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A cognitive geographic approach to dialectology: Reachability as a predictor for dialect distance

The central relationship under investigation in dialectology is often that between geographic distance and dialect distance (Heeringa & Nerbonne, 2013). Nevertheless, other approaches to the spatial component of dialect research may be more suited to represent contact situations, such as (historical) travel distance (Gemert, 2002; Gooskens, 2004) or 'rice paddy distance' (Stanford, 2012).

In this study, the theoretical framework of cognitive geography is used to explain dialect variation in The Netherlands. Cognitive geography postulates that the mental representation that individuals have of their environment has a greater influence on their behaviour than the actual environment (Montello, 2018). In order to incorporate the mental representations of space in our analysis, we use reachability indices based on perceptual travel times using the public transportation network in The Netherlands as calculated by the Netherlands Institute for Transport Policy Analysis (Bakker & Warffemius, 2017). This study aims to assess whether the use of these reachability indices improves our understanding of dialect variation.

A model will be built in which the reachability indices for each municipality are used as an explanatory variable for dialect distance. Dialect distance is calculated using the Levenshtein algorithm (Levenshtein, 1965) on the phonetic transcriptions from the Goeman-Taeldeman-Van Reenen project (Goeman & Taeldeman, 1996). Other demographic and geographic variables, such as population size and geographical distance, will also be included in the model.

We hypothesise that a high reachability index correlates to low dialect distances between dialects and to a low distance to the standard language, Dutch. Furthermore, we expect that the reachability indices add to the explanation of dialect variation the most in urban centers, as contact situations in these locations are less shaped by geographical distance than in rural areas.

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