

ID+ RESEARCH
INSTITUTE FOR
DESIGN, MEDIA
AND CULTURE
PORTUGAL

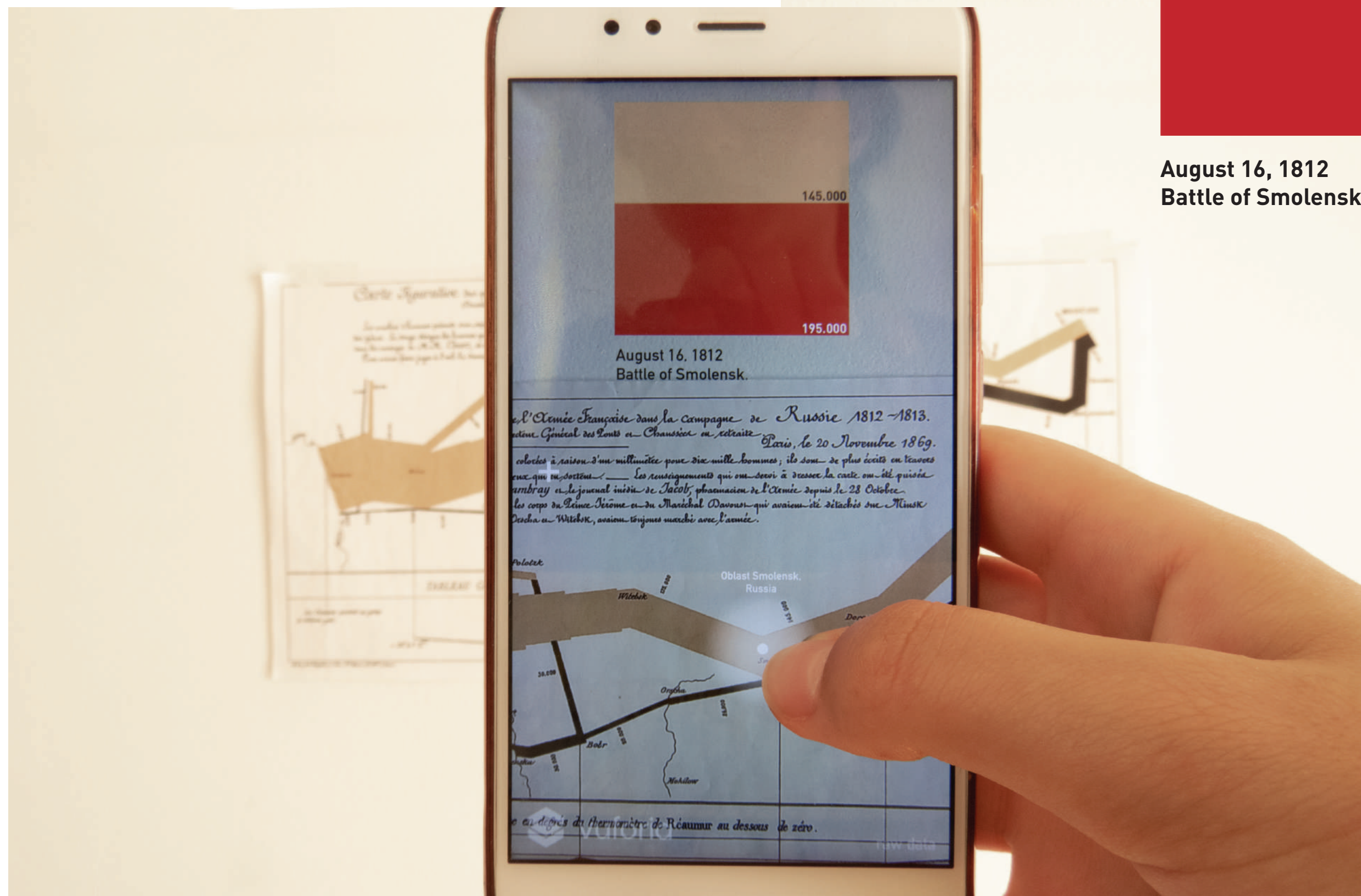
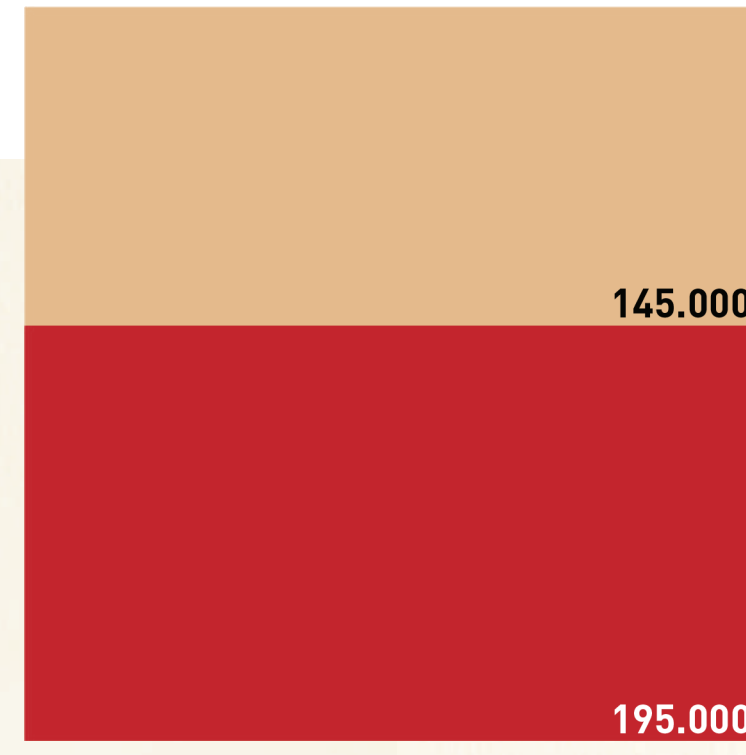


Figure 1. *Pointing Finger* app for android. 2021

The virtual square on top of the map represents the number of survivors en route (soft brown), the number of survivors on the return route (black) and the number of fatalities (red) in each point of the map where there is a graphic representation of casualties.



Figure 5. *War Painting* app (detail). *Napoleon's retreat from Moscow*, Adolph Northen, 1851.



August 16, 1812
Battle of Smolensk.

Figure 2. *Pointing Finger* app (detail). The graphic indicates the number of survivors and casualties on August 16, 1812 at Oblast Smolensk, Russia.



Figure 4. *War Painting* app (detail). *Battle of Smolensk on 18 August 1812*, Albrecht Adam, c.1825.



Figure 3. *War Painting* app for android. 2021

The virtual white dots on top of the map signalize the points where there are paintings to show on click.

Ana Beatriz Marques
PhD Design,
Department of
Communication and Art,
University of Aveiro
Research Centre for
Design, Media and
Culture (ID+)
abmarques@ua.pt

Supervision:
Vasco Branco
Rui Costa
Department of
Communication and Art,
University of Aveiro
Research Centre for
Design, Media and
Culture (ID+)

AUGMENTED NARRATIVES: BRINGING REALITY TO DATA AND BRINGING DATA TO REALITY

Charles Joseph Minard's data-map describes the successive losses in men of the French army during the French invasion of Russia in 1812. Vivid historical content and brilliant design combine to make this one of the best statistical graphics ever.

Tufte, 2006

Keywords

Augmented Reality,
Information design,
Augmented Narrative,
Figurative Map, Mobile
Augmented Reality.

The experiment of augmented narratives about classic information design cases consisted of a phase of the doctoral thesis entitled *Augmented narrative: contributions of digital technologies for information design* and aimed to test and confirm the interest and viability of incorporating augmented reality (AR) technologies in information design. The experiments carried out based on Charles Minard's *Figurative Map* (1869) combined an information design artefact recognized as exemplary in the culture of the discipline and AR technology, being already documented [1]. The combination of this technology with the *Figurative Map*, an artifact widely legitimized for its graphic completeness, allowed us to elaborate on what might be some of the benefits of AR from a design point of view, ie. in the creation of meaning.

After the aforementioned publication, *Pointing Finger* (a more recent version of the *Battle Map* app) and *War Painting* (a more recent version of the *Further Reading* app) stood out among the developed experiments, being representative of the remaining experiments and splitting them in two sets: the cases in which augmented reality brings data to reality and the cases in which augmented reality brings reality to data.

Pointing Finger is an application for mobile devices that allows to obtain additional and contextual information in points of the original map where there is a graphic representation of casualties. *War Painting* features several paintings depicting different moments and locations of Napoleon's invasion of Russia, signaling them on the original map. In *Pointing Finger*, augmented

reality brings data to reality, it allows to access more information about the context in which the phenomenon depicted took place: the huge number of human losses in Napoleon's invasion of Russia in 1912. *War Painting*, on the other hand, represents the cases in which augmented reality brings reality to the data, in the sense that it adds the human experience, better captured by painting, to the graphic abstraction of numbers that, due to its quantitative accuracy, can contribute to a certain relativization of the war terror and magnitude.

Acknowledgements

This work is financed by national funds through FCT - Fundação para a Ciência e a Tecnologia, I.P., and FSE - Fundo Social Europeu with the PhD grant with the reference "SFRH/BD/144937/2019".

[1] Marques, A. B., Branco, V. & Costa, R. [2020]. Minard Revisited - exploring augmented reality in information design. In N. Martins & D. Brandão (Eds.), *Advances in Design and Digital Communication: Proceedings of the 4th International Conference on Design and Digital Communication*, Digicom 2020 (79-89). doi: https://doi.org/10.1007/978-3-030-61671-7_8

[2] Tufte, E. R. [2006] *Beautiful Evidence*. Connecticut: Graphic Press LLC.