

GROUP POLARIZATION, SOCIAL INFLUENCE AND THE ANALYTIC HIERARCHY PROCESS

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EXTENDED ABSTRACT

1. Introduction

As an introduction the question may be asked: How might Social Influence affect the decisions of a group? Social Influence is the process by which group members influence one another's opinions as part of the overall process to formulate a group decision based on the members' opinions. The transformational process, moving a group from a set of individual opinions to one group decision, the process of choice aggregation, is essential for group decision-making and it is important to understand the role of Social Influence in this transformational process and particularly how using the AHP affects this process.

2. The Group Polarization Effect

Research into decision-making of natural groups uncovered an overall phenomenon called the *Group Polarization Effect*. It was hypothesized in the mid 1960s that the mathematical average of the pre-discussion opinions of the group members would indicate what they would eventually agree upon. Choice dilemma research findings, however, showed this idea to be false and that the eventual decision was riskier than the mathematical average would predict. Scientists have proposed many theories regarding the Group Polarization effect. Not only were several theories proposed to explain the Polarization phenomenon itself, but scholars also believe that Polarization go beyond choice dilemmas and relate to all types of group decisions. Group Polarization is a window into the larger process of Social Influence. Hence, by looking at Group Polarization, we can discover more about how Social Influence affects all kinds of group decision-making tasks.

3. Social Influence

The light that Group Polarization sheds on Social Influence can be grouped into five positions.

3.1 Position 1: Group Decisions Without Social Influence

Position 1 assumes that Social Influence is *not* important in group decision-making. The theory sees social interaction as a *combinatorial* process transforming individual pre-discussion preferences into a group output. Social Decision Schemes fall within the realm of Position 1.

3.2 Position 2: Social Influence From Opinion Expression

Position 2 accepts the idea that Social Influence is important to the decision-making process and that Social Influence happens when group members listen to one another express opinions about the available options, hypothesizing that members are likely to adopt the option of the majority. Social Influence occurs because

people want to agree with the majority and this position thus assumes a *normative* process of social influence. Social Comparison Theory is a view consistent with Position 2.

3.3 Position 3: Social Influence From New Information

Position 3 also accepts the idea that Social Influence is important in the decision-making process. The main contention of Position 3, however, is that Social Influence occurs when group members learn *new information* about the available options. The *arguments* that members present, not their *opinions*, are the key factors. They believe that this discussion is responsible for Social Influence and do not feel that group members will change their minds merely because they learn other members' preferences but that group members need to have new information before Social Influence can occur and thus assume an *informational* process of social influence. The Persuasive Arguments Approach is the main Position 3 theory.

3.4 Position 4: Social Influence From Both Opinion Expression and New Information

Position 4 combines parts of positions 2 and 3. In Position 4, researchers claim that *both* opinion expression and new information are important; both can affect the preferences of group members.

3.5 Position 5: Social Influence From Group Discussion

Position 5 gives group discussion itself a bigger role than do any of the other four positions. This *interactional* position, known as Structural Theory, claims that what happens during group discussion is of utmost importance. As members talk, the group *creates* a new base of information, as it were, which it uses to make its decision. The Structural Perspective is based on the premise that the factors determining social action exist only in the stream of interaction. External factors, including pre-discussion preferences, only have bearing on action insofar as they are produced and reproduced by group members using them in interaction.

4. Empirical Test for Polarization

The opportunity to test the AHP in relation to Group Polarization and Social Influence presents itself. Several reasons make this an interesting exercise. An empirical study was earlier undertaken to test the feasibility of the 3-phase AHP approach and reported at ISAHP2001. For the current case the results were re-analyzed to reveal the degree of Group Polarization found. The AHP application displays the group polarization effect. What is clear is that the 3-phase AHP allows social influence to occur, proving that the AHP is more than a social decision scheme and providing additional evidence for the value of this approach over and above the evidence found in the original study. The partial de-polarization evident in the Phase 3 geometric means (Post-discussion priorities) is further encouraging evidence that, although social influence occurs during discussion, group members can express a degree of autonomy in their 3rd Phase responses.

5. Conclusion

This paper discussed the phenomenon of Group Polarization and the different Social Influence Theories proposed to explain it. We used the results from an earlier study involving judgments via the AHP to investigate whether this effect is also seen when using the AHP in group decision-making. The presence of Group Polarization and consequently Social Influence was demonstrated. The study was not designed to test for polarization specifically and it is suggested that the relationship between using the AHP and polarization in group interaction is researched in more detail. The implication of Group Polarization is that group dynamics have the potential of changing the group's final decision without necessarily changing any of the underlying facts that lead to the decision and as such has both potential benefits as well as detrimental effects in group decision-making. Explicating the role of group polarization while using the AHP is, therefore, of great importance if we wish to utilize the AHP as an effective group decision-making methodology.