

On Geographic and Linguistic Distance in the Bandiagara Escarpment

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This paper examines the relationship between geographic and linguistic distance among seventeen Dogon languages in the Bandiagara Escarpment. I begin by describing the methods used to obtain linguistic and geographic distances based on cognacy and geographical coordinates, respectively. I then demonstrate that the distance matrices derived from these methods are statistically and practically distinct. Despite this, a trend analysis reveals that as geographic distance increases, linguistic distance tends to increase as well, though at a decreasing rate. The data, however, show significant variability, suggesting that factors beyond geographic distance also influence linguistic differences. By clustering the linguistic distance matrix using agglomerative hierarchical clustering and projecting this onto the physical geography of the Bandiagara, I propose that historical topography may play a role in explaining the observed linguistic distribution.

Keywords: Cognacy, linguistic distance, geographic distance, Dogon languages