A Study of the Correlation between Phonetic and Geographic Distances in Acadian French

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It has been suggested that dialects that are geographically close are more similar than those that are geographically distant. Quantitative studies that have tested this claim (e.g. Heeringa & Nerbonne 2001, Séguy 1971) have found a regular relation between dialect distance and geographic distance, one that has the form of a logarithmic function. However, these studies were often based on dense sampling in dialects that are spoken in geographically contiguous areas. The study reported in this paper tests the claim in dialects that are found in geographically discontinuous regions. Acadian French communities are scattered throughout Canada's Atlantic region and provide an interesting test case.

Eleven phonetic variables (with a total of 28 variants) were studied. Among these there are features with traditional Acadian variants – such as nasal vowel alternations, ouisme (of /o/), palatalization of /k, g/ – and features that are generally associated with neighbouring varieties of Québec French – such as assimilation of /t, d/, backing of /l/, high vowel laxing. The data were taken from the Atlas linguistique du vocabulaire maritime acadien (Péronnet et al 1998), which contains responses to over 400 questions by 54 speakers from 18 localities. A frequency profile corresponding to the phonetic variants was established for each locality and was input to correspondence analysis to obtain chi-squared distances between localities (Greenacre 1993). These "phonetic distances" were calculated among all 18 x 17 pairs of localities. Geographic distances were measured in terms of spherical distance (Fotheringham et al 2000).

Regression analyses show that there is a regular relationship between phonetic and geographic distances in Acadian French. Nevertheless, the amount of statistical variance accounted for is considerably smaller than that observed in earlier studies. The paper concludes with a discussion of the effect that geographically isolated localities can have in explaining the influence of geographic proximity on phonetic variation.

References