

How Maps have been used: Towards a Typology of Map Functions



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Freitag (1993) places map functions in the context of everyday human experience. His proposed classification consists of cognitive, communicative, decision support, and social functions [1]. This experience is also shaped by power relations [2], e.g. politics and it is possible to represent political circumstances in a map [3].

This research aims at identifying a new typology of map functions, based on political ideologies throughout different time periods of history. For this, five different epochs, the Middle Ages, Renaissance, Realism, Futurism, and Contemporary Age, as well as four fundamental map types, General Reference, Topographic, Navigational, and Thematic, are assessed.

RESEARCH OBJECTIVES

The following research objectives are specified for successfully completing this project:

1. Identifying broad political trends in different time periods in history in Europe and today and determining if these features are reflected in according maps.
2. Identifying map functions, in respect to their political context, of several map types in different time periods of history in Europe and today and across various user groups.

METHODS

First, a literature review on political circumstances of the five eras under investigation is conducted. Then, two user questionnaires with twelve and thirteen maps each are published. In the first one, participants are asked to describe map functions in respect to their political context in a free associative way. Three auxiliary questions are formulated for this purpose:

Which purpose does this map serve, in respect to its political context?

Which motivations or intentions of a mapmaker can be found, in respect to its political context?

Which aim should it fulfill, in respect to its political context?

For the second questionnaire, the responses are grouped according to topic, respectively function, and provided to the participants to choose from after viewing the maps. In addition, they are asked to evaluate their knowledge of the five epochs and to describe their associations with them.

Safety. Thematic Political maps have Justice and the Thematic City type Advertisement. In comparison for all epochs, the Middle Ages were most often assigned the Religion function. For the Renaissance it is Courage, in Realism Manipulation and in the Present Age Justice. The Futurism era has proportionally not been assigned any function most often. However, the most frequent one for this period is Courage.

None to very few differences are

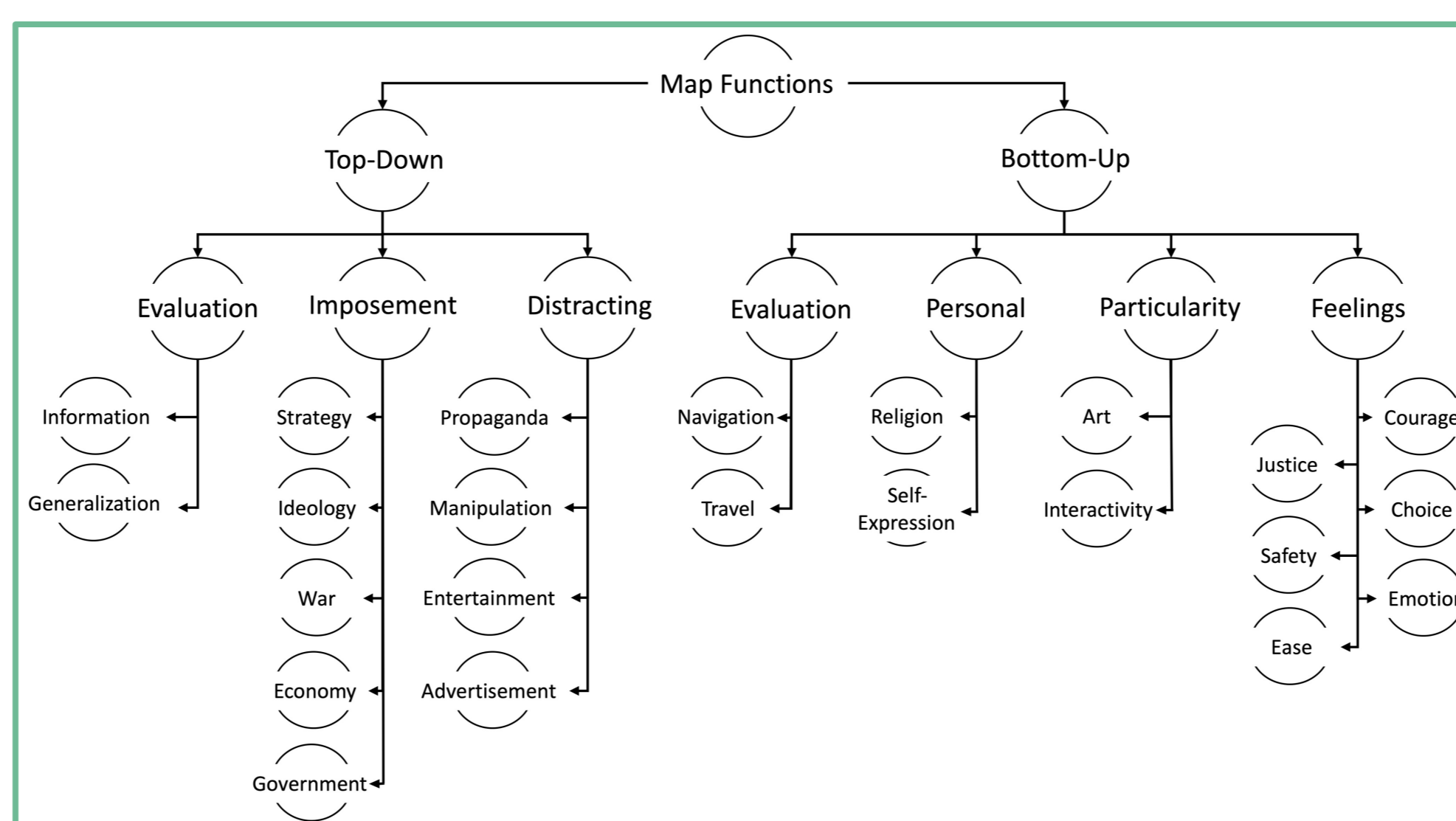


Fig.1: Top-Down vs. Bottom-Up Typology of Map Functions. Image by the author.

RESULTS

Regarding the first research objective, all studied maps show elements of the political conditions of their time, as described in literature. Moreover, this information overlaps with the associations of the participants of the questionnaires. The argument that they may only be well acquainted with the respective eras can be contradicted. For the most part, participants indicate that they know nothing to very little about the examined epochs. Accordingly, it is proven by two methods that the contents of maps are influenced by political circumstances.

Further, there are also findings for the second objective. In comparison to all map types, the General Reference maps have most often been assigned the Choice function. For the Topographic type it is Religion, for Navigational ones

found in terms of user groups. On average, the function selection of experts and non-experts does not differ at all. The biggest difference is found between male and female gender, with a score of 1.7 percentage points. All results can be reviewed in the appendices.

CONCLUSION

Based on the results, the Top-Down vs. Bottom-Up Typology of Map Functions (Fig. 1) is created. Under the assumption, that functions can either be imposed on (Top-Down) or perceived by the individual, depending on their personal background (Bottom-Up). It is found that female participants tend to perceive more Bottom-Up and males more Top-Down functions.

Further, it is presumed, that this typology is applicable to more contexts than just the political one.

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LINK TO APPENDICES



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