ICT20-065 - Talking charts

Abstract

Visualizations are ubiquitous tools for communicating data, both within science and the popular media. Urgent messages with immediate effects on public life, i.e. the exponential growth of COVID-19, are often communicated via charts or diagrams. It is not clear whether public interpretations of these visualizations match the messages their creators aim to convey. The same is true for data visualizations in science; it is not a given that experts will interpret them the way they are intended. How do visualization producers create, and consumers understand, the messages carried in visualizations? How do consumers come to trust or to distrust, to act on or to ignore them? We propose a three-year mixed-methods project to explore how people encode, understand and engage with the messages (and implicit assumptions) communicated by data visualizations, particularly those focusing on COVID-19 and climate change. The project team, with expertise in computer science and science & technology studies, will study and work with members of two case studies: 1) journalists and their readership and 2) researchers in the natural sciences, to develop and co-create tools and guidelines facilitating visual data understanding. We therefore take actual practices of visualization production and sensemaking as a starting point to inform and intervene into design, while also seeking to foster dialogue between visualization producers and consumers.

Scientific disciplines:
Data science (30%) | Human-computer interaction (20%) | Science communication (25%) | Science and technology policy (25%)

Keywords:
data visualization, data sensemaking, data visualizations, science communication

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Further links to the persons involved and to the project can be found under
https://www.wwtf.at/funding/programmes/ict/ICT20-065/