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## **Smarter Geovisualization Tools: A User Approach**

Geovisualization tools are continuously becoming more complex. These tools can present vivid and highly accurate representations of the real world. Simultaneously, spatial data is becoming incredibly detailed and the possibilities of interacting with the geovisualization tools are plentiful. Geovisualization tools are indeed powerful. However, in contrast to the well-developed technological side of these tools, the user side is far less explored and understood. In addition, the development process can suffer from bias due to choices made by the developer. In this thesis, the urgent need for applying a user-based approach to the development of geovisualization tools is addressed. The need has been recognized for a very long time; however, the theories about how the users perceive these tools are still lagging. This study is empirical and interdisciplinary, combining the fields of geomatics and cognitive science. It is based on a survey which was submitted among residents in Växjö, a city in southern Sweden. The collected information was used in multivariate statistical analyses to elucidate potential relationships between the cognitive concept “sense of place”, demographic factors, and the way participants interpret static and interactive maps. The study is particularly focused in investigating differences across age groups and supporting future tool development applying a user approach. The results demonstrate that differences among age groups were detected and that sense of place can beneficially be used to explore place relationships.

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