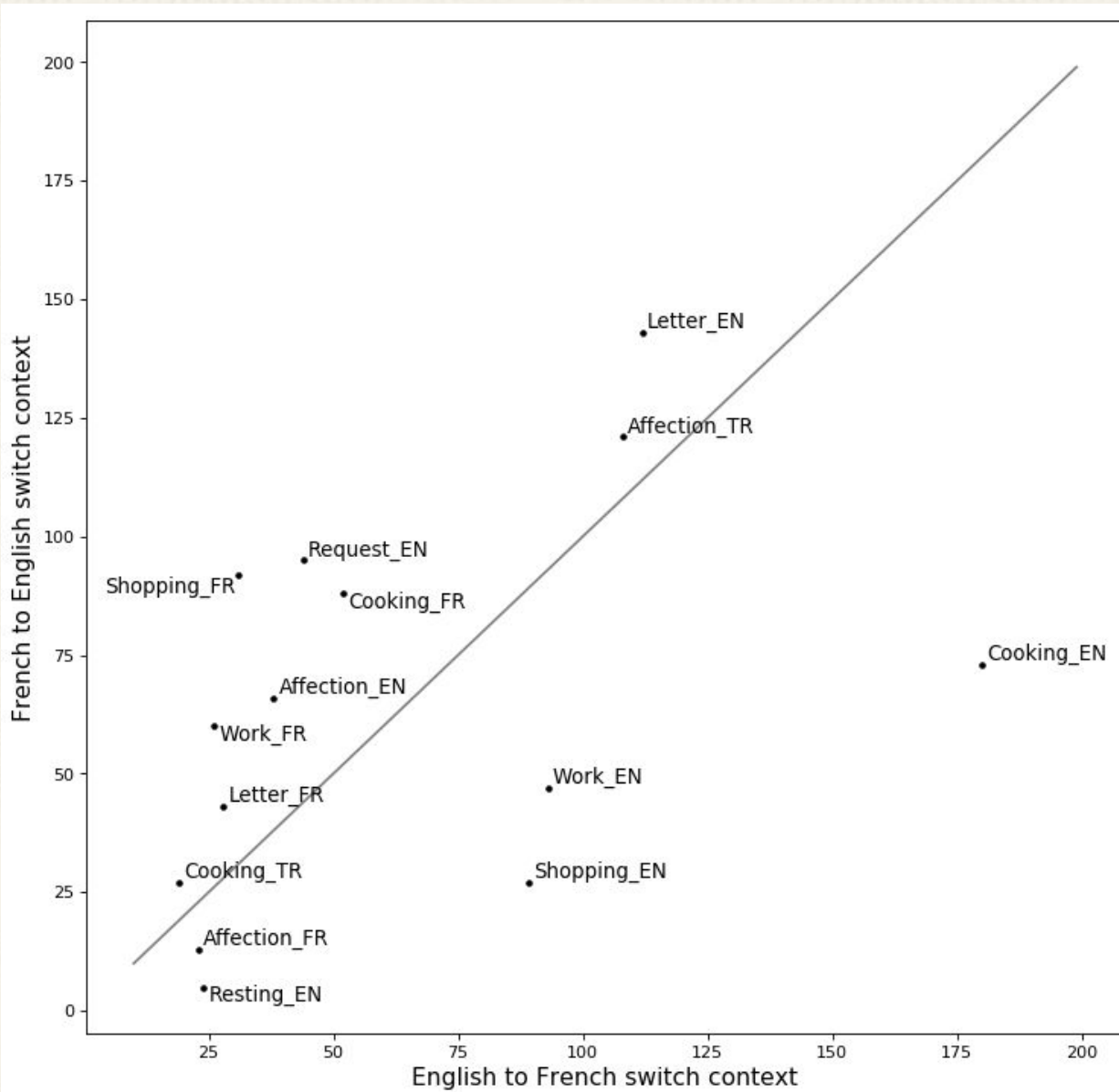
What influences language choice?



Participants

- either dominant with one language or indifferent
- only motivation for language choice, not CS

LANGUAGE CHOICE



What influences language choice?



Content of the discourse &



Function of the interaction

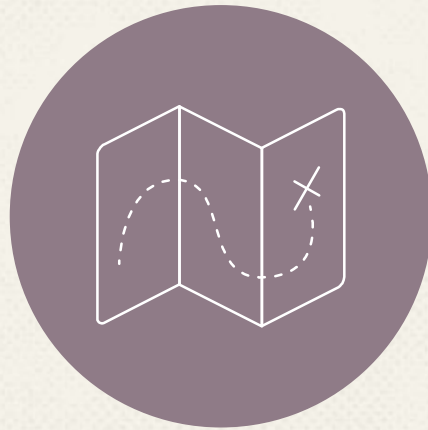
- domain- and culture-specific concepts or objects
- personal preference
- preference for monolingual passages

What influences language choice?



Le mot juste

- connotations, lack of translational equivalents
- culture-specific concepts or objects
- personal preference (*cervello* for *cerveau*)
- can trigger longer CS



DISCUSSION

Limitations and outlook

Limitations

Imbalanced corpus

- language use of major and minor languages not comparable

One author

- consistent, yet specific language use

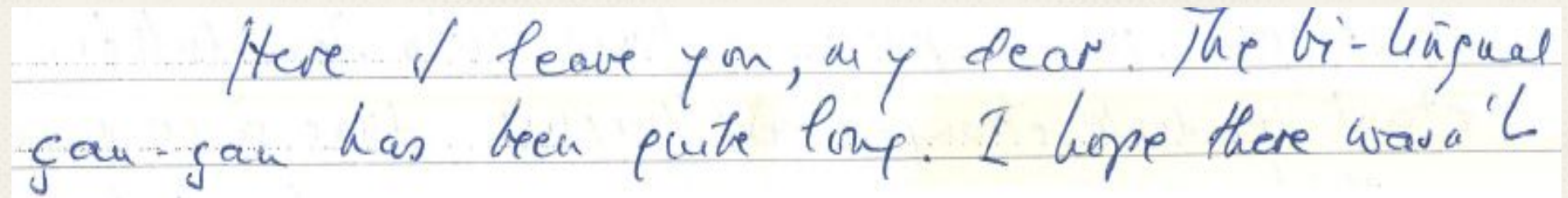
Standardized method missing

- manual inspection
- multitude of factors

DISCUSSION

Outlook

- CS in writing vs. speech
- incorporate findings in automatic LID/NLP methods

A photograph of a handwritten note on lined paper. The text is written in blue ink and reads: "Here I leave you, my dear. The bi-lingual çan-çan has been quite long. I hope there was a 'L". The word "çan-çan" is highlighted in yellow in the original image.

Here I leave you, my dear. The bi-lingual çan-çan has been quite long. I hope there was a 'L

“Here I leave you, my dear. The bi-lingual çan-çan has been quite long. [...]” May 22nd 1962

Franka Weber

M.A. Speech and Language Processing

University of Konstanz

franka.weber@uni-konstanz.de

Bibliography

- Backus**, Ad 2001. The role of semantic specificity in insertional codeswitching: Evidence from Dutch-Turkish. In Rodolfo Jacobson (ed.), *Trends in Linguistics: Codeswitching Worldwide II*, 125-154. Berlin: Mouton de Gruyter.
- Ben-Rafael**, Miriam 2001. Codeswitching in the language of immigrants: The case of Franbreu. In Rodolfo Jacobson (ed.), *Trends in Linguistics: Codeswitching Worldwide II*, 251-307. Berlin: Mouton de Gruyter.
- Broersma**, Mirjam. 2009. Triggered codeswitching between cognate languages. *Bilingualism: Language and Cognition* 12 (4), 447-462. DOI: 10.1017/S1366728909990204.
- Grosjean**, François. 2010. *Bilingual: Life and reality*. London: Harvard University.
- Lui**, Marco and Timothy **Baldwin**. 2012. langid.py: An off-the-shelf language identification tool. In Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics (ACL 2012) Demo Session, 25-30. Jeju, Republic of Korea. <https://www.cs.cmu.edu/~ralf/langid.html>.
- Minach**, Gisella and Pieter Stokvis. 2011. *Een handkus van Atatürk: Opgroeien in Istanbul 1933 - 1954*. Uitgeverij Tilia Levis.
- Myers-Scotton**, Carol. 2006. *Multiple voices: An introduction to bilingualism*. Malden: Blackwell.
- Nakatani**, Shuyo. 2010. Language detection library. Slides. <http://www.slideshare.net/shuyo/language-detection-library-for-java/>. <https://pypi.org/project/langdetect/>.
- Sinha**, R. Mahesh K. and Anil **Thakur**. 2005. Machine translation of bi-lingual Hindi-English (Hinglish) text. *Conference Proceedings: the tenth Machine Translation Summit*, 149-156.
- Transkribus**. <https://transkribus.eu/Transkribus/>.