AN INVESTIGATION IN OPTIMUM CHOROPLETHIC MAP GENERALIZATION

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ABSTRACT

Cartographers have long been plagued with the problem of the number of classes to use on a choroplethic map. A test employing two- through ten-class choroplethic maps was devised to ascertain the optimal level of generalization. Each map was followed by a set of questions that were designed to extract information commonly contained on choroplethic maps. The questions were used as a surrogate to measure information flow from map to reader.

The preliminary results indicate that map-reader comprehension declines as map complexity increases. The results suggest that if the map-reader is restricted to a one and one-half minute time limit his ability to answer questions about a map declines rapidly beyond the fourth level of generalization. If the purpose of the map is to present a quick overview of the surface then a map with few classes is probably best. A map with a few classes does show a generalized overview of the surface and the areas of high and low values. If the statistical surface is complex then it appears that the optimum number of classes may be as few as three, and if the surface is simple then as many as five classes can be understood. Further testing is needed to strengthen the findings of this study.