Components of Perceived Interpersonal Interaction

Travis Sola
Grand Valley State University
Components of Perceived Interpersonal Interaction

Travis Sola  
McNair Scholar

John Adamopoulos, Ph.D.  
Faculty Mentor

ABSTRACT:  
This paper focuses on the perception of different psychological structures which, taken together, constitute social action from the observer's perspective. Thus, action identification is conceptualized as a function of structural components (frame domain) and semantic features (semantic domain). Certain combinations of semantic features are prescriptive schemata for typical behavior. The participants were primed for prescriptive or non-prescriptive schemata, then engaged in a memory task. The memory task consisted of an acquisition phase (participants heard partial action event sentences) and a recognition phase (participants were asked to identify sentences they had heard). A higher false recognition of "new" sentences containing the primed prescriptive schema was found.

Introduction  
How do we detect and interpret the meaning of interpersonal behavior? When we are in social situations, like attending church, and we observe an action taking place, how do we know (or think we know) what just occurred? In other words, how is information about social interaction organized into meaningful "units" of behavior? This problem has been particularly vexing for social psychologists and philosophers of action for some time (e.g., Adamopoulos & Stogiannidou, 1996; Davidson, 1980; Ginsburg & Smith, 1993; Heider, 1958; and Newton & Engquist, 1976). Because of the problem's complexity, it has been very hard to develop systematic techniques for experimentation (Adamopoulos, & Stogiannidou, 1996).

The operationalization of action has been particularly troublesome. However, in the 1970s, Newtson and his colleagues showed that action was composed of behavior sequences that are critical for identification. They had participants watch video tapes of a person moving through various tasks and asked them to indicate whenever they identified distinct, meaningful changes in behavior. Remarkably, this unit marking technique showed that people consistently break action into psychologically meaningful units of behavior. The weakness of the empirical work by Newtson and Engquist (1976) was its inability to explain results in a systematic manner. Other researchers have since expanded Newtson's unit marking technique to social interaction (e.g., Ginsburg & Smith, 1993), but have still lacked any thorough analysis of the process involved. A theoretical framework on the interaction between social stimuli and the process of the formation of the perceptual "units" of action was sorely needed. Recently, Adamopoulos and Stogiannidou (1996) adopted a componential approach to action identification that investigated the role and importance of different cognitive structures in the perception of social action. This approach differs from most others, which focus on the intentionality of the actor (e.g., Harré & von Cranach, 1982; Vallacher & Wegner, 1985, 1987).

Instead, Adamopoulos and Stogiannidou focused on the observer's perspective of social behavior and developed a framework for understanding action identification. They demonstrated in their preliminary research that the identification of social action is a function of the social components involved and the presence of abstract conceptual structures. Figure 1 provides an easy to interpret schematic of the action identification framework.

The basic components of action are conceptualized as (1) actor, (2) target, (3) behavior, and (4) the environment. Different arrangements of components constitute particular frames of action. Thus, action frames can consist of such combinations as <actor, behavior> or <target, behavior, environment>, etc. These frames are assumed to be involved in the perception of social action, but have no culturally-defined meaning. Action frames acquire their meaning through the semantic features that define the components of culturally appropriate configurations.

The semantic features are the underlying dimensions of meaning for the components. Behavior and actor-target relationships vary on dimensions of association, dominance, conflict, and intimacy (Triandis, 1997, 1994), while environments vary, at least, on the dimension of constraint (Adamopoulos, 1982). Certain combinations of the semantic features are thought to be prescriptive schemata. In other words, prescriptive schemata are abstract conceptual structures for normative behavior that predispose individuals to expect certain actions, rather than others. Non-prescriptive schemata, on the other hand, are defined as combinations of semantic features with no normative implications. Therefore, non-prescriptive
schemata are of little importance in understanding the social environment (Adamopoulos & Stogiannidou, 1996).

The Present study
This line of work can be expanded using a slightly different methodology. In this project, research participants were primed with instances of prescriptive or non-prescriptive schemata. Priming results in the increased facility of detecting and processing schemata that have been recently activated. The priming stimuli were two sentences which contained the same conceptual schema. During the initial instructions, the sentences were read to the participants as an example of what would be asked of them in the acquisition phase of the experiment. Subsequently, participants engaged in a memory task, which had been adopted from Bransford & Franks (1971) by Adamopoulos and Stogiannidou (1996).

It was predicted that the subjects would misidentify novel sentences containing the primed prescriptive schemata more than sentences with primed non-prescriptive schemata. Since the priming effect is due to the activation of schemata, the hypothesized outcome can be contributed to prescriptive schemata, rather than to other processes. This procedure provides more evidence on the influence of prescriptive schemata in the correct identification of social action.

Method
Participants
Sample
The sample consisted of one hundred and ten Grand Valley State University introductory psychology students who received class credit for participation.

Apparatus and Procedure
Two prescriptive and two non-prescriptive schemata were selected from Adamopoulos and Stogiannidou. (1996). Specific instantiations of the schemata were created using stimuli that had been previously scaled (Adamopoulos, 1982). One of the schemata was primed for each of the four experimental conditions. The priming was accomplished by inserting two full instantiations of the same schema into the initial instructions. The experimenter read these instantiations to the participants and asked a simple content question about each. For example, one of the priming sentences for prescriptive schema 1 was: "The young man talked with his girlfriend in the library" (Intimate Roles, Associative Behavior, High-Constraint Environment).

Once the instructions and priming stimuli were read, the participants began the acquisition phase. For this phase, four complete instantiations, of the two prescriptive and two non-prescriptive schemata (not the specific instantiations used for the priming stimuli) were generated. Each of these four sentences were then broken down into four smaller frames: two with two-component frames: (1) Actor, Target <AxT>, e.g., “The student was with his roommate.”; (2) Target, Behavior <TxB>, e.g., “The roommate was helped with the assignment.”; and two with three component frames: (3) Actor, Target, Environment <AxTxB>, e.g., “The student and his roommate were in the library.”; and (4) Target, Behavior, Environment <TxxBxT>, e.g., “The roommate was helped with the assignment in the library.”.

The participants listened to each of the sixteen sentences and then responded to a single question about each sentence (e.g., “Who was helped with the assignment?” or “Where were the student and his roommate?”). The question helped the participants hold the idea in their memory long enough to be encoded. When the acquisition phase was finished, the participants were given a five-minute break in which they could rest but not converse with one another.

During the recognition phase, participants were given a list containing twenty-eight sentences. This list contained both “old” and “new” sentences. The “old” sentences included action frames which the participants heard, and the “new” sentences included action frames which they did not hear. The “new” sentences were derived from the same instantiations as the “old,” but had different combinations of components: <AxTxBxT>; <AxTxB> and <AxBxE>; and <AxT>, <TxE>, and <AxB>. For each of the twenty-eight sentences, respondents indicated whether or not they recalled it (Yes or No), and then ranked the confidence of their recollection on a five-point scale, ranging from “not at all confident to extremely confident.”

Variables
The dependent variable was the participants’ false recognition scores. One independent variable was the action frames (2, 3, or 4- components). The second independent variable was whether or not the schema was primed (primed or not primed).

Manipulation
Priming was manipulated within the initial instructions read to the participants by the experimenter. The instructions contained an explanation of the acquisition phase and two examples of the way the sentences would be read. The example sentences read by the experimenter contained one of the four schemata per condition, but was analyzed by combining the prescriptive schemata 1 and 2 primed conditions together and non-prescriptive schemata 1 and 2 primed conditions together. Recognition scores for “new” sentences were analyzed for priming effects separately by their underlying schemata, respectively. This design was completely crossed; therefore, priming was a within-subjects independent variable.
The action frames (2, 3, or 4-component) were manipulated within the recognition questionnaire, making frames a within-subjects independent variable. Only “new” frames were used in the analysis.

Assignment
Participants were randomly assigned to the four experimental conditions: (1) prescriptive schema 1 primed, (2) prescriptive schema 2 primed, (3) non-prescriptive schema 1 primed, and (4) non-prescriptive schema 2 primed.

Each participant heard the same acquisition items and responded to the same recognition items. However, there were three random orders (with the constraint that the same schema instantiation could not follow another on the recognition list) of both sets of items to control for design effects.

Data Analysis
—Scoring
Each item on the recognition list was (a) marked “yes” if it was recognized or “no” if it was not, with “yes” coded as a “1” and “no” coded as a “−1”; and (b) assigned to a 5-point confidence scale, with “not at all confident of recollection” coded as “1” and “extremely confident of recollection” coded as a “5.” The responses from (a) will then be multiplied with responses to (b), creating a single recognition score for each item ranging from “−5” (no recognition, high confidence) to “5” (recognition, high confidence).

—Results
Prescriptive and non-prescriptive schema instantiations were analyzed separately. Table 1 provides a summary of the descriptive statistics for prescriptive schemata. False recognition for “new” sentences with prescriptive schemata was analyzed in a 2 (primed/ not primed) X 3 (action frame: 2, 3, and 4-component) ANOVA. The effect of priming was significant \[ F(1, 54) = 3.71, \ p = .059 \], as was the effect of action frame \[ F(2, 108) = 19.068, \ p < .001 \], with the highest false recognition for 4-component sentences \( M = 2.95, \ SD = 2.91 \). The interaction between priming and action frame was not significant (see Table 2).

Descriptive statistics for non-prescriptive schemata are presented in Table 3. False recognition for “new” sentences with non-prescriptive schemata was also analyzed in a 2X3 ANOVA. The effect of action frame was significant \[ F(2,104) = 6.852, \ p = .002 \]. However, the effect of priming, and the priming and action frame interaction were not significant (see Table 4). This indicates that priming was achieved for the prescriptive schemata, but not for the non-prescriptive schemata.

Discussion
As predicted, the findings in this study support the hypothesized functioning of prescriptive schemata as outlined in previous investigations (Adamopoulos & Stogiannidou, 1996; Logas & Adamopoulos, 1995). Action identification appears to depend upon prescriptive schemata that provide expectations and upon the presence of particular action frames that convey information about the specific interpersonal behavior. In other words, the redundant nature of experience is reflected in abstract rules for interpreting future experiences. Prescriptive schemata tend to aid memory when the social information is schema-consistent and increase confidence in schema-consistent recollections. However, when these schemata are activated under certain conditions, they can lead to the misidentification of interpersonal behavior. Therefore, it seems that prescriptive schemata guide our perception of new information, ignoring schema-inconsistent information, and enhancing memory for schema-consistent information that was never presented. This interpretation is congruent with other studies regarding schemata and their function in social information processing (Eysenck, 1990).

In addition, as Adamopoulos and Stogiannidou (1996) indicated, the structures of action identification can be understood as culture-common and culture-specific in nature. Referring to Figure 1 on the next page, notice that action frames are conceptualized as culturally-invariant structures (frame domain). They are assumed to be important in the perception of interpersonal interaction, but do not carry any culture-specific meaning in themselves. Meaning is reflected in the semantic features. While these are culture-common dimensions, certain combinations of semantic features may constitute prescriptive schemata that vary from culture to culture. Therefore, it can be predicted that such schemata will modify the role of different action frames (Adamopoulos & Stogiannidou, 1996). Future studies may use this framework to explore prescriptive schemata cross-culturally.
Figure 1. The action identification framework.
The sentence (The young man talked with his girlfriend in the library) is shown to
contain components and semantic features. Components can be displayed in differ-
ent combinations called action frames. Certain combinations of semantic features are
called either prescriptive or non-prescriptive schemata.

Table 1
Mean False Recognition Scores for
Prescriptive Schemata
Not Primed Primed
Action Frame 2 3 4 2 3 4
M – .24 .40 1.51 – .03 .65 2.95
SID 2.57 3.12 3.70 2.56 2.72 2.91

Table 2
Within-Subjects Effects for
Prescriptive Schemata
<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priming</td>
<td>1</td>
<td>3.707</td>
<td>.059</td>
</tr>
<tr>
<td>Action Frame</td>
<td>2</td>
<td>19.068</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>PrimingXAction Frame</td>
<td>2</td>
<td>1.839</td>
<td>.164</td>
</tr>
</tbody>
</table>
Note. Computed using alpha = .05

Table 3
Mean False Recognition Scores for Non-
prescriptive Schemata
Not Primed Primed
Action Frame 2 3 4 2 3 4
M – .14 .01 .83 .03 .21 1.92
SD 2.84 3.39 4.44 2.64 3.27 3.89

Table 4
Within-Subject Effects for
Non-prescriptive Schemata
<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priming</td>
<td>1</td>
<td>1.650</td>
<td>.205</td>
</tr>
<tr>
<td>Action Frame</td>
<td>2</td>
<td>6.952</td>
<td>.002</td>
</tr>
<tr>
<td>PrimingXAction Frame</td>
<td>2</td>
<td>1.235</td>
<td>.295</td>
</tr>
</tbody>
</table>
Note. Computed using alpha = .05

Acknowledgements
I would like to thank Dr. John Adamopoulos for his tremendous
amount of encouragement, instruction, and enthusiasm. Also, I would like to
express my appreciation for the McNair program and for the hard work of
Gloria Tate. Finally, I would like to acknowledge Tonya Simon and Tami
Reed for their help in coding the data.

Any questions concerning this article
should be addressed to:
John Adamopoulos,
Department of Psychology,
Grand Valley State University,
Allendale, MI 49401.
References


