Understanding Cognitive Processes Involved in Perceptions of Entitativity

Andrea Purington

University of North Carolina, Charlotte
Understanding Cognitive Processes Involved in Perceptions of Entitativity

With growing advancements and popularity of technology in modern culture, there has been growing interest in how online groups influence the way people think, feel, and behave. Ren and her colleagues (2007) suggested that there are hundreds if not thousands of online groups devoted to similar topics. However, only a few of them are successful.

Entitativity, or “how groupy a group is”, may play a role in the success or failure of these sites. Perceived entitativity could influence whether an individual decides to join or remain a member of the online group. These decisions are critical to the survival of a group because groups constantly need new members to replace those who leave (Bateman, Gray, Butler, 2011).

The goal of this study, therefore, is to gain insight into the thought processes that occur when people encounter an online social unit, and how that leads to their perceptions of entitativity.

Literature Review

Entitativity refers to the degree to which either an onlooker or a group member perceives a unit of people as a group, or single entity (Crump, Hamilton, Sherman, Lickel, & Thakkar, 2010). Entitativity functions as an element of a group, where the level of entitativity lies on a continuum. This means that some groups are perceived as being more entitative, and other groups are perceived as less entitative (Hamlton & Sherman, 1996).

People recognize different types of groups as being having various levels of entitativity (Lickle, Hamilton,Wieczorkowska, Lewis, Sherman, & Uhles, 2000). For instance, imagine observing a college classroom right before class begins. There are groups of students sitting near each other. Some groups are having a conversation, others are sitting quietly. The group of
students who are interacting and having a conversation, may be perceived as having higher entitativity than the groups that are not interacting.

*Entitativity Outcomes.* Entitativity is a vital component of groups as it may predict multiple group outcomes. Most current research focuses on outcomes of entitativity, particularly social perceptions (Rutchick, Hamilton, & Sack, 2008). For instance, one study suggests that groups with high entitativity are associated with members’ perceived fulfillment of psychological needs through strong group identification (Crawford & Salaman, 2012). That is, members of a group with high entitativity often develop a strong identification with the group. Those with strong group identification are more likely to perceive that their group membership provides them with resources that fulfill their psychological needs.

Lickle et al. (2000) compared groups with different levels of entitativity (intimacy groups, task groups, social categories, and loose associations), and found that people valued their membership more highly in groups with higher entitativity. That is, people were more likely to value their membership in intimacy groups, where there is high entitativity, compared to loose association groups, where there is low entitativity. In addition, studies have found correlations between entitativity and in-group biases, group identity, polarization, and other perceptions of group members, as well as stereotype formation (Castano, Sacchi, & Gries, 2003, Gaerther, Iuzzini, Witt, & Orina, 2006, Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007, Spencer-Rodgers, Hamilton, & Sherman, 2007).

When studying the outcomes of entitativity, researchers often use social identity theory as an approach to understanding the associations between entitativity and perceptions of others (Crump, et al., 2010, Hogg, et al., 2007). Social identity theory suggests that groups have both a cognitive and psychological existence. Perceptions of this existence involves self-conception of
membership, group processes, and relations among members (Hogg, 2006). The social identity theory emphasizes critical components the precede group formation. Antecedents posited to increase entitativity include common goals, interdependence, and internal structure of a group (Hogg, 2006)

Entitativity Antecedents. The literature suggests that similarity and interaction are particularly strong antecedents of entitativity (Rutchick, Hamilton, & Sack, 2008). Similarity is more salient when determining entitativity in similarity-based, or categorical, groups (Rutchick, et al., 2008). Continuing with the classroom analogy, consider a group of students sitting near each other before class starts. They are not talking to each other, yet they are wearing shirts representing the same school organization, such as a sports team or sorority, people are still likely to perceive higher entitativity.

Interactivity is most important when observing interaction-based, or dynamic, groups (Rutchick, et al., 2008). For instance, if the students in the classroom are supposed to be working on a group project, the groups with members who are interacting with each other are likely to be perceived as having higher entitativity.

Other characteristics of groups that have been found to influence entitativity include common goals, importance of a group to its members, duration and size of a group, interdependence among its members, and the boundaries that separate in-group from out-group (Gaerther, et al., 2006, Igarashi & Kashima, 2011, Rutchick, et al., 2008).

The majority of literature on entitativity focuses on identifying antecedents and outcomes as opposed to why and how entitativity is associated with these antecedents and outcomes. This project will help fill these gaps in the literature by studying the mental processes that occur when an individual is assessing the entitativity of an online forum.
Social Presence Theory. A useful approach to understanding and explaining the relationship between entitativity and its antecedents and outcomes in online environments is the social presence theory. Social presence is the sense of “being together” during a social interaction depending on the degree to which each person in that interaction feels accessibility to the other person’s intelligence, impressions, and intentions (Guawardena, 1995). When considering social presence in indirect interactions that are mediated by technology (such as having a conversation over the phone or e-mail), the concept of social presence can be thought of as the extent to which people are less aware of the medium that exists between them, and more aware of the person they are interacting with (Ijsselainen, de Ridder, Freeman, & Avon, 2000). For example, a telephone conversation creates greater presence than sending an e-mail, however, face-to-face interactions create even greater presence.

Social presence theory includes three components that are particularly important for this study, including mutual awareness, perceived interpersonal connection, and social schema of interactions (Biocca, Harms, & Burgon, 2003; Short, Williams, & Christie, 1976).

Mutual awareness involves the acknowledgement of the existence of individuals involved in a social interaction (Biocca, et al., 2003). For instance, students in a college classroom sitting next to one another may be mutually aware of each other’s existence, even if they are not interacting; however, social presence theory can extend farther to the awareness of more tangible relationships and connections (Shen, Yu, & Khalifa, 2010). For example, if the students were not interacting, but they were wearing the same shirt that associates them with a student club or sorority, they may produce even greater social presence because it is now assumed that they hold a history of interactions. In addition, social presence can involve deeper perceptions of social schema that influences the way people act or expect others to act in certain situations (Biocca, et
For example, an individual approaching the group of people wearing the same sorority shirt, might behave differently or have different expectations of the members of the group than if they were wearing shirts that did not affiliate them with any particular group (or a different type of group, like an honors society or sports team).

This study will employ the social presence theory as a means to guide and understand how entitativity is related to its antecedents and outcomes to answer the following research questions:

Research Question 1: How does social presence theory relate similarity and interactivity to perceptions of entitativity?

Research Question 2: How does social presence theory relate entitativity to group identity?

Methods

Participants

Participants used in this study will be eight undergraduate students from the University of North Carolina at Charlotte. The participants will be recruited using the university’s subject pool. All students participating in this study will be compensated by receiving research credit.

Procedure

The purpose of this project is to gain insight into the cognitive processes involved in making judgments about group entitativity using an online forum. In order to ensure consistency between trials, the study will take place entirely in a laboratory setting. Each participant will be studied individually.

Upon entering the lab, participants sit at a computer where they will be interacting with an online forum created and revised by the research lab prior to the study. Each participant will be read the same instructions about proceeding with the study by the same experimenter. They will also be given the opportunity to ask questions regarding those instructions.
The online forum contains several different topics relevant to the university and its football team. Examples of topics include “What to do before/after gametime? Tailgating, food, ect.” “Let the Games (or recruitment) Begin!” and “Off Topic: Parking on Campus.” Under each topic, participants will see a thread of comments related to each topic between the forum “members” we created. The comments include statements and responses to other members (Visual examples of the sports forum are available in appendix A).

Certain aspects of the forum will be manipulated to create two different conditions. Participants randomly assigned to condition 1 are shown a version of the forum that includes particular features related to similarity and interactivity, which are expected to increase entitativity. These features include signature lines, avatars, and affirmative language in the comments (such as “great thread!” and “good info.”). Participants randomly assigned to condition 2 are shown an identical version of the forum without avatars, signature lines, and affirmative language.

**Think Aloud Protocol**

This study employs the Think Aloud Protocol to study the thought processes involved in making judgments about the online group, which calls for participants to perform a task while concurrently verbalizing their thought processes along the way (Jaaskelainen, 2010).

For this project, participants will be instructed to explore the sports forum by browsing the different topics and reading comments left by the forum members. Participants also told to clearly verbalize all of their thoughts while they navigate the forum.

Think Aloud protocol can be useful because, when conducted appropriately, the Think Aloud Protocol does not disrupt the course or structure of thought beyond slightly slowing down
the process (Ericsson & Simon, 1993). Thus, this method can provide valuable information about the processes that occur when people make judgments about a group.

The Think Aloud Protocol alone has some limitations. One potential limitation is that continuous verbalization of thoughts can be disrupted if a participant is under a high cognitive load (Jaaskelainen, 2010). This limitation is addressed by creating a forum that is user friendly, and instructing the participants to perform a fairly simple task.

A particularly important limitation to consider is that only the information being consciously processed in working memory can be verbalized by the participant (Jaaskelainen, 2010). To remedy this, participants are instructed to move the cursor to indicate what they are looking at on the forum. The participants’ actions on the computer screen and their verbalized thoughts will be recorded using the computer program Saba Meeting Events.

*Semi-Structured Interview*

The Think Aloud Protocol is paired with a semi-structured interview to ensure that information relevant to the research questions are obtained. The semi-structured interview will take place simultaneously with the Think Aloud Protocol. The questions asked in the interviews are loosely based off of prewritten questions which target specific information related to answering the research questions.

The interview will include questions about the participants’ beliefs about what they observe on the online forum, such as: To what extent are the members similar or different? In what ways are they similar or different? To what extent are the members interacting or not interacting? In what ways are they interacting or not interacting? To what extent does this forum feel like a group or not like a group? To what extent does it seem like the forum members identify with the
group? To what extent do the members seem to be aware or unaware of each other? (The full interview guide can be found in Appendix B).

Participants may not be asked the same questions. The questions the experimenter asks a participant depends on the information given in each participant’s verbalized thoughts. For example, if a participant provides information that answers a prewritten question, that question will not be asked. However, if the participant does not provide certain important information, a question directed at retrieving that information will be asked.

In addition to participants’ actions on the sports forum and vocalized thought processes, their responses to the interview will also be recorded using the computer program Saba Meeting Events.

**Analysis Strategy**

The data retrieved in this study is analyzed qualitatively in three steps. First, each recording will be converted into a detailed transcript. Each transcript combines the vocalized thoughts, actions on the forum, and responses to interview questions of the participant.

Second, the transcripts are then compared among participants in each condition. The comparisons help identify common and relevant themes for coding and conceptualizing the results.

Finally, the coded information between both conditions will be compared and interpreted. These interpretations are used to answer the research questions. The results may also form implications for areas that yield potential for future research.
Appendix A
Appendix B

1. To what extent do the members seem similar or different?
   a. In what ways are they similar or different?
   b. Do the signatures indicate anything to you? *
      i. What do they indicate?*
   c. Do the avatars indicate anything to you?*
      i. What do they indicate?*

2. To what extent are the members interacting or not interacting?
   a. In what ways are they interacting or not interacting?
   b. Does the language used in the members’ comments indicate anything to you?*
      i. What does it indicate?*

3. To what extent does this forum feel like a group or not like a group?
   a. In what ways does the forum feel like a group or not like a group?

4. To what extent does it seem like the forum members identify with the group?
   a. In what ways do they seem to identify or not identify with the group?

5. To what extent do the members seem to be aware or unaware of each other?
   a. In what ways do they seem to be aware or unaware?

*Used only in condition 1


