New visualization techniques in dialect geography: The merging of analytic and synthetic mapping in the virtual and interactive cartography of VerbaAlpina

Cartography is the most plausible form of representation of dialect variation and - indirectly - of dialectal change. In dialectology, two traditions have developed since the 19th century that use 'analytic' or 'synthetic' maps both of which have advantages and disadvantages. Analytic maps are typical of the Romance tradition; they reflect the single linguistic utterances as a whole, as for example is the case of the linguistic atlas of Italy and Southern Switzerland (AIS). Here the focus is on the documentation of the single utterances and the reader has to understand the geographical distribution of more abstract types from the single utterances by himself. This form of visualization has the advantage that it provides very detailed information that is reliable to the source, traceable and verifiable; analytic atlases are dialectal corpora avant la lettre. On the other hand, analytic maps are rather confusing due to the large number of utterances. The so-called synthetic maps, which mostly use point symbols for visualization, primarily represent the Germanic tradition, as for example the linguistic atlas of Vorarlberg (VALTS); in this case, single utterances are documented only occasionally if they are strongly marked. However, the geographical distribution of selected features of the single utterances is directly apparent through the allocation of symbols. Quantitative relationships, especially those of dialectometric nature, can only be represented in this way. A disadvantage due to the feature selection is the rather limited transparency of synthetic maps which are also very suggestive.

In order to address the described disadvantages of traditional cartography, mapping methods are needed that make it possible to merge the two mentioned visualization traditions. Such a mapping tool, for example, is the virtual interactive map of the DFG long-term project VerbaAlpina which investigates the Alpine region in its cultural and linguistic unity. The online mapping of VerbaAlpina (https://www.verba-alpina.gwi.uni-muenchen.de/) is based on georeferenced linguistic utterances and combines the two methods. While at first glance 'synthetic' maps are displayed, at second glance, after clicking on the individual symbols on the map, the user also has access to the single utterances, which guarantees empirical transparency; in addition, the utterances are enriched with metadata and links to reference dictionaries. The visualization of language data via the interactive map also allows to combine different data sources and to display not only data from linguistic atlases but also data from dictionaries and crowdsourcing. Thus, via the interactive map, vocabulary can be viewed not only from an onomasiological perspective (as in traditional geolinguistics) but also from a semasiological one. The visualization of the linguistic data can always be done qualitatively as well as quantitatively. In addition, the interactive map offers the function of creating so-called synoptic maps. This function enables the user to save a certain selection of maps on a synoptic combination map in order to visualize the range of any linguistic and non-linguistic features in context.

This talk will present the described visualization techniques offered by the virtual interactive map of VerbaAlpina in more detail.

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