

# ESPERANTO AND ITS PROXIMITY TO OTHER LANGUAGES

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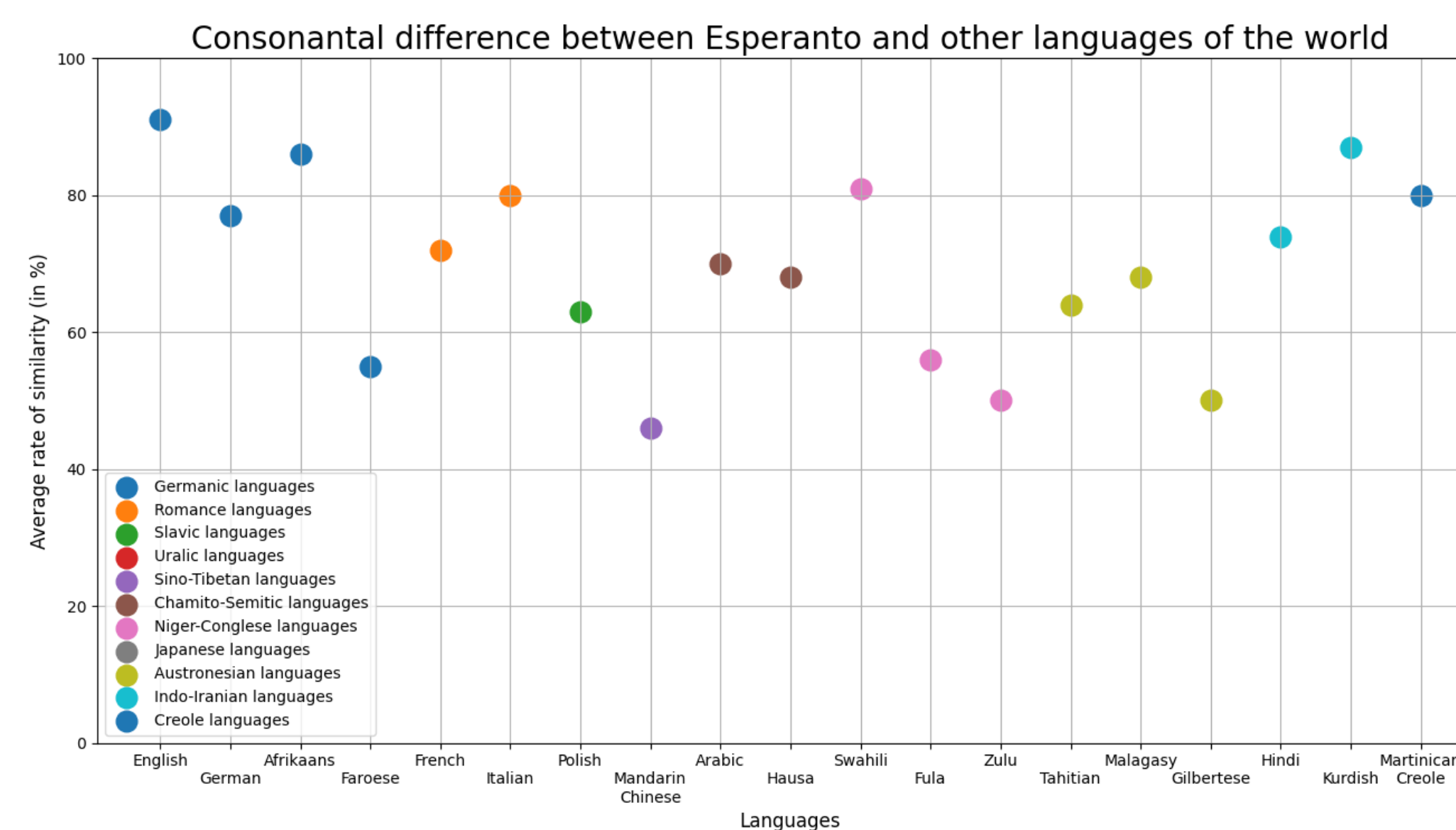
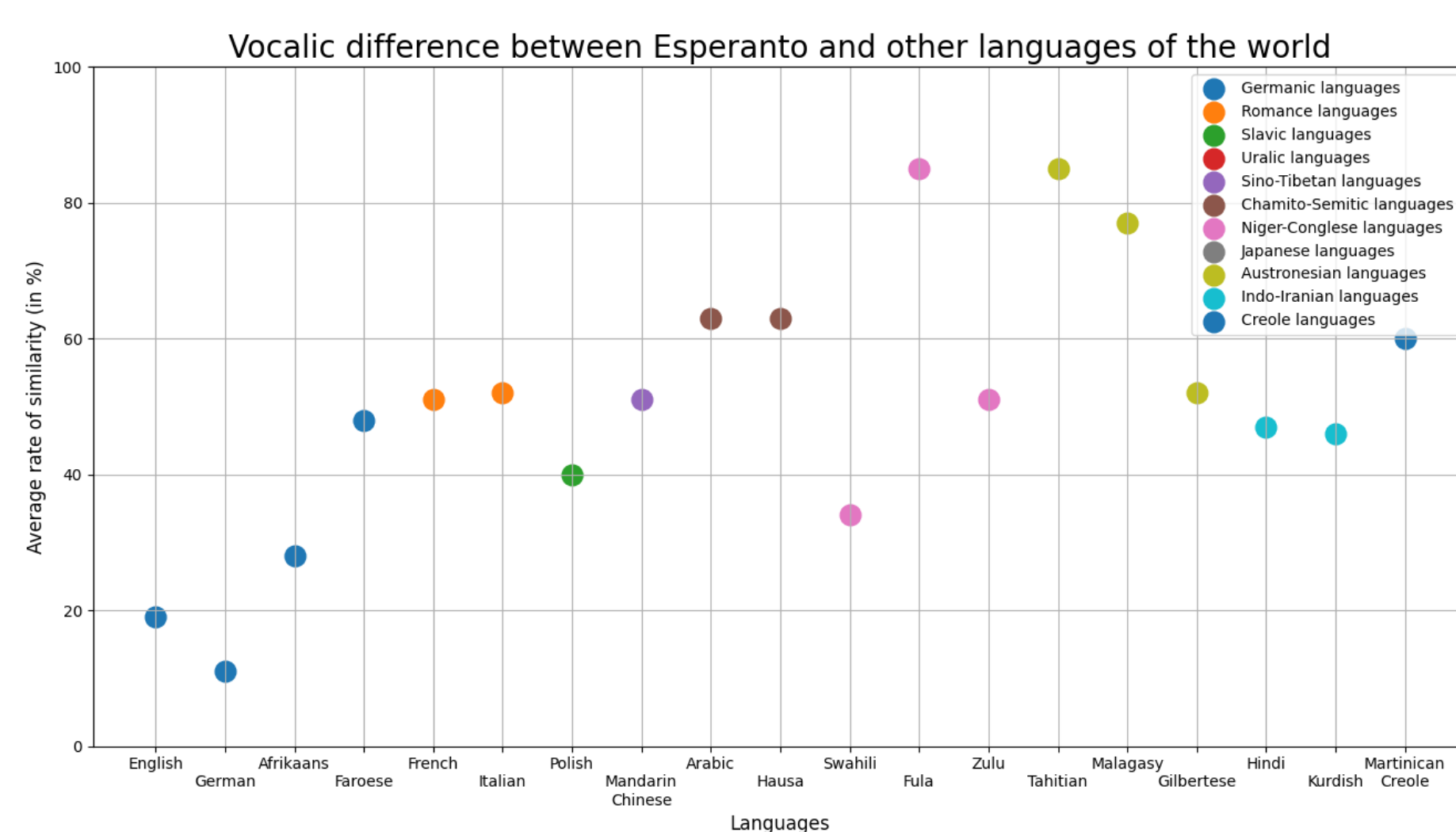
## Introduction

Esperanto is an artificial language, built in 1887 by Ludwik Zamenhof on the ambition of being an international and neutral language, that is not representing any particular culture and not being attached to any particular country. In order to be learned by everyone, it must adopt strict rules without exception. However, this raises the question of the equality of proximity between this language and natural languages. Is Esperanto a language uniformly close to other languages? The aim of this study is to determine which language is closest to Esperanto, or which language family is closest to it.

## Corpus

- Germanic languages : English, German, Afrikaans, Faroese
- Romance languages : French, Italian
- Slavic languages : Polish
- Sino-Tibetan languages : Mandarin Chinese
- Chamito-Semitic languages : Arabic, Hausa
- Niger-Congolese languages : Swahili, Zulu, Fula, Yoruba
- Japanese languages : Japanese
- Austronesian languages : Malagasy, Gilbertese, Tahitian
- Indo-Iranian languages : Hindi, Kurdish
- Creole languages : Martinican Creole
- Uralic languages : Hungarian

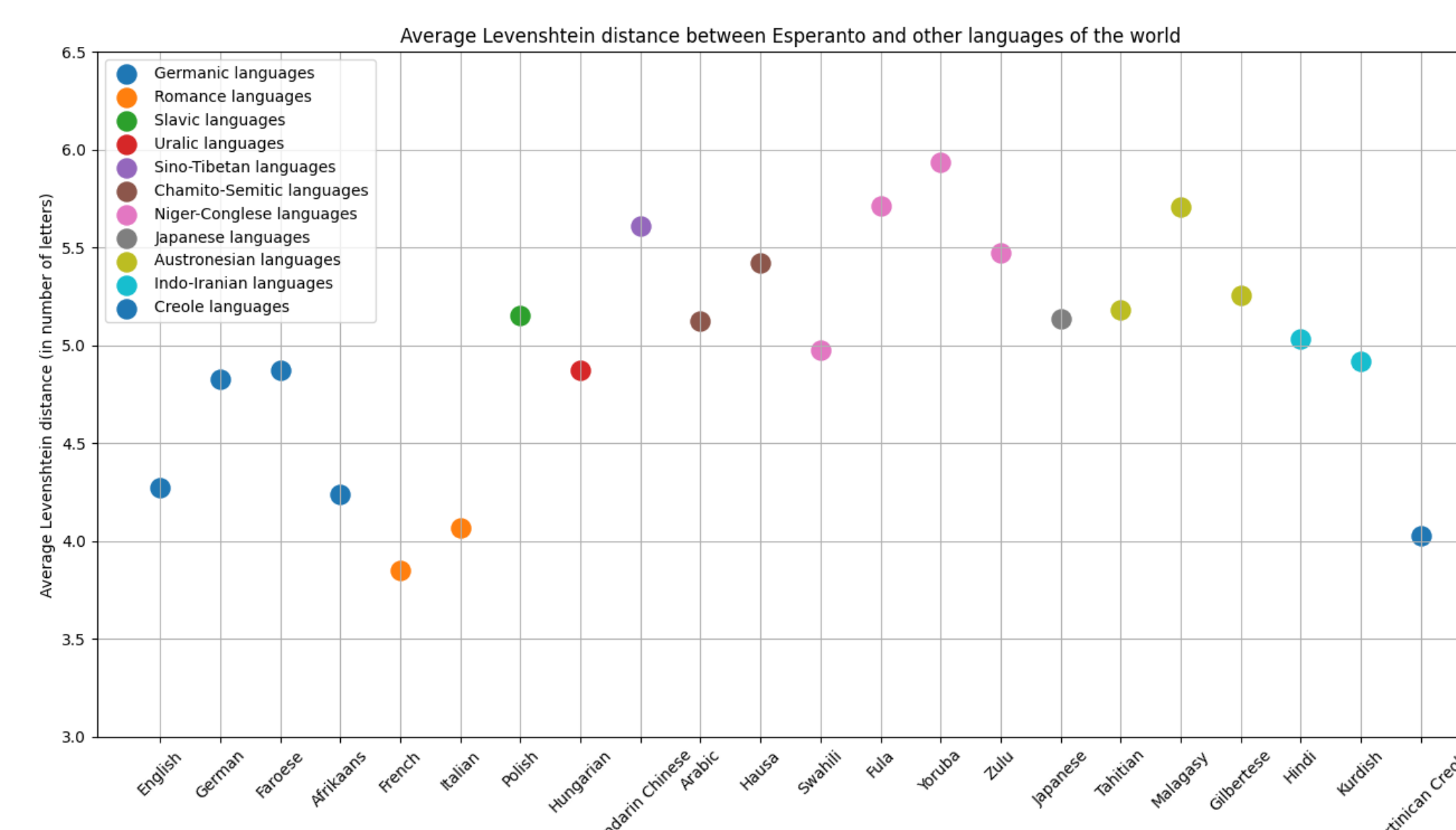
## Phonetic similarity



We proceeded according to an inclusiveness calculation of similarity of the vowels and consonants of Esperanto in another language and vice versa thanks to inventories of phonemes for each language.

The vowel experiments show that the Austronesian and Chamito-Semitic languages are the language families whose vowel system is closest to that of Esperanto, followed by the Romance and Creole languages. The Germanic and Slavic languages are very distant from Esperanto.

## Lexical similarity



For the lexical aspect, the experiment consists in measuring the Levenshtein distance between the Swadesh list of 207 words for each language and Esperanto.



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## Syntactic similarity

- SVO: Esperanto, Mandarin Chinese, French, English, Polish, Italian, Swahili, Fula, Yoruba, Martinican Creole, Hausa, Faroese, Afrikaans
- SOV: Japanese
- SOV/SVO: Hungarian, German
- VSO: Arabic, Tahitian
- VOS: Malagasy, Gilbertese

We compared languages canonical orders. Esperanto is an SVO language, like most languages of our corpus. According to the WALS, the SOV order is the most common order (40.9%), followed by SVO(35.5%).

## Conclusion

Even if this analysis is only an introduction to comparing Esperanto with other languages, it already raises some interesting points. Esperanto seems to be closer to European languages than Chamito-Semitic and Niger-Congolese languages for example. This result is similar to what is shown in Parkvall's typological study of Esperanto [1].

## References

- [1] Parkvall, Mikael, How European is Esperanto? A typological study, Language Problems Language Planning, 2010, 04, volume = 34, pages = 63-79, doi = 10.1075/lplp.34.1.04par
- [2] Maddieson, Ian and Precoda, Kristin, Updating UPSID, UCLA Working Papers in Phonetics, 1990, publisher = Department of Linguistics, UCLA, volume = 74 pages = 104-111,
- [3] Matthew S. Dryer, Order of Subject, Object and Verb, The World Atlas of Language Structures Online, 2013, editor = Matthew S. Dryer and Martin Haspelmath, publisher = Max Planck Institute for Evolutionary Anthropology, url = <https://wals.info/chapter/81>,