Group Decision Making and Group Recommender Systems

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1. Abstract

Like designers of recommender systems for individuals, those who design recommender systems for groups can benefit greatly from a thorough understanding of human decision making and ways of supporting it – in particular decision making that occurs in a group context. But a comprehensive analysis with regard to groups has so far been lacking in the recommender systems field. This talk will present such an analysis in an accessible way, referring workshop participants to a recently completed chapter for the Recommender Systems Handbook (3rd edition) for further details and references [1] (a preprint is available on request from the first author).

Relevant knowledge about decision making in groups can be found in research on group decision making, group dynamics more generally, negotiation, and group decision support systems as well as in the practical experience of human group facilitators. To see the relevance of these areas, we will look at seven widely accepted principles derived from them that have important implications for the design of group recommender systems.

We will then consider two high-level approaches to using this type of knowledge in a recommender systems context: supporting interaction among group members vs. predicting the results of interaction without allowing the interaction to occur. The approaches differ greatly in their applicability to particular recommendation scenarios.

We will discuss concrete examples of how group recommender systems have applied – or could apply – these ideas and results. These examples are organized in terms of an extension to groups of the previously published Aspect and Arcades models, which distinguish the diverse ways in which people make choices and in which their choice processes can be supported.

2. Bio

Anthony Jameson's contributions to the field of recommender systems have focused on showing how an understanding of the psychological processes involved in individual and group decision making helps to generate new ideas for the design of recommender systems.

His chapter with Barry Smith titled *Recommendation to Groups* (2007) is one of the most influential publications on its topic. More general contributions include the book *Choice Architecture for Human-Computer Interaction* and the cofounding of the *ACM Transactions on Interactive Intelligent Systems*.

In 2017, he left his position as Principal Researcher at DFKI to found the startup Chusable AG (https://chusable.com), which creates software for the support of everyday decision making and the sharing of actionable knowledge.

3. References

[1] A. Jameson, M. Willemsen, and A. Felfernig, Individual and group decision making and recommender systems, in: F. Ricci, L. Rokach, and B. Shapira (Ed.), Recommender systems handbook, 3rd. ed., Springer, Berlin, 2022.