

Cognitive and User Issues in Contemporary Cartography



In the past, even if they had insights into user behaviour, cartographers often lacked the resources to redesign maps in line with actual needs. Today, however, cartography is dynamic and interactive: maps change when users interact with them on online and mobile platforms. Producing maps is now easier and cheaper than ever before, and technology has opened up new possibilities for conducting better user research. The latter has â€œpaid offâ€™ on many occasions already, as illustrated by the design improvements to Google Maps for instance.

Ultimately, all activities executed in the fields of geodata acquisition, storage, processing, analysis and dissemination are aimed at creating geographic information that human beings want or need in order to live their lives. Maps have always been important tools for

communicating geographic information to their users. That is perhaps why cartographers have always been the geoinformation professionals who have paid the most attention to usage and user issues, or they have at least been the most aware of them.

Although, internationally, there were earlier signs of scientific cartographic research such as Robinson's 1952 book *The Look of Maps*, many cartographers consider the publication Bertin's *Sémiologie Graphique* in 1967 as the birth of cartographic science. In this publication, Bertin formulated rules for map and symbol design based on knowledge of the way in which his so-called 'visual variables' are perceived by human beings. His cartographic grammar undoubtedly led to improved designs and more effective and efficient geographic information transfer. However, Bertin never tested his rules through systematic experiments with map users.

While scientists paid increasing attention to map users from the 1970s onwards, throughout the 20th century practising cartographers themselves did not typically investigate their users' behaviour. They did not have the resources to carry out substantial user research, and the difficulty and cost of producing several map iterations were further limiting factors. Certainly, though, map designers did make use of the outcomes of scientific map use research as reflected by an overall undisputed and steady increase in map design quality. But for a long time most of their energy went into coping with the extremely fast technological revolution, first in reproduction methods and thereafter in computing. As a consequence, many maps were not as effective, efficient and satisfying as they potentially could be.

Read the full article [here](https://www.gim-international.com/content/article/cognitive-and-user-issues-in-contemporary-cartography).