Review of PhD thesis of Michail Tsikerdekis

The thesis entitled "Social Interaction Design for Social Media: The Case of Groupthink and Aggression" deals with very interesting and actual topic: the social media and indirectly also with Human Computer Interaction. The results provided are inspired by psychological research, namely the use of statistical evaluation of human reactions. The major contribution of the thesis is how potentially vast the effect of software design is in social media. Another very important result relates to the specific use of aggression and groupthink.

The thesis starts with the overview of the studied area—the social media and social interaction design for social media. The first chapter covers the definition of all important terms, including all the relevant references in the literature. It also includes comparison of different approaches, presenting and discussing all the major concepts. The author thus sets the initial framework for the whole thesis. The second chapter contain the overview to social media applications.

The third chapter concludes the explanatory parts of this thesis. The chapter deals with the groupthink, which is defined and described in detail. In the beginning, two definitions of groupthink are compared followed by examples of social media endangered by groupthink, and historical view of groupthink research. Five step groupthink model is described in detail. The chapter is finished by groupthink and online groups and by software features studied for groupthink. There are no author’s research results in this chapter.

The first major contribution is presented in the next chapter, with method and initial results, analysis for argument production, Bayesian analysis for readability, leaders in social media, response order and behavior. Acquired results are discussed. Methods use in this chapter are based on a mathematically sound foundations and could be easily reused in other work. The results are thus reproducible.

The fifth chapter deals with aggression as a phenomenon encountered not only in real, but especially in virtual worlds. It provides a description of online aggression theory and applications including online aggression preventing. I ask author to explain different types of anonymity (used in 5.5.1.) in more details.

The chapter six presents author’s original results in research of individual features for aggression in social media. Author describes several hypotheses and proves them by prepared applications and statical analysis.

The last part of this thesis is dedicated to the social interaction design framework. Chapter seven covers benefits provided by interaction design as well as by social interaction design. I have two questions:

1. Clarify relation of your results described in chapter 4 and 6 to interaction design framework.

2. Discuss how the other features (not only aggression) can be covered by the framework.
The chapter is concluded with the social cognition and distributed cognition framework.

Taking into account the overall impression from the thesis, I would like to emphasize a rational approach Mr. Tsikerdeksis took to deal with an area that is on a border between social and information sciences. While dealing with social media, the thesis includes clear computer science related results, achieved through standard mathematical and statistical analysis.

To conclude, the thesis is a good work clearly demonstrating Mr. Tsikerdeksis ability to work on a scientific problem, to define a hypothesis, and to experimentally evaluate and verify it. This scientific ability is also proved by a list of publications authored by Mr. Tsikerdeksis (who in all cases is the only one author). The thesis fulfills all the requirements and I recommend that it is accepted and used as a basis for a PhD title defense.

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