## Language mapping for linguists

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Recent research in language mapping strongly advocates the adoption of standardized ethical and technological practices, which enable linguists to create maps that function as impactful communicative tools in linguistic research (e.g., Stone & Anonby, 2022; Gawne & Ring, 2016; Haynie & Gavin, 2019; Canvin & Tucker, 2019). Building on this existing research, this presentation introduces our language mapping project in the context of the motivations for and importance of language mapping. In doing so, we aim to illustrate our methods and reasons for mapping languages, while also discussing contemporary language mapping techniques and lowering the barriers for linguists to create their own language maps.

Language maps are geographic representations of spatial linguistic data, which can take the form of linguistic typology maps (e.g. mapping the distribution of a particular linguistic feature, like on World Atlas of Language Structures; Dryer & Haspelmath 2013) or language distribution maps (i.e. mapping the area where a specific language is spoken). Within these classifications, there is a wealth of applications in sociolinguistics, linguistic typology, and language documentation. Our project focuses on language distribution maps, primarily for languages that entirely lack language maps or have existing maps that do not include information on varieties of the language or their precise distribution. For example, an Oromo speaker-linguist says that existing maps for Oromo are inconsistent and not standardized and notes that a good language map helps to better understand the language and community. Therefore, the maps that we create aim to contribute to such understanding and can be used by both linguists and language communities in linguistics research, teaching, and language documentation. We argue that language maps are important visualization tools to contextualize languages.

Our methods include the collection of spatial information from a variety of sources, such as census data, coordinates provided by community members, location descriptions, and existing maps, where the language community's input takes priority. We also employ current GIS techniques to produce our maps and use symbols, shading, and colour to resolve complex representational issues, such as dialect regions, majority/minority-speaking regions, and misidentification of political boundaries as linguistic boundaries. The resulting maps are also evaluated by community members, and their feedback is used to improve them.



Our own work in language mapping involves creating language distribution maps as part of community-centred documentation of underrepresented languages. So far, we have produced 15 language maps, including Yoruba (pictured), Yiddish, Pangasinan, Ilocano, and Oromo. We are also compiling the maps into a public corpus for use in linguistic papers, presentations, and courses. Through these results, we emphasize that creating language maps is an important process, but it need not be inaccessible for linguists; it is not as daunting as it may first appear. By employing a

framework of community-engaged research alongside contemporary cartographic techniques,

linguists can create maps that communicate effectively in service of both language communities and linguistics research.

## References

- Canvin, M., & Tucker, I. (2019). Mapping linguistic vitality and language endangerment. In S.
  D. Brunn & R. Kehrein (Eds.), *Handbook of the Changing World Language Map* (pp. 1571–1587). Springer, Cham. https://doi.org/10.1007/978-3-319-73400-2\_15-1
- Drude, S. (2018). Why we need better language maps, and what they could look like. In S. Drude, N. Ostler, & M. Moser (Eds.), *Endangered languages and the land: Mapping landscapes of multilingualism: 22<sup>nd</sup> Annual Conference of the Foundation for Endangered Languages (FEL)* (pp. 33-40). FEL & EL Publishing. http://www.elpublishing.org/PID/4006
- Dryer, M. S. & Haspelmath, M. (Eds.) (2013). WALS Online (v2020.3) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.7385533
- Gawne, L., & Ring, H. (2016). Mapmaking for Language Documentation and Description. Language Documentation & Conservation, 10, 188–242.
- Haynie, H. J., & Gavin, M. C. (2019). Modern Language Range Mapping for the Study of Language Diversity. Ms., University of Colorado. SocArXiv. DOI:10.31235/osf.io/9fu7g.
- Lueberring, C. R. (2013). Displaying the geography of language: the cartography of language maps. *The Linguistics Journal*, 7(1), 39–67.
- Rabanus, S. (2019). Language Mapping Worldwide: Methods and Traditions. In S.D. Brunn & R. Keherin (Eds.), *Handbook of the Changing World Language Map* (pp 103-129). Springer, Cham. https://doi.org/10.1007/978-3-030-02438-3\_151
- Stone, A., & Anonby, E. (2022). A Typology for Evaluating Language Maps. In S.D. Brunn & R. Keherin (Eds.), *Language, Society and the State in a Changing World* (pp. 3-32). Springer, Cham. https://doi.org/10.1007/978-3-031-18146-7\_1