Sample Research Outline (excluding title and reference pages)

Behavioral Entrainment in Computer-mediated Communication

There has been a paucity of research on the influence of temporal factors on human behavior and cognition. Although many of our academic, organizational, and social interactions are affected by both implicit and explicit temporal constraints, the concept of time has been routinely ignored in the field of psychology. According to McGrath, Kelly, and Machatka (1984), endogenous or naturally occurring temporal rhythms underlie much of human behavior as well as social interactions at the group level. The synchronization or lack thereof, of these temporal rhythms have many implications for social cognition, interaction, and group performance.

Similarly from a psychological perspective, the theory of mutual entrainment also suggests that an individual's behaviors and attitudes can be unconsciously modified or adjusted in order to achieve synchrony with an external agent (i.e. another person, temporal constraints, etc.) (McGrath et al., 1984; McGrath & Kelly, 1983). For example, this endogenous synchronization usually occurs when individuals are speaking to one other during face-to-face interactions. When one person has finished a speaking, the second individual is expected to deliver a verbal or nonverbal response within a certain implicitly understood time frame, which will be reciprocated by the original speaker. This verbal synchronization or rhythm (e.g. length of pause and response) is unique for each situation and interaction depending on the communicators and the social environment. Research on behavioral entrainment (Kelly & Barsade, 2001; Kelly et al., 1990; McGrath & Kelly, 1983) suggests that interaction synchrony between group members may lead to more positive intra-group affect and enhanced performance on tasks.

Kelly and McGrath (1983) randomly assigned dyads to either solve 20, 40, or 80 5-letter anagram puzzles. The two-person groups worked on the tasks over three work periods of either 5, 10, or 20 minutes. Groups that started with a 5 minute period were given increased time over the next two trials (e.g. 5min., 10 min., and 20 min.). Groups given 20 minutes for the first task were given less time over the next two trials. The control groups were given 10 minutes to complete their tasks on all trials. The researchers found that groups who were given increasing time (5 – 10 - 20 minutes) solved anagrams at faster rates in every condition than did group

whose time decreased or stayed the same. The researchers suggest that the initial time constraints affected the groups' solution rates and this established rate carried over into the subsequent interactions. Groups initially attuned or adjusted their solution rates to fit the experimenter-imposed temporal constraints. Once established or made normative, this rate persisted even when the temporal constraints were increased or decreased in subsequent trials (McGrath, Kelly, & Machatka, 1984).

Researchers (Kelly & Barsade, 2001) have indicated that behavioral entrainment between group members also has implications for group affect and impression formation. Group members whose behaviors (body language, speech patterns, etc.) are synchronized during an interaction may lead individuals to communicate in more fluid and coordinated patterns. This interaction synchrony increases group affect, satisfaction, and liking for group members. Lack of mutual entrainment between group members tends to be unpleasant leading to an increase in negative group affect.

Summary and Hypotheses

Temporal issues are a crucial, yet often overlooked component of human behavior and group interaction. Mutual entrainment or interaction synchrony between individuals has widespread implications for group and individual cognition, motivation, affect, and performance. The purpose of the present research will to examine the influence of behavioral entrainment on impression formation following computer-mediated interactions. Past research has examined the effects of behavioral entrainment while explicitly manipulating external time constraints during face-to-face interactions. We will be attempting to implicitly modify behavioral entrainment in a computer-mediated environment without the use of experimenter-imposed time constraints.

Method

Participants

A total of four participants will be present at each of the research sessions (2 confederates "pretending to be participants" and 2 actual participants). The participants (Shippensburg University – General Psychology students) and confederates will be using a computerized chat program (e.g. America Online Instant Messenger).

Procedure

The discussants will be individually seated in private cubicles and will be visually anonymous to their chat partner during the interaction. For the experimental control, confederates will be given an identical set of structured paragraphs to describe specific magazine pictures. Confederates will be randomly instructed to either correspond with the participant in a normal fashion (i.e. no time delay), or to wait for 90 seconds before responding to their partner's messages (delay) throughout the discussion. The computerized transcripts of the discussion will be recorded with time stamps for later analysis. After the session is completed the experimenter will ask the participants to rate his/her partner and the overall interaction on a number of positive/negative impression ratings. A survey will be administered prior to the online discussion session measuring the participants experience with computers.

Following the questionnaire portion of the study, the two actual participants will be asked to interact with each other in a second conversation session describing magazine pictures. For half of the dyads (synchronous condition), the communication will be with a partner whose confederates responded to them at the same rate (e.g. they both chatted with a confederate who delayed their responses). For the rest (desynchronous condition), the dyads will interact with a partner whose confederates responded to them at different rates respectively (e.g. one confederate responded immediately and the other delayed response for 90 seconds). Following the second interaction, the experimenter will again ask the participants to give their impressions of his/her partner.

Results

A 2 entrainment rate (Delay vs. No Delay) X 2 partner rate (Synchronous vs. Desynchronous) analysis of variance (ANOVA) will be used to analyze impression ratings and response times for each of the discussion groups.

Prior research has only looked at the development and influence of mutual entrainment in face-to-face interactions. These studies have examined the development of interaction synchrony via the explicit manipulation of time constraints. The present study is examining the implicit formation of behavior entrainment within groups, while holding environmental factors constant in a computer-mediated environment.