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FREE RESPONSE CAUSAL ATTRIBUTIONS AND INFORMATION REQUESTS REGARDING INTERPERSONAL EVENTS: AN EXAMINATION OF KELLEY'S ATTRIBUTION MODEL

presented by

Irene T. Mann

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By

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A Dissertation
Submitted to
Michigan State University
in partial fulfillment of the requirements
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Department of Psychology

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ABSTRACT

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According to Harold Kelley's model of the attribution process, consensus, distinctiveness and consistency information allow one to assign causality for a behavior to either the person, the stimulus, the circumstances or some combination of these causal factors. Researchers have typically examined the kinds of attributions that persons make when given these informational cues; the attribution categories are usually specified by the researcher. The purpose of the present research was to assess the appropriateness of both the information and attribution categories by allowing participants to request information and explain a variety of hypothetical events in their own words. The events varied in the type of response described (action, emotion or opinion), likelihood, positivity and whether the event pertained to the self or another. Several individual difference variables not previously studied (self-monitoring, intolerance of ambiguity and cognitive complexity) were also of interest. Based on prior research, predictions were made regarding the effects of some of these variables on the two main sets of dependent variables: the kinds of attributions made and the kinds of information requested.

Irene T. Mann

One hundred fifty-seven introductory psychology students responded to 24 sentences describing interpersonal events by stating what they thought caused the event and listing the types of information they would want in order to explain the event. The events had been preselected according to ratings made by another student sample who rated the events for likelihood, positivity and whether the response was an action, emotion or opinion. Participants also completed measures of self-monitoring, intolerance of ambiguity and cognitive complexity.

Coding schemes were developed to categorize the attributions and the information requests. Some coding categories were combined for the purpose of analysis. These categories were the dependent variables of interest. Attribution complexity (the number of elements mentioned in the attribution) was also investigated.

Seven attribution categories were examined: Person (P), Stimulus (S), Circumstances (C) and attributions mentioning combinations of these (PC, CS, PS and PCS). The most frequent attributions were CS attributions (27.5%). Participants made more attributions reflecting combinations of causal factors (PC, CS, PS and PCS) than attributions reflecting single factors (P, C, and S), and often wrote complex explanations, some of which described causal sequences. Some attributions contained mentions of interpersonal affect or the type of relationship existing between persons in the event. Cognitively complex participants made more complex attributions than simple participants.

Very few consensus, distinctiveness and consistency information requests were made. Many requests pertained to the Stimulus (43%).

Other categories of information request focused on the Person, interpersonal relationships and affect, external factors and elements in combination. The individual difference variables did not affect the kinds of information requested.

For events involving another, negative events, unlikely events and action events, the focus of both the attributions and information requests was on the Person, whereas for self events, positive events, likely events and emotion and opinion events, the focus was mainly on the Stimulus or Circumstances.

This research indicated that the types of information provided for participants in previous work were not the most important types of information sought by participants and that their free response attributions were often quite complex and displayed content not previously investigated. The preponderance of information requests and attributions pertaining to the Stimulus perhaps indicated that participants viewed a Stimulus explanation as sufficient and they made no inferences regarding the Person. The discussion also focused on differences in the ways the individual events were described and what effect this had on participants' responses, and some of the difficulties encountered in coding the free response attributions and information requests.

To R.M.

and

The Soundproof Room

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CHAPTER I

INTRODUCTION

According to Heider (1958), persons are naive psychologists; they are concerned with the causes of behavior much as the scientist is and undertake analyses of both their own behavior and the behavior of others. They use information regarding behavior, its consequences, and the circumstances under which it occurs to make an attribution or causal statement regarding the behavior. The area of social psychology concerned with how persons view the world in cause and effect terms and draw such causal inferences has been called attribution theory. It is related to work in the person perception area, which has focused on the process by which the perceiver forms an integrated impression of another from diverse attributes of the person.

Heider (1958) provided the basic model for attributional processes. His theory focused on the perceiver's need to make sense of, and impose order on, the social world by assigning causality to either the person or the environment. Harold H. Kelley (1967, 1972a, 1972b, 1973) is one of a number of social psychologists who have contributed to the refinement and systematization of Heider's ideas. While Heider originally stated that the perceiver assigns causality to the person or the environment, Kelley distinguished two "aspects" of the environment: the stimulus and the circumstances.

The present study focused on Kelley's model of the attribution process. It attempted to assess the validity of Kelley's proposed information and attribution categories. Also, this research tried to address objections to the highly structured tasks used by researchers in the attribution area. This was accomplished by allowing participants to respond to descriptions of hypothetical interpersonal events in an unstructured manner. It also examined the effects on the attribution process of different kinds of events and the effects of several individual difference variables. The following presentation of the theoretical and empirical concerns of the present research begins with a brief overview of Kelley's model of the attribution process, moves to a summary of the rationale for the present study and ends with a discussion of the kinds of events that were examined and the individual difference variables of interest.

Kelley's Attribution Model

According to Kelley's (1967, 1972a, 1972b, 1973) model of the attribution process, the attributor arrives at an attribution for an event by noting whether the behavior in question occurs in the presence or absence of certain conditions along three dimensions. The cause for the event will probably be found among the conditions that vary as the event does, i.e., "the effect is attributed to that condition which is present when the effect is present and which is absent when the effect is absent" (Kelley, 1967, p. 194). This observation of covariation between the effect and possible causes is the basic principle of Kelley's model. The use of covariation information assumes that

one has made multiple observations of the effect and its possible causes.

The three dimensions or classes of causes proposed by Kelley are persons, entities and time/modality. The persons dimension includes the actor whose behavior is under scrutiny and other persons. If, for example, the attributor observes that Paul laughs at the clown and no other persons laugh at the clown, then the attributor has information regarding the effect when varying conditions on the persons dimension. Since only Paul emits the behavior and others do not, the perceiver concludes that something about Paul produced the behavior.

The entities dimension represents those entities (or persons) toward which (or whom) the actor responds. If the perceiver notes that Paul laughs at this clown and no other, such information regarding the effect when varying conditions on the entities dimension would probably lead the perceiver to assign causality to something about the clown.

Lastly, the time/modality dimension refers to the setting or context in which the event occurs. If the attributor observes that Paul laughs at the clown when the clown is performing live at the circus and at no other time and not when the clown appears on a TV show, then the attributor has observed variation on the time/modality dimension. Since the behavior does not occur at other times or when the entity is observed in a different modality, the perceiver will probably attribute Paul's laughter to the circumstances.

In summary, attributions are likely to be made to the person when there is variation on the persons dimension (i.e., when the effect is unique to the actor and is not displayed by other persons), to the stimulus or entity when there is variation on the entities dimension (i.e., when the effect occurs only in the presence of that entity and not in the presence of other entities), or to the circumstances when there is variation on the time/modality dimension (i.e., when the effect has not occurred in the past or when the entity appears in a slightly different form or context).

The three kinds of information pertaining to variation on the three dimensions have been labelled consensus, distinctiveness and consistency information. Consensus information refers to whether or not the entity evokes a similar response from other persons. Distinctiveness information indicates whether the effect also occurs when other entities are present. And lastly, consistency information refers to whether or not the response occurs whenever the entity is present and in whatever way it may appear.

When the attributor has information pertaining to all three dimensions and there is covariation between the effect and one class of causes and not the others, then the attributor may be reasonably certain that the effect is due to the dimension along which there is variation. Imagine one were given the following information regarding the event, "Paul laughs at the clown":

No one else laughs at this clown.
Paul laughs at every other clown.
In the past, Paul has laughed at this clown.

From the information given, one would be likely to conclude that the effect is dependent on Paul because of the variation on the persons dimension.

Other information patterns lead to other attributions. Given the following information, one would probably attribute the effect to something about the clown:

Everyone laughs at this clown.
Paul doesn't laugh at other clowns.
In the past, Paul has laughed at this clown.

In this case there is variation on the entities dimension, and an attribution to the clown is made.

Finally, given the following information, one would probably attribute the effect to particular circumstances because there is variation on the time/modality dimension:

No one else laughs at this clown.
Paul doesn't laugh at other clowns.
In the past, Paul has not laughed at this clown.

However, given the following information:

No one else laughs at this clown.
Paul doesn't laugh at other clowns.
In the past, Paul has laughed at this clown;

the attributor would be uncertain whether the effect was due to Paul (because no one else laughs at this clown), or the clown (because Paul laughs only at this clown). The effect might perhaps be due to some unique combination of Paul and the clown. Certain patterns of the three types of information do not imply a simple attribution to the person, entity or circumstances, but rather imply that a combination of causes produced the effect. For the attributor interested in

assigning a single cause for an event, several different explanations may be competing for his or her attention.

Before the perceiver has had an opportunity to make multiple observations of an effect and its possible causes, alternative causes regarding the event may create uncertainty regarding the precise cause of the event. When multiple observations have been made, the perceiver decides which among multiple possible causes is the most plausible cause for an event by applying the covariation principle. However, before a full causal analysis occurs, the attributor may be aware of multiple possible causes, and, according to Kelley, such causes may be combined in basically two ways.

When the attributor believes that either one of two causes could have produced or facilitated the effect, the attributor may try to discount one and accept the other in order to identify a single cause for the event. In this case, the effect is produced by multiple sufficient causes. The effect occurs when either cause is strong, when both are present in moderate strength, but not when both are weak. In this situation the perceiver uses the discounting principle; a possible cause is discounted as the sole cause of the event when there are other possible causes also sufficient to explain the event. For example, if Mr. Jones buys a painting at an art auction, it might be because the painting is a beautiful landscape. However, this cause might be discounted if one also knew that Mr. Jones' sister-in-law painted the landscape. The latter is a sufficient cause for the event and the former cause would be discounted as the sole cause of the

event. In order to check the accuracy of such an attribution, the perceiver would need to conduct a full causal analysis and apply the covariation principle.

In other cases, one of the causes may not be viewed as sufficient to cause the event; both causes may be viewed as necessary. Multiple necessary causes are said to be present when both causes must be operating for an effect to occur. When either is absent the effect does not occur. In such cases, the two causes in combination are necessary to produce the effect.

According to Kelley, application of the discounting principle and notions regarding combinations of causes when one has not made a full causal analysis, i.e., when one does not have consensus, distinctiveness and consistency information, are based on the attributor's notions of possible causes and their interaction from prior causal analyses. These notions or ideas regarding the operation and interaction of causal factors are called schemata. The perceiver may conclude that an effect was due to two causes in combination, by utilizing the multiple necessary schema, or that either one of two causes produced the effect, by utilizing the multiple sufficient schema. After observing the effect and possible causes on multiple occasions and varying conditions for the three possible classes of causes, these conclusions may be supported or contradicted. Such schemata, however, guide the thinking of the attributor when the attributor first ponders the cause of the event and after the perceiver has observed the effect on a number of occasions.

Although Kelley's model is based on the general premise that the attributor takes into account the contribution of multiple causes in explaining behavior, Kelley also maintains that the attributor prefers simpler schemata to more complex schemata. "Complexity" refers to the number of dimensions or causes that people use in their causal schemata. The combining of causes (as in multiple necessary and multiple sufficient schemata), as well as other schemata involving compensatory causes and additivity of effects, are considered complex schemata (Kelley, 1972b). Simple schemata are attributions to single causes, such as attributions to the person, the stimulus or the circumstances. Single cause attributions may be made when the discounting principle is applied or there is covariation between cause and effect on one dimension.

The preference for simpler schemata is reflected in the tendency to stereotype. People sometimes believe that only one cause could produce certain behaviors, e.g., a man who dresses in women's clothes is a homosexual. The inference of personal characteristics from behavior without interpretation of the situation in which the behavior occurs is another example.

This concludes a brief summary of Kelley's model of the attribution process. The following section reviews empirical findings supportive of his basic model.

Research Regarding Kelley's Model

Research assessing Kelley's model has been generally supportive. In the typical attribution experiment, information regarding variation on the three dimensions is provided. High or low consensus information, high or low distinctiveness information and high or low consistency information are presented. High distinctiveness information would indicate variation on the entities dimension and low consensus and low consistency information would indicate variation on the persons dimension and time/modality dimension, respectively. Hansen and Lowe (1976), McArthur (1972), Orvis, Cunningham and Kelley (1975), Ruble and Feldman (1976), Zuckerman (1978), and others presented information in this way and then asked participants to make an attribution regarding the event to the person, the stimulus, the circumstances or some combination of these. Participants responded in predictable ways, e.g., given high consensus, high distinctiveness and high consistency information, most participants attributed the event to the stimulus.

Some of these researchers also found that certain patterns of information did not imply a single cause attribution but instead led to attributions that were combinations of person, stimulus and circumstances. For example, when participants were given high consensus, low distinctiveness and high consistency information, they indicated most frequently that a combination of the person and stimulus caused the event. The information that everyone responds similarly to the stimulus (high consensus) implies that something about the stimulus caused the event, whereas information that the person responds similarly

to other stimuli (low distinctiveness) implies that something about the person caused the event. For other patterns of information, such as low consensus-low distinctiveness-low consistency information and high consensus-low distinctiveness-low consistency information, participants indicated that other combinations of causes (person and circumstances, stimulus and circumstances, person and stimulus and circumstances) best explained the event.

Orvis, Cunningham and Kelley (1975) found support for Kelley's notion that schemata guide a person's thinking in inferring causality. They examined three information patterns: (1) low consensus-low distinctiveness-high consistency information, which implies a person attribution; (2) high consensus-high distinctiveness-high consistency information, which implies a stimulus attribution; and (3) low consensus-high distinctiveness-low consistency information, which implies a circumstances attribution.

According to the authors, the individual interprets each bit of information given to them by relating it to these patterns, i.e., these patterns "serve as templates or standards with which information is compared in order to be interpreted" (p. 606). When one is given only partial information, such as high consensus information, this information fits only the stimulus pattern, and a stimulus attribution would be made. Other information patterns such as high consensus and low distinctiveness information imply alternative interpretations. The high consensus information is related uniquely to the stimulus pattern whereas the low consistency information is related uniquely to the circumstances pattern. In this case, the authors predicted

that an attribution to both the circumstances and the stimulus would be most frequent. Other information patterns were also examined. Results generally supported the authors' predictions, although they noted several biases in the interpretive process.

In a related area, research has indicated that individuals are able to make causal judgments in predicted ways for achievement-related events using the kinds of information outlined by Kelley. Supportive evidence comes from work done in the achievement area regarding attributions for success and failure (Cordray & Shaw, 1978; Frieze & Weiner, 1971; Weiner, Frieze, Kukla, Reed, Rest & Rosenbaum, 1972).

Support for Kelley's model comes mainly from research utilizing paper-and-pencil measures. An issue of concern has been whether results of studies using such measures reflect the attributional process in real life. Since the present research utilized a paper-and-pencil measure, the issue warrants brief discussion.

Paper-and-Pencil Measures

Researchers studying the attribution process have relied heavily on paper-and-pencil measures. In these studies, participants are usually given informational cues, offered a list of causes, and are asked to choose one, rate the importance of each, or rate the extent to which internal or external factors caused the event on a single bipolar scale (Elig & Frieze, 1979). For example, participants are presented with brief stories or vignettes containing the information and may then be asked to indicate a person, stimulus or circumstances attribution (e.g., Ruble & Feldman, 1976). Occasionally participants

witness live behaviors and are asked to make an attribution for the behavior (e.g., Feldman, Higgins, Karlovac & Ruble, 1976) or they participate in some activity and are asked to make an attribution regarding their own actions (e.g., Stephan, 1975). Other researchers who have focused on the use of covariation information or causal schemata by children have, of necessity, not depended heavily on written information (e.g., Karniol & Ross, 1976; Shultz & Butkowsky, 1977; Shultz & Mendelson, 1975; Smith, 1975).

The paper-and-pencil methodology is considered a role-playing technique (Frieze, 1976b). Frieze concluded that, at least for achievement situations, evidence has indicated that differences in information utilization and causal attributions between role-playing and "real" conditions are negligible. Fontaine (1975), however, found that for participants engaging in live behaviors, ego-oriented motives played a larger role in self-attribution than for participants engaged in simulated other-attribution procedures. However, it is not required that responses to paper-and-pencil procedures mirror exactly responses to real-life situations or more involving task situations. McArthur (1972) contends that although the paper-and-pencil method is limited, in real life we are often called upon to say why someone did something, and that we often give causal opinions based on scanty information. Thus, the paper-and-pencil methodology actually taps into an available process.

Fontaine (1975) has made the criticism that the typical structured simulation task and within-subjects design biases participants toward

logic; in this way participants' responses may not mirror their responses in real life situations. However, the present research was specifically concerned with participants' responses to hypothetical events in the context of an unstructured task. The unstructured task was designed so as not to "force" the participants to behave logically. No assumption was made that responses to such a task would mirror real life responses. However, it was thought that responses to such a task would reflect the processes and content of cognitions when persons think about the causes of events. Much of the information we are exposed to daily is in the form of written material (books, magazines, newspapers). And the things we read prompt us to wonder why an event occurred or why someone did something. It was the attribution process at this level that was of concern in the present research.

Limitations of Attribution Research

A large number of studies in the attribution area have followed a single format; this format has several limitations. In the typical experiment, participants are given from one to three informational cues regarding an event and are asked to assign causality by rating the importance of two or three causal factors or by choosing one of these factors. The dependent variable has been the causal inference, i.e., the ratings of the causal factors or the choice of one. The causal factors usually presented have been the person, the stimulus, the circumstances or the person and the situation. For example, McArthur (1972), Orvis, Cunningham and Kelley (1975) and Zuckerman

(1978) gave participants consensus, distinctiveness and/or consistency information at one of two levels and asked them to make attributions regarding a number of hypothetical events. Similarly, Karaz and Perlman (1975) varied distinctiveness and consistency information and outcome in a simulated race track situation, and participants were asked to choose whether the horse, the field of horses or circumstances produced the outcome. Researchers examining attributions for achievement-related events have also typically used this format (e.g., Frieze & Weiner, 1971).

Such a format does not permit one to assess the appropriateness of the informational cues given to participants, i.e., whether persons actively seek and spontaneously use the three kinds of information in making causal attributions, nor does it allow the assessment of whether participants spontaneously make clearcut person, stimulus or circumstances attributions. A number of researchers (Bassili & Regan, 1977; Elig & Frieze, 1979; Fischoff, 1976, McArthur, 1972; Orvis, Kelley & Butler, 1976; Pilkonis, 1977) have commented on the importance of such an assessment. There is a need to assess, using other methods, both the categories of information needed to make an attribution and the categories of causal attribution. Research has shown that people use the three kinds of information differentially to make causal attributions. But are these three kinds of information the only cues or even the most important cues participants need or want in order to explain the event?

Similarly, participants are able to make attributions to the person, stimulus or circumstances. But if these options were not

supplied by the researcher, what kinds of attributions would participants make? One procedure asks participants to rate the importance of several causal factors, and researchers have made assumptions about the orthogonality of the causal factors. They have assumed that if one can make a person (dispositional) attribution regarding behavior then little can be said about the situation as a cause of the behavior. Given this, one would expect an inverse relationship between ratings made of the importance of the person and the situation in producing the event. However, as Monson and Snyder (1977) have noted, situational explanations often imply something about relevant dispositions and vice versa. Pilkonis (1977) and Lowe and Hansen (1976) used separate rating scales and found that person and situational attributions were unrelated.

Some researchers have tried to address these issues. Studies examining free response attributions or attributions made regarding an event with no other informational cues provided are discussed. This is followed by a review of studies examining information search or assessing information requests with information as the dependent variable rather than as the independent variable.

Research Examining Attribution Categories

Frieze (1976a, 1976b) allowed participants to state in their own words why they thought certain achievement-related events had occurred. These explanations were coded, and the four attribution categories typically used in this area of research (ability, effort, luck, and the task) accounted for a large percentage of the attributions made.

However, participants also frequently mentioned other causal factors such as stable effort, other people, mood, good or bad personality and physical appearance.

Smith (Note 1) discussed unpublished work by E. Smith in which participants were allowed to explain events in their own words; the explanations were often long and complex, with mention of several factors or alternative explanations. The explanations often expressed quasi-causal relations such as enabling (necessary preconditions) and gating (a type of enablement, i.e., a state which determines whether or not an action leads to a particular outcome) or content which would not easily fit a researcher's categories.

McArthur (1972) did not allow participants to respond freely but did permit them to designate any combination of the person, stimulus and circumstances attributions. These participants were given no information regarding the event. She found that simple person attributions were more frequent than simple stimulus or circumstances attributions. Overall, however, combinations of person and circumstances, stimulus and circumstances and person and stimulus and circumstances were most frequent, followed by person and stimulus combinations. She interpreted these results as reflecting the tendency for participants to make complex (qualified) attributions when given no information regarding the event. Pilkonis (1977) also found that participants, when given no information regarding events, indicated that the person and the stimulus in combination better explained the events than either alone.

Research Examining Information Categories

Bassili and Regan (1977) found that participants preferred certain types of information when asked to make a person, stimulus or circumstances attribution. Participants were asked to select one of three information types (consensus, distinctiveness or consistency information) as most useful in making a specific attribution. Participants were told, "While watching T.V. John laughed at the comedian," and were asked, "In order to decide with confidence whether something about John caused him to laugh at the comedian, which of the following [three types of information] would you find most useful?" Those participants asked to make an attribution to the person preferred distinctiveness information, those making an attribution to the stimulus preferred consensus information, and those making a circumstances attribution preferred consistency information. Results suggested that persons did seek out particular types of information when given an attributional focus. However, the structured format of this study does not permit conclusions regarding the appropriateness of the three types of information, the exclusiveness of these information categories or if, in fact, given greater freedom, participants would actively seek such information.

Frieze (1976a, 1976b) attempted to evaluate the relevance of certain types of information by allowing participants to respond freely. Instead of providing information in various patterns, participants were allowed to designate in their own words what types of information they might consider useful in order to explain

achievement-related events. Frieze found thirteen identifiable categories of information request, accounting for 75% of the information requests. The cues or information which had been used in earlier studies employing a structured format (percentage of others successful at the task, percentage at similar tasks, percentage success over time) accounted for 62-66% of the cues sought. Certain kinds of information were sought that had not been studied previously, such as mood or state of mind of the person, incentive (importance of the outcome to the person) and the influence of other people (were there other persons who intentionally affected the outcome, were others cheating or did someone allow the person to win).

Finally, a study by Garland, Hardy and Stephenson (1975) also used an open-ended format to study information requests. The authors wanted to know whether information search would be affected when a particular attributional focus was specified. For example, participants were told, "Mary got an A on the chemistry exam," and were asked, "What further information would you require in order to say that Mary is intelligent?" Requests for information were coded into the three information categories (consensus, distinctiveness and consistency) and a residual category. Results indicated that specification of an attributional focus did affect information search. When asked to make a person attribution, participants were concerned with obtaining consistency and distinctiveness information, and when asked to make a stimulus attribution, participants frequently requested consensus information. However, only 23% of the requests

could be coded into the three information categories. Two other "categories" emerged in the residual category: a "person" category, including requests for information regarding dispositional characteristics of the person, and a "stimulus" category, including information requests regarding characteristics of the stimulus.

The Present Study

The studies reported above had limitations in their suitability for assessing the categories of information request and attributions outlined by Kelley. The present study addressed and overcame some of these limitations.

Limitations of Research Examining Attribution Categories

There is a need to evaluate the attribution categories presented as options. The categories used have been "person," "stimulus," and "circumstances," and combinations of these three. There are problems with a procedure which forces participants to choose among these options. Smith (Note 1) has been particularly critical of such procedures both because they impose a particular view of causation on participants and because they limit the amount and content of the explanations which participants might give.

As noted above, several authors have found that participants spontaneously use combinations of causal factors in explaining events. McArthur (1972) and Orvis, Cunningham and Kelley (1975) found that for certain patterns of information participants designated a combination of causal factors as the best explanation. Smith (Note 1) had persons explain events in their own words and these explanations were often

long and complex. Clearly, people are capable of expressing more complex attributions than those allowed by the 3 or 4 options usually given. Complex attributions may not be tapped by the structured format of attribution tasks; it would clearly increase our knowledge of the attribution process to examine the kinds of attributions that participants make when their responses are not defined by the researcher's categories.

Limitations of Research Examining Information Categories

As mentioned earlier, many researchers have emphasized the importance of assessing the types of information persons use in making attributions. As a review of the pertinent literature has indicated, categories of information other than consensus, distinctiveness and consistency information are also important. However, these studies were limited in their generalizability. Even though Frieze and Garland et al. used a free response format to examine information requests, the studies were limited; Frieze's work dealt only with achievement-related events and the work of Garland et al. specified an attributional focus. The present research employed a procedure similar to the one used by Frieze (1976a), but the events included were not limited to achievement-related events and an attributional focus was not specified. Thus, the design of the present study was optimal for determining the types of information that participants freely request in order to explain a variety of hypothetical interpersonal events.

In summary, the purpose of the present research was to assess Kelley's proposed attribution categories and categories of information request and to overcome some of the criticisms made regarding the highly structured tasks used in attribution research. This was accomplished by allowing participants to make attributions and request information in a free response task. Another purpose of this research was to examine the effects of individual differences variables and different kinds of events on the attributions and the information requests made. The kinds of events chosen for examination in the present research are discussed next.

Mediators of the Attribution Process: Stimulus Event Variables

Researchers have identified a number of variables that mediate the attribution process. Much attention has been devoted to actor-observer differences in the attribution process. Attributions regarding one's own behavior may be affected by having more information regarding oneself than about others and the operation of self-protective mechanisms. Other variables such as the outcome of the event (e.g., success or failure) or positivity of the event have been thought to differentially engage self-serving mechanisms and may affect attributions or the assignment of responsibility. Other variables including likelihood of the event and the type of response (action, emotion, opinion, accomplishment) have also been considered.

These variables involve the characteristics of the stimuli presented to participants, i.e., the events for which participants

were to make attributions and request information. The four variables: type of response, likelihood of the event, positivity of the event and whether the event pertained to the self or another were incorporated in the present research so that their effects on the attribution process could be examined.

Self Vs. Other

Jones and Nisbett (1972) proposed that actors have a tendency to attribute causes for their own behavior situationally whereas observers tend to see these same behaviors as reflecting traits or dispositions. Actor-observer differences have been well-documented. (See Monson & Snyder, 1977, for a review of research in this area.)

Actor-observer differences in attributions may be a function of differences in the amount of information available to actors and observers or differences in perceptual focusing (Wegner & Vallacher, 1977). The actor has more information regarding his or her own past behavior than the observer does. The observer may assume that the observed behavior is an example of how the actor behaves generally and may attribute the behavior to the actor's dispositions, whereas the actor may be aware that the behavior is distinctive and not consistent with past behavior.

The actor and observer also have different perceptual focuses. The actor cannot see him or herself and focuses more on the situation or setting. However, the observer focuses more on the actor and the behavior and less on the situation. Thus, the actor is more likely to attribute the behavior to the situation whereas the observer is likely to attribute the behavior to something about the person.

A dispositional attribution also helps the observer predict how the person will behave in the future in a number of situations. A situational attribution does not permit such prediction. The actor, however, does not benefit by making a dispositional attribution since an individual needs to be flexible in responding to new situations; a dispositional attribution does not facilitate such flexibility.

Actors and observers may assign causality differently when the behavior involves good or bad outcomes. In order to preserve feelings of self-worth, actors tend to make an internal attribution for behavior with good outcomes and an external attribution for behavior with bad outcomes. Similarly, self-attributions may be affected by the actor's desire to maintain the notion that he or she has control over outcomes. The observer, however, is presumably not affected by such "biases."

Thus, it was predicted that when participants were explaining the behavior of another they would make more person attributions than when explaining their own behavior. When explaining their own behavior, they would make more stimulus and circumstances attributions than when explaining another's behavior.

Since differences in the types of attributions made by actors and observers were predicted, hypotheses regarding the type of information that would be requested could also be made. Prior research has indicated that when subjects are asked to make a particular attribution, they prefer specific types of information. Results of studies by Bassili and Regan (1977) and Garland et al. (1975) have indicated that in making a person attribution, subjects desire distinctiveness

information and in making a stimulus attribution they prefer consensus information. Zuckerman (1978) has pointed out that consensus information provides information about the stimulus' provocation while distinctiveness and consistency information provide information about the person's proclivity. Thus, it was also hypothesized that participants would request more "person"/distinctiveness/consistency information regarding another than for the self and more "stimulus"/consensus information for the self than for another.

Frieze (1976a) also found that participants requested more information regarding others than for the self when assigning causality for success and failure events. As implied above, the actor already has distinctiveness and consistency information regarding his or her own behavior whereas the observer does not. Thus, it was predicted that participants would request more information for events involving another than for events involving the self.

Likelihood of the Event

The likelihood of an event may affect attributions in several ways. According to Jones and Davis (1965), actions that depart from usual patterns of behavior are interpreted as reflecting unique characteristics and intentions of the person; such actions provide more information regarding the person than engaging in very ordinary behaviors would. Empirical findings have tended to support the notion that highly unlikely or unusual events tend to be attributed to the characteristics of the person (e.g., Jones, Davis & Gergen, 1961), and the person is assigned greater responsibility for the event (Fischer, Note 2).

However, Younger, Earn and Arrowood (1978) have advanced a different notion. They reinterpreted the results of a 1971 study by Shaw and Skolnick which indicated that for a serious accident of a positive nature (i.e., while performing a chemistry lab assignment a student makes a major discovery), the actor was not held responsible; chance was viewed as the explanation. Shaw and Skolnick interpreted their results in terms of defensive attribution. Younger et al., however, suggested that the findings be interpreted in terms of event likelihood, i.e., the positive accident was seen as unlikely by participants and for this reason they rated the event as chance determined.

An unlikely event may yield information about the person or characteristics of the person (Jones & Davis, 1965) or the event may be seen as so unlikely that a circumstantial or luck attribution seems most plausible. Much depends on how unlikely the event is. No predictions were made regarding the effects of likelihood of the event on the types of attribution and information requested because, as indicated above, even within the class, "unlikely events," varying degrees of unusualness may produce different causal attributions.

Uncommon events (Kun & Weiner, 1973) or events of extreme magnitude (Cunningham & Kelley, 1975) usually elicit multiple necessary schemata. For example, Kun and Weiner found that success at a difficult task (an uncommon event) was viewed as requiring both high ability and high effort. Cunningham and Kelley found that for "extreme" interpersonal events (e.g., "Fred completely dominates Bill"), the cause was more often attributed to the characteristics

of both the actor and the target rather than to either alone. In line with these results, it was predicted that a greater number of causes would be given for unlikely events than for likely events and that more complex attributions (combinations of causes) would be made for unlikely than for likely events.

Positivity of the Event

Jones and Davis (1965) have suggested that behavior of low social desirability is more likely to be attributed to the person than behavior of high social desirability. This may be the case when no plausible situational cause for the behavior is available (Taylor & Koivumaki, 1976). Taylor and Koivumaki examined causal attributions for positive and negative behaviors (paying a compliment, talking cheerfully vs. being rude, having a heated argument). They found evidence for a strong positivity effect with persons seen as causing positive behaviors and situations seen as causing negative behaviors. This was the case for both self and others. Thus, it was predicted that more attributions to the person would be made for positive events than for negative events and that more stimulus and circumstances attributions would be made for negative events than for positive events.

In the case of self-attributions, a negative event may engage self-protective mechanisms. Arkin, Gleason and Johnson (1976) and Federoff and Harvey (1976) have shown that attributions to the self or to external factors depend on outcome. Miller and Ross (1975) reviewed pertinent literature and concluded that individuals engage in self-enhancing attributions when they succeed although evidence

did not strongly suggest that individuals engage in self-protective attributions when they failed. Bradley (1978) readdressed the issue and argued strongly for the existence of self-protective biases in the attribution process, i.e., individuals tend to accept responsibility for positive behavioral outcomes and deny responsibility for negative behavioral outcomes. Monson and Snyder (1977) reviewed available evidence and concluded that actors take more credit than observers give them for successful or socially desirable behaviors or outcomes. Also, actors accept less personal responsibility than observers ascribe to them for unsuccessful, socially undesirable behaviors or outcomes.

The research suggests that positivity of the event will have a different effect when one is explaining one's own behavior than when one is explaining another's behavior. The available evidence would seem to suggest the following predictions: More attributions to the person would be made for positive events than for negative events. When explaining their own positive behavior, participants would make more attributions to the person than when explaining the positive behavior of another. Generally, more attributions to the stimulus or circumstances would be made for negative events than for positive events. This would occur more markedly when participants were explaining their own negative behavior than when explaining another's negative behavior.

Type of Response

McArthur (1972) selected sentences pertaining to emotions ("Sue is afraid of the dog"), actions ("Jack contributes a large sum of money

to an automobile-safety fund"), opinions ("Bill thinks his teacher is unfair"), and accomplishments ("Henry gets a birdie on the fifth hole"). McArthur found that accomplishments and actions yielded significantly more person attributions and significantly fewer stimulus attributions than emotions and opinions. McArthur suggested that emotions and opinions are commonly regarded as being elicited by stimuli rather than as being emitted by persons. Actions and accomplishments, on the other hand, are seen as emitted by persons. Cohen (1969) and Paquette (1970) (as reported by McArthur, 1972) have shown that person attributions were more frequent for manifest verbs (acts that are observable and delimited in time) than for subjective verbs (mental states that are not directly observable), and that stimulus attributions were more frequent for subjective verbs than for manifest verbs. The distinction between manifest and subjective verbs parallels the distinction between actions/accomplishments and emotions/opinions.

Zuckerman (1978) utilized the distinction that has been made between behaviors that are completely voluntary (actions) and behaviors that are not completely voluntary (occurrences). He examined the types of attributions made for actions and occurrences. (Occurrences included emotions, accomplishments, opinions and interpersonal responses). Results indicated that actions were more readily attributed to a specific factor than were occurrences, whereas occurrences were more readily attributed to a combination of factors than were actions.

In line with these results, it was predicted that opinions and emotions would be more often attributed to the stimulus than actions, whereas actions would be more often attributed to the person than emotions or opinions (cf. McArthur, 1972). In addition, it was expected that less complex attributions would be made for actions than for emotions or opinions (cf. Zuckerman, 1978).

Mediators of the Attribution Process: Individual Difference Variables

Individual difference variables may also affect the attribution process in a number of ways. Information processing or cognitive variables may affect the kind of information a person seeks out, the amount and kinds of information a person can adequately handle and how this information is processed. Motivational variables may also affect the process; i.e., information search and processing and the kinds of attribution made may be affected by the needs of the individual, such as self-esteem or the need for prediction and control.

Much attribution research in recent years has focused on the differences between actors and observers when making attributions regarding their own or another person's behavior. Jones and Nisbett's (1972) original proposition that actors tend to attribute their actions to the situation or situational factors while observers tend to attribute the same actions to the person, has generated a great deal of research. In accounting for such a difference, researchers have focused on both differences in information processing and motivational differences.

Paralleling this interest in actor-observer differences or, generally, differences in information processing and motivation, has been an interest in individual difference variables which have implications for the attribution process, especially in regard to attributions for success and failure. The effects of internal-external locus of control, self-esteem and level of achievement motivation on information search and causal attributions for success and failure have been examined (Frieze, 1973). Some work regarding the effects of self-monitoring (Snyder & Tanke, 1976) and self-consciousness (Buss & Scheier, 1976) on attributions for self and others has also been completed.

The present research examined three individual difference variables: self-monitoring, intolerance of ambiguity and cognitive complexity. The effects of these variables on the attribution process have not received extensive examination prior to this time. A more detailed discussion of each of these variables is to follow.

Self-Monitoring

One often tends to view the behavior of others as reflecting inner traits or dispositions. Trait assignment enables one to impose order on the social world (Heider, 1958) and allows one greater prediction and control (Kelley, 1972a). Miller, Norman and Wright (1978) have provided some evidence that a dispositional explanation does serve this need for prediction and control.

In recent years, psychologists have addressed evidence indicating that there is little cross-situational consistency in behavior

(Mischel, 1968, 1969, 1973). However, some people may behave consistently across situations whereas other persons may display greater situational variability in their behavior (Bem & Allen, 1974; Campus, 1974; Snyder & Monson, 1975). Some individuals are high self-monitors, i.e., they are sensitive to situational cues as guidelines for their own behavior, whereas other persons (low self-monitors), are not guided by such cues but, instead, seem to be guided from within by dispositions and other personal characteristics. The behavior patterns of the latter individuals are relatively consistent across situations (Snyder & Monson, 1975). A scale of acceptable validity and reliability has been developed to assess individual differences in self-monitoring (Snyder, 1974).

Self-monitoring has been related to how the individual views his/her own behavior. High self-monitors perceived more situational variability in their own behavior than did low self-monitors (Snyder & Monson, 1975). A study by Snyder and Tanke (1976) showed that in a forced compliance counterattitudinal essay writing exercise, low self-monitors agreed with their essays more than did the high self-monitors. Snyder and Tanke accounted for this finding by suggesting that low self-monitors explained their behavior dispositionally while high self-monitors explained their behavior situationally.

What effect does self-monitoring have on the attribution process in explaining another's behavior? It follows from the definition of the variable that self-monitoring identifies individuals who use different cues and who respond to different cues in guiding their

own behavior. The high self-monitor attends to situational cues while the low self-monitor attends less to situational cues and more to internal, personal characteristics. One would predict that in attempting to explain another's behavior, the high self-monitor would also be attentive to situational cues that might be influencing the other person's behavior. The low self-monitor, however, would tend to be less attentive to situational cues when explaining another's behavior. The low self-monitor might assume that the other's behavior is guided by his/her traits or dispositions and not by the characteristics of the situation. Thus, in attending to situational cues, the high self-monitor would be more likely to attribute another's behavior to the situation. The low self-monitor, on the other hand, being less attentive to situational cues, would tend to attribute another's behavior to a disposition or characteristics of the person.

However, there has been evidence pertinent to this issue that would lead one to make the opposite predictions. These predictions follow from the assumption that high self-monitors have a greater need for prediction and control than low self-monitors.

Snyder and Monson (1975) found that high self-monitors not only perceived more situational variability in their own behavior than did low self-monitors but they also perceived more situational variability in their own behavior than they saw in others' behavior. In contrast, low self-monitors perceived less variability in their own behavior than they saw in others' behavior. Berscheid, Graziano, Monson and Dermer (1976) found that high self-monitors were more likely than

low self-monitors to infer dispositions (as measured by extremity and confidence ratings of traits) from the behavior of one they expected to date socially. It was concluded from these results that perceiving the behavior of another in dispositional terms had functional value in facilitating prediction of the other's behavior for the self-monitor; it served as a cue for guiding and managing behavior in interactions with others (Snyder, 1976).

Snyder has argued that attributions regarding another are used by the high self-monitor as cues for guiding and managing their own behavior and self-presentation in interactions with the other. A dispositional attribution implies consistency in the other's behavior across situations; this allows high self-monitors to manage their own behavior in line with stable expectations regarding how the other person is going to behave. Thus, dispositional attributions serve the high self-monitor's need for prediction and control.

Such an interpretation would imply the following predictions regarding the attribution process: as observers, high self-monitors would view the behavior of others in relatively more dispositional terms than would low self-monitors. As perceivers of their own behavior, high self-monitors would view themselves in relatively more situational terms than would low self-monitors. Thus, for attributions involving another, high self-monitors would make more person attributions than low self-monitors. For self attributions, high self-monitors would make more stimulus and circumstances attributions than low self-monitors. It would also be predicted that high

self-monitors would request information that would enable them to make a person attribution, i.e., they would seek more "person" information (see Garland et al., 1975) and distinctiveness information (Bassili and Regan, 1977; Garland et al., 1975) than would low self-monitors.

It should be noted that the predictions for information preference stated above are the opposite of the predictions originally made, i.e., the predictions made following from the definition of self-monitoring and how it affects information selection, and which did not incorporate the need for prediction and control. Results of the present study would indicate which of the two sets of predictions was more accurate.

Intolerance of Ambiguity

Intolerance of ambiguity is defined as "the tendency to perceive (i.e., interpret) ambiguous situations as sources of threat" (Budner, 1962, p. 29). Vannoy (1965), in a factor analysis of a number of measures of complexity, found that Intolerance of Ambiguity (Budner, 1962) loaded on the first factor along with Authoritarianism and Independence of Judgment. This factor suggested the profile of a person who requires a highly ordered existence where uncertainty is at a minimum; he or she must interpret events unequivocally. As Budner (1962) has noted, situations characterized by novelty, complexity or insolubility are threatening to such an individual. The opposite profile is of a person with a highly differentiated perspective who is more able to handle uncertainty and complexity and may even find ambiguity desirable.

Goldberg (1976) has proposed that ambiguity tolerance is related to the need for prediction and control, and that the need for prediction and control is one factor affecting the attribution process. The argument advanced by Goldberg focuses on actor-observer differences. As was mentioned previously in regard to self-monitoring, one may make an internal, dispositional attribution for another's behavior in order to predict and control one's social environment. Making an external attribution for one's own behavior can also be viewed as an expression of the need for prediction and control. Goldberg assumes that the perceiver focuses on the aspect of the situation that is most salient for the prediction and control of future events; the observer makes an attribution to that which commands the most attention. Thus, the observer finds the other person to be the unstable element in the situation, focuses on the person and makes an internal attribution. The actor has more information about the self than about the situation, focuses on the situation and makes an external attribution. The actor is better able to predict and control the social environment by focusing on the situation while the observer achieves the same by focusing on the other person.

The perceiver who is intolerant of ambiguity will view ambiguous situations or information as potential sources of psychological discomfort or threat. The intolerant perceiver may have a greater need for prediction and control in order to escape or avoid such discomfort. Thus, according to Goldberg's arguments, intolerant observers would be more apt to make an internal attribution for another's behavior and

an external attribution for their own behavior than would tolerant observers. The tolerant person would be more apt to scan the entire situation and would be able to attend to situational factors, perhaps in a way analogous to a manipulated "set" to empathize with the actor, which has been shown to produce more situational attributions than person attributions (Galper, 1976; Regan and Totten, 1975). Thus, it was predicted that persons intolerant of ambiguity would make more person attributions than would persons tolerant of ambiguity. Furthermore, persons who are intolerant of ambiguity would request more "person"/distinctiveness/consistency information than would persons who are tolerant of ambiguity, and persons who are tolerant of ambiguity would request more "stimulus"/consensus information than persons who are intolerant of ambiguity.

Cognitive Complexity

Research in the area of person perception or social cognition has dealt with the "processes by which man comes to know and think about other persons, their characteristics, qualities and inner states" (Tagiuri, 1969, p. 429). Cognitive complexity is one characteristic of the perceiver that may affect these processes (Hastorf, Schneider, & Polefka, 1970; Schneider, 1973). Cognitively complex persons and cognitively simple persons perform differently when given impression formation tasks (Mayo & Crockett, 1964; Nidorf & Crockett, 1965; Shrauger, 1967). Differences have also been demonstrated in tasks involving the discrimination of behavioral stimuli and making judgments (Bieri, Atkins, Leaman, Miller & Tripodi, 1966) and

in predicting how others will respond (Shrauger & Altrocchi, 1964). Generally, research has shown that complex persons are able to integrate conflicting information more readily than simple subjects, possess more categories or dimensions by which to differentiate or discriminate among others and are more tolerant of ambiguity than simple persons.

Using Schroder and Streufert's (Note 2) Sentence Completion measure of "integrative" complexity, Streufert, Suedfeld and Driver (1965) found that abstract (complex) participants were less affected by changes in information load than were concrete (simple) participants. In an investigation of attributions for success and failure, Streufert and Streufert (1969) found that both the simple and complex participants accepted more responsibility for success than for failure but that this effect was more pronounced for simple participants than for complex participants.

Other measures of complexity have not been examined in conjunction with the attribution process. Complexity has not been found to be a unitary concept (Gardner & Schoen, 1962; Vannoy, 1965). Widely used tests of complexity, such as Intolerance of Ambiguity, the Sentence Completion Test, the Role Construct Repetory Test (or Rep Test) and Scott's measure of complexity all loaded on separate factors in Vannoy's factor analytic study of measures of complexity. While the Intolerance of Ambiguity scale and the Sentence Completion Test assess to what degree the individual is comfortable with uncertainty and ambiguity, the Rep Test and Scott's measure of complexity focus

on the structure of cognition or the relationships among concepts and their attributes. Scores on these measures of structural complexity have not been investigated in conjunction with the attribution process.

Bieri's (1966) modified version of the Role Construct Repetory Test (or Rep Test) assesses the individual's complexity in the interpersonal realm and was derived from Kelley's (1955) personal construct theory. Specifically, it assesses differentiation, or how well the individual discriminates among others. Two persons are distinguishable because they possess different attributes or characteristics. The Rep Test taps the individual's use of bipolar constructs to distinguish among persons.

Predictions regarding the effects of complexity, as measured by Bieri's Rep Test, on the attributions to be made were difficult to formulate. It was not known whether results for this variable would coincide with the results for the intolerance of ambiguity variable. However, it was predicted that complex subjects would request more information than simple subjects, because of their capacity to deal with more (and often conflicting) information than simple persons. It was also predicted that complex subjects would make more "complex" (combinations of causes) attributions than simple subjects.

Summary of Predictions

The purpose of the present research was to assess Kelley's proposed information and attribution categories in a manner that overcame criticisms of research in this area that past reliance on structured tasks had generated. Participants were given descriptions

of events and were allowed to request information regarding the events and write explanations for the events in their own words. It was expected that the attributions and information requests would be examined and that coding schemes would be developed to define the requests and attributions made. In addition, it was expected that three individual difference variables (self-monitoring, intolerance of ambiguity and cognitive complexity) would affect the types of attributions made and information requested. The effects of different kinds of events were also of interest. The events varied on four dimensions: positivity, likelihood, the type of response and whether the event pertained to the self or another. A review of the relevant literature led to the following predictions regarding the kinds of attributions and information requests that would be made.

1. In the absence of any information regarding the event, participants would make more attributions that were combinations of causal factors than attributions representing a single causal factor (McArthur, 1972; Pilkonis, 1977). In regard to the attributions reflecting a single causal factor, it was predicted that more attributions to the person would be made than attributions to the stimulus (Cohen, 1969, Paquette, 1970; as reported by McArthur, 1972; McArthur, 1972).

2. When explaining the behavior of another, participants would make more person attributions than when explaining their own behavior. When explaining their own behavior, they would make more stimulus and circumstances attributions than when explaining the behavior of another.

3. A greater number of attributions would be made for unlikely events than for likely events. More complex attributions would be made for unlikely events than for likely events.

4. More attributions to the person would be made for positive events than for negative events. When explaining their own positive behavior, participants would make more person attributions than when explaining the positive behavior of another. More attributions to the stimulus or circumstances would be made for negative events than for positive events. When explaining their own negative behavior, participants would make more stimulus or circumstances attributions than when explaining the negative behavior of another.

5. Opinions and emotions would be more often attributed to the stimulus than actions. Actions would be more often attributed to the person than emotions or opinions. Less complex attributions would be made for actions than for emotions or opinions.

6. Persons who are intolerant of ambiguity would make more person attributions than persons who are tolerant of ambiguity.

7. Complex persons would make more complex attributions than simple persons.

Predictions regarding the information requests were as follows:

1. Participants' requests for consensus, distinctiveness and consistency information would not constitute the majority of requests; other categories of information request would be identifiable (Garland, Hardy & Stephenson, 1975).

2. Participants would request more information for events involving another than for events involving the self.

3. Participants would request more "person"/distinctiveness/consistency information regarding another than the self, and more "stimulus"/consensus information regarding the self than another.

4. Persons who are intolerant of ambiguity would request more "person"/distinctiveness/consistency information than persons who are tolerant of ambiguity; persons who are tolerant of ambiguity would request more "stimulus"/consensus information than persons who are intolerant of ambiguity.

5. Complex persons would request more information overall than simple persons.

CHAPTER II

METHOD

Overview

Data collection consisted of two phases: (1) the generation and selection of the stimulus events, and (2) the administration of the free response task. During the first phase, a number of events were generated; these events were rated on several dimensions by a sample of undergraduate students. The ratings of the events determined their suitability for use in the free response task. The free response task was administered to another sample of undergraduate students, and responses from these participants were the primary focus of the present research. The discussion to follow focuses on the two phases in turn.

Generation and Selection of Stimulus Events

Generation of Stimulus Events

The free response task was to contain 24 events; eight would be typed as action events, eight as emotions and eight as opinions.[1] The eight statements for each type of event were to reflect two degrees of positivity (positive and negative), two degrees of likelihood (likely

[1]The present research did not examine accomplishments. Extensive work has been done on attributions for achievement-related events by Frieze and Weiner. Also, it was expected that events describing accomplishments would be uniformly rated positively. For these reasons, accomplishments as one type of event were not examined.

and unlikely) and would pertain to either the self or another. Thus, 12 different events of the following types were required:

Action--positive--likely
Action--positive--unlikely
Action--negative--likely
Action--negative--unlikely
Emotion--positive--likely
Emotion--positive--unlikely
Emotion--negative--likely
Emotion--negative--unlikely
Opinion--positive--likely
Opinion--positive--unlikely
Opinion--negative--likely
Opinion--negative--unlikely

The 12 events would then be presented with either another person as the subject or "you" as the subject, indicating, in the latter case, that the participant was to respond as if he or she were the actor.

Several graduate students helped generate an initial pool of events. These persons were asked to generate sentences describing events with a person as the subject of the sentence and covering a range of events in terms of positivity, likelihood and type of event described (see Appendix A). After the events were generated, it was decided that they would all be interpersonal events, i.e., another person would be involved in the event. The events were sorted in a rough way according to type, positivity and likelihood. Some events were rejected because there were too many of that kind or because they were not clearly of one kind or another. Additional statements were generated by the author and her adviser to insure that all kinds of events were represented. Positive unlikely and negative likely events were generally underrepresented in the sentences spontaneously offered by the graduate students assisting in this phase. In all, sixty events

were generated in order to be rated by a sample of persons similar in age and interests to the sample which would receive the free response task.

Participants

The participants were 104 introductory psychology students at Michigan State University who participated for credit. Of the 101 participants who indicated their sex, 72 were females and 29 were males.

Procedure

Each participant received a booklet containing 30 of the 60 events. The 60 events had been grouped according to kind and numbered consecutively. The even numbered events appeared in one booklet and the odd numbered events appeared in another booklet. (The 60 events tested appear in Appendix B.) Fifty-three participants (41 females and 11 males; 1 person did not indicate his/her sex) rated the 30 events in Booklet 1, and 51 participants (31 females and 18 males; 2 persons did not indicate their sex) rated the 30 events in Booklet 2. The event appeared at the top of the page followed by questions regarding likelihood of the event (for oneself and for others), positivity of the event and whether the event was an action, emotion, opinion or other (see Appendix C). These questions appeared in the same order for each event. Likelihood was rated on a 7 point scale from "very unlikely" to "very likely." Positivity ratings were made on four 7 point scales: Bad-Good, Unpleasant-Pleasant, Awful-Nice and Negative-Positive. Ratings on the four scales were summed

(range 4-28) with a high rating indicating greater positivity. There were 4 random orders of the 30 events for each booklet.

Selection of the Stimulus Events

The percentage of participants marking each event as an action, emotion, opinion or other, the mean likelihood rating,[2] and the mean positivity rating were examined for each of the 60 events. In most cases, one option among "action," "emotion," "opinion" or "other" was marked by a clear majority of the participants and generally agreed with the initial, rough categorization. Generally, the positivity and likelihood ratings also matched the initial categorization of events. However, the positivity and likelihood ratings were positively related ($r = .34$, $p < .001$ for Booklet 1 and $r = .29$, $p < .001$ for Booklet 2).[3] This made it difficult to establish rigid cutoff points to aid in selection. For example, a mean likelihood rating slightly below the midpoint was the lowest that could be found for a positive unlikely event while for a negative unlikely event a much lower and more satisfactory mean likelihood rating could be found. The positivity and likelihood ratings of the events were examined relative to each other and the "best" events chosen for inclusion

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[2]Participants responded to two questions: "How likely is this event to occur?" and "How likely is it that you would be in this situation?" Ratings from the former question were examined for the purpose of selecting the events to be included in the free response task.

[3]The ratings regarding likelihood of the event for oneself were more highly related to positivity ratings ($r = .47$, $p < .001$ for Booklet 1 and $r = .50$, $p < .001$ for Booklet 2) than were the likelihood ratings for the general other.

in the free response task. These events and their ratings appear in Appendix D.

Administration of the Free Response Task

Participants

Participants were 185 introductory psychology students at Michigan State University who participated for credit. Responses from 28 participants were excluded from further examination because of a great deal of missing data or failure to follow instructions.[4] Of the remaining 157 participants, 103 were females and 54 were males.

Procedure

Participants filled out a 24 page booklet containing 24 different events. The 24 events varied in terms of positivity, likelihood, type of event (action, emotion and opinion) and whether they pertained to the self or another (see Table 1). There were 9 random orders of the events with the restrictions that self and other events appeared alternately and that the self and other presentation of the same event did not appear consecutively. Each event was followed by two questions with a half page of empty space for each response:

1. State why you think this event occurred.
2. List any information which would help you better know why this event occurred.

Eighty-one booklets contained the two questions in the above order and 76 contained the two questions in the opposite order. Additional instructions were required for some participants (see Appendix E).

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[4]Participants with only a few missing data points were not excluded.

Table 1

List of Stimulus Events

Kind[a]	Event
P-L-A-O	1. Jim let his friend stay with him a few days.
P-L-A-S	2. You let your friend stay with you a few days.
P-U-A-O	3. Sue loaned her friend $4,000 to help with her emergency medical bills.
P-U-A-S	4. You loaned your friend $4,000 to help with her emergency medical bills.
N-L-A-O	5. Joe told his roommate to shut up.
N-L-A-S	6. You told your roommate to shut up.
N-U-A-O	7. Sue smashed all of her roommate's records.
N-U-A-S	8. You smashed all of your roommate's records.
P-L-E-O	9. Shirley is happy to hear Fred's news.
P-L-E-S	10. You are happy to hear Fred's news.
P-U-E-O	11. Tom worshipped his professor.
P-U-E-S	12. You worshipped your professor.
N-L-E-O	13. Jan is jealous of her husband's secretary.
N-L-E-S	14. You are jealous of your husband's (wife's) secretary.
N-U-E-O	15. Judy is terrified of her father.
N-U-E-S	16. You are terrified of your father.
P-L-B-O	17. Joe believes that the child should be praised.
P-L-B-S	18. You believe that the child should be praised.
P-U-B-O	19. Gladys believes that her mother has never told a lie.
P-U-B-S	20. You believe that your mother has never told a lie.
N-L-B-O	21. Fred thinks his professor grades too hard.
N-L-B-S	22. You think your professor grades too hard.
N-U-B-O	23. Sally believes that her roommate deserved the crippling accident.
N-U-B-S	24. You believe that your roommate deserved the crippling accident.

[a]P = positive; N = negative; L = likely; U = unlikely; A = action; E = emotion; B = opinion; O = other; S = self.

Participants then received a booklet containing several personality measures and computer scored answer sheets. The measures were Intolerance of Ambiguity (Budner, 1962), the Self Monitoring scale (Snyder, 1974) and the Rep Test measure of complexity (Bieri et al., 1966). The Intolerance of Ambiguity scale is a 16 item scale. Participants responded to items on 7 point scales from "agree strongly" to "disagree strongly." High scores indicated greater intolerance of ambiguity. The Self Monitoring scale contains 25 true-false items. High scores indicated high self-monitoring. Coefficient alpha for the Intolerance of Ambiguity scale for this sample was .47[5] and for the Self Monitoring scale, .69.

In completing the complexity measure, participants thought of four persons they knew fitting the following role descriptions: best friend, person you dislike, person you'd like to work with and person you would not like to work with. These four persons were rated on 24 seven point scales (see Appendix F for instructions and rating scales used). The order of the 24 scales was the same for each person rated. The order of the role figures was random.

The complexity score was derived by comparing the first scale rating with ratings on each of the other 23 scales, the second scale rating with each of the other ratings except the first, and so on, yielding 276 comparisons for each role figure and 1,104 comparisons

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[5]Two of the items from the Intolerance of Ambiguity scale were inadvertently omitted from the measure and realization of the error came only after all data had been collected. Thus, the reliability of 14 items for the sample was somewhat lower than the alpha of .49 on 16 items reported by Budner (1962).

for the set of four role figures. A score of 1 was assigned when there was exact agreement of the ratings. This number was then divided by the maximum number of possible redundancies in the set. A low score indicated less redundancy in ratings or greater complexity, while a high score indicated greater redundancy in ratings.

Lastly, participants responded again to the 24 events by answering questions regarding likelihood of the event, positivity of the event and whether the event pertained to an action, emotion or opinion. For events pertaining to the self, the question, "How likely is this event to occur?" was omitted. There were several random orders of the events with the restrictions that self and other events appeared alternately and that the self and other presentation of the same event did not appear consecutively. The mean ratings for the 12 unique events included in the study appear in Appendix D. These ratings matched closely the ratings obtained from the participants who initially rated the events in the selection phase.

CHAPTER III

RESULTS

Attributions: The Coding Scheme and Categories

The attributions were examined and coded with Kelley's proposed categories in mind. Kelley's model suggests seven types of attributions: person (P), stimulus (S), circumstances (C), person and stimulus (PS), person and circumstances (PC), stimulus and circumstances (CS), and person, stimulus and circumstances (PCS). The typical attribution study in which an event and informational cues are supplied allows the respondent to attribute the cause of the event to the person, the stimulus, the circumstances or some combination of these. Researchers have not examined these combinations in detail and certainly no study has examined how these attributions might be expressed in a free response task.

Examination of responses proceeded with these seven types of attributions as response categories. Another potential category of response was noted and was labeled "Relational" (R). Such responses contained mention of affect, mutual affect or the type of relationship existing between persons in the event. One might expect mentions of this sort since all of the events were interpersonal events, i.e., there was at least one person other than the actor mentioned in the event. The separation of the relational category was supported by

the fact that in multidimensional scaling solutions for similarity ratings of causes of negative behavior in close interpersonal relationships, Passer, Kelley and Michela (1978) found that positive vs. negative attitude toward the person was an important dimension.

The stimulus category (S) was further divided into S1 and S2; S1 was the Stimulus Person in the event and S2 was the Stimulus Object if one were present. (In only one event, "Jan is jealous of her husband's secretary," was the S2 a third person. In this case, the secretary was designated as S2 in order to be consistent with the coding of other events such as "Sue smashed all of her roommate's records," or "Shirley is happy to hear Fred's news," where the records and the news, respectively, were designated as S2's.) The Relational category (R) was further divided into R1 and R2. R1 referred to a relationship or affect between P and S1 while R2 referred to a relationship or affect involving S2; i.e., P and S2 or S1 and S2. In addition, the R1 and R2 codings were either directional or nondirectional. A directional comment referred to one person's feelings for another, such as "Shirley likes Fred," or a person's feelings for an object(s), "Sue hates the records." A nondirectional comment referred to the state of the relationship or the type of relationship between two people, such as "They get along well," or "They're going steady."

The initial coding was performed using almost all possible combinations of the basic categories and subcategories described above.[6]

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[6]A nondirectional R1 coding could not be accompanied by a directional R1 coding. For example, if there was mention of the feelings of one person for another and the type of relationship, a nondirectional R1 was coded, with the former mention subsumed under the reference to

The coding procedure was similar to a content analysis. The first step was to note whether the attribution focused on the Person or some element external to the Person. If the focus was external to the Person, it had to be determined whether there was mention of the Stimulus Person (or Object) or the presence of a particular set of Circumstances or both. The attribution could focus on the Person and Stimulus Person in combination or the Relationship between these two persons. If the response introduced additional external elements or focused on a particular act or behavior that apparently occurred only once, a C was assigned to the attribution in order to capture the circumstantial nature of the response. If the response focused on stable and long term factors such as consistent behaviors or trait-like characteristics, no C was assigned to the coding designation.

In some cases, rules of a rather specific nature had to be adopted in order to code the attributions. The main difficulty lay in insuring that a given category for one event was comparable to the same category for another event. To insure more accurate assignment of attributions to categories, coders were not blind to the event in question when coding the responses. Percentage agreement among three coders computed on the basis of coding of 15 protocols chosen at random was .80. (See Appendix G for a discussion of the coding procedure.)

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the overall relationship. The same rule applied in the coding of R2's, except for one event, "Jan is jealous of her husband's secretary." For this event only, a directional R2 coding could be accompanied by a nondirectional R2 coding, e.g., if a participant mentioned the type of relationship between S1 and S2 as well as P's feelings for S2.

Only the first attribution made by each participant was coded for the purpose of analysis although the number of different explanations given for each event was also noted. When participants wrote a number of sentences in paragraph form, the response was viewed as one explanation, was coded accordingly and was counted as one attribution. When separate sentences appeared on the page (usually each beginning at the left margin or beginning with a dash at the left margin) and were unrelated in content, only the first was coded. The code for any one attribution reflected one of the basic categories (e.g., P, C, S1, S2, R1, etc.) or combinations of these categories (e.g., PCS, PCR, CSR, etc.).

Most of the attributions which were coded as combinations of the basic categories represented dual causality, e.g., a characteristic of P and a characteristic of S caused the event. A lesser number were attributions in which there was an interaction of elements (or shared causality), e.g., "Her father looks scary to her." McArthur (1972) distinguished shared causality and dual causality. In shared causality, a combination of the person and situation produces a unique effect. In dual causality both the person and situation together produce the effect. In the present study, the distinction between these two types of attributions was not made.

Some attributions represented multiple sufficient schemata, i.e., either X or Y caused the event. For the purpose of analysis, only the cause preceding the first "or" was coded, and the entire attribution was counted as one attribution. However, each attribution

of this type was designated as such. Of the 3,678 codable attributions made by participants in the present study, 127 or 3.4% represented multiple sufficient schemata.

In coding the attributions, a total of 114 different coding categories were used. Many of these categories were used by respondents only a few times and in regard to only a few events. The coding categories were combined for the purposes of analysis. Since not all events referred to a stimulus object, the S2 and R2 codings did not apply for all events. The S2 and R2 categories were eventually combined with the S1 and R1 categories, respectively. The directional R1 and R2 categories were combined with the P and S categories, respectively. If the explanation involved a statement of P's feelings for S1 or S2, the affect was seen as emanating from P and the attribution was combined with attributions in the P category. Alternately, if the explanation described S1's feelings for P or S2 (or S2's feelings for S1 or P), the affect was seen as emanating from S1 (or S2) and the attribution was combined with attributions in the S category. Nondirectional R1 attributions were combined with attributions in the PS category. Finally, nondirectional R2 attributions (occurring only for the event, "Jan is jealous of her husband's secretary") and S1S2 attributions were combined with attributions in the S category. Thus, the initial 114 categories were eventually reduced to seven categories: P, C, S, PS, PC, CS, and PCS.

To preserve some of the information contained in the time-consuming content analysis of responses, complexity of the attribution

was also examined. The complexity of the attribution was the number of dimensions or elements present in the attribution as originally coded. For example, a PCS1S2 attribution would have 4 elements whereas a PC attribution would have 2 dimensions. (It should be noted that the combining of categories described above did not combine attributions of exactly equal complexity.)

Frequencies of Attribution Categories

In the absence of information regarding the event, people tend to attribute the event to combinations of causal factors rather than to single factors (McArthur, 1972; Pilkonis, 1977). Results of the present study comformed to this expectation. Attributions reflecting combinations of factors (PC, CS, PS, PCS) accounted for 70% of all attributions made, whereas single factor attributions (P, C, S) accounted for 30% of all attributions. More specifically, the majority of attributions were CS attributions (27.5%) and PCS attributions (24.5%). PS attributions accounted for 13% of all attributions. Twelve percent were Person attributions and 12% were Stimulus attributions. PC attributions (5%) and Circumstances attributions (7%) each accounted for a small percentage of all attributions made (see Table 2). Less than 1% (55) of all attributions were uncodable. Of the attributions made, the mean number per event was 1.29.

Participants were generally capable of writing long and often complex attributions. As indicated above, the majority of attributions reflected combinations of causes rather than single causes. Of the

Table 2

Number of Attributions Made in Each Attribution Category for Each Event

Event	P	C	S	PC	PS	CS	PCS
1	20	30	5	11	15	54	22
2	14	30	9	7	16	50	30
3	25	1	1	8	24	39	59
4	14	0	2	7	11	41	80
5	10	6	9	11	6	41	72
6	6	1	14	7	2	43	82
7	47	9	0	8	27	21	43
8	21	19	2	8	12	45	41
9	19	1	29	0	36	41	26
10	11	0	38	2	44	43	16
11	10	12	22	16	36	19	41
12	9	5	46	5	39	27	22
13	26	10	25	2	40	26	27
14	13	7	24	3	33	51	22
15	3	4	54	6	14	52	23
16	0	2	45	10	16	44	37
17	18	7	4	12	6	60	49
18	16	7	10	3	3	73	43
19	31	18	15	4	26	46	12
20	14	18	16	2	13	70	11
21	21	38	5	41	4	12	34
22	9	24	21	14	6	22	57
23	49	0	12	0	27	35	30
24	20	1	25	0	15	55	22
Totals	426	250	433	187	471	1,010	901
% of total	11.6	6.8	11.8	5.1	12.8	27.5	24.5

Note. Grand total = 3,678.

codable attributions made, the average complexity of attribution (the number of dimensions or elements in the attribution) was 2.01. Twenty-eight percent of all attributions involved three causal factors or more.

Attributions: The Predictions

There were a number of predictions made regarding the effects of the stimulus event variables (likelihood, positivity, type of response, self vs. other) and the individual difference variables (self-monitoring, intolerance of ambiguity, cognitive complexity) on the types of attributions made. In order to test these predictions, the data were prepared and analyzed in the following manner.

Analysis

The data for analysis were for each participant for each of 24 events, (1) the presence or absence of an attribution for each of the seven categories of attribution: P, C, S, PS, PC, CS and PCS; (2) the presence or absence of a multiple sufficient attribution; (3) the number of attributions made; and (4) the complexity of the attribution (as described above). In addition, each participant had a score on three measures: intolerance of ambiguity, self-monitoring and cognitive complexity.

For each participant, counts of the number of attributions made in each of the 7 attribution categories for all 24 events, for the 12 positive events, for the 12 negative events, for the 12 likely events, and so on, were performed and aided in testing some of the predictions. Numbers of attributions in each category for each type

of event for each participant were used in the calculation of the means which are reported. T-tests were used for determining statistical significance.

Cochran Q's were performed on the frequencies across the 24 events for each attribution category to ascertain whether the frequencies were the same over all the events or differed significantly among themselves. The Cochran Q is an extension of the McNemar test of significant changes to three or more matched sets of frequencies (Siegel, 1956).

However, the Cochran Q did not allow examination of the stimulus event variables (positivity of the event, likelihood of the event, etc.) and their effects on the number of attributions made in each attribution category. Separate analyses of variance were performed using each of the attribution categories, the number of attributions, multiple sufficient attributions and complexity of attribution as dependent variables. The design in each case was a 2 (positive-negative) X 2 (likely-unlikely) X 3 (action-emotion-opinion) X 2 (self-other) completely within-subjects ANOVA.

Median splits were performed on the scores for each of the three individual difference measures, creating two groups of participants, those scoring high and those scoring low on each variable. Five-factor ANOVAs with each of the individual difference variables in turn as a two-level between-subjects factor were also performed on each of the dependent variables.

For all ANOVAs, participants with missing data points were deleted.[7] In addition, data from several randomly chosen participants were excluded to insure equal cell frequencies. Thus, the ANOVAs were performed on data from 130 participants. An analysis of variance, although not entirely appropriate for dichotomous data,[8] does allow one to draw conclusions regarding the effects of the stimulus event variables on the number of attributions made in each category. All other analyses were based on data from 157 participants.

The Predictions Involving Stimulus Event Variables

Some of the predictions regarding the stimulus event variables and the individual difference variables were stated in terms of P, C and S attributions, but predictions regarding other types of attributions (PC, CS, PS, PCS) were not made. With the coding scheme adopted,

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[7]All participants with missing data were deleted from the ANOVAs because BALANOVA, the one software package on the CDC 6500 system which was capable of handling repeated measures designs, would not allow missing data points for these types of designs.

[8]Lunney (1970) has argued that an ANOVA may be performed on dichotomous data without distortion of effects when the proportion of responses in the smaller response category is equal to or greater than .2 and there are at least 20 degrees of freedom for error, or when the proportion of responses in the smaller response category is less than .2 and there are at least 40 degrees of freedom for error.

D'Agostino (1971) preferred to focus on the homogeneity of variance issue and has suggested that the sample proportions for the cells should lie between .25 and .75 and there should be at least 20 degrees of freedom for error. If sample proportions are below .3 and beyond, or range from below .7 to 1.00, the author suggests an arcsin transformation. D'Agostino agrees that Lunney's rule of thumb applies when sample proportions are below .30 and do not have a wide range of variability.

In this study the proportions for each of the 24 events were below .3 and the degrees of freedom for error were certainly greater than 40, and there was perhaps some justification for the ANOVAs.

one would expect the results for P and PC attributions to be similar, and one would also expect the results for S and CS attributions to roughly coincide. The discussion of these predictions introduces the results for PC and CS attributions and uses them to evaluate the predictions.

Of the hypotheses advanced regarding the effects of the stimulus event variables, the one receiving the strongest confirmation involved the distinction between events pertaining to the self and events pertaining to another. It was predicted that participants would make more Person attributions for events involving another than for events involving the self, whereas more Stimulus and Circumstances attributions would be made for self events than for events involving another. The number of P and S attributions made for self and other events clearly supported the prediction. The number of C attributions made for self and other events did not support the prediction.

The mean number of P attributions made for self events was .99 and for other events, 1.8. (The overall frequencies appear in Table 3.) This difference was significant ($t\ (134) = 7.34$, $p < .001$). A similar pattern of means held for the number of PC attributions, also. The mean number of S attributions for self events was 1.52 and for other events, 1.10. This difference was also significant ($t\ (134) = 3.56$, $p < .001$). A similar pattern of results held for CS attributions. Thus, participants made more P and PC attributions for other events than for self events and more S and CS attributions for self events than for other events, clearly supporting the prediction.

Table 3

Number of Attributions Made in Each Category
by Stimulus Event Variables

	P	C	S	PC	PS	CS	PCS
Positive events	201	129	197	77	269	563	411
Negative events	225	121	236	110	202	447	490
Likely events	183	161	193	113	211	516	480
Unlikely events	243	89	240	74	260	494	421
Actions	157	96	42	67	113	334	429
Emotions	91	41	283	44	258	303	214
Opinions	178	113	108	76	100	373	258
Self events	147	114	252	68	210	564	463
Other events	279	136	181	119	261	446	438
Total	426	250	433	187	471	1,010	901

The predictions made regarding the effects of positivity of the event and the type of response (action, emotion, opinion) received only partial confirmation. The results for type of response are discussed first, followed by a discussion of the results regarding positivity of the event.

It was hypothesized that opinions and emotions would be more often attributed to the Stimulus than would actions, and that actions would be more often attributed to the Person than emotions or opinions. The hypothesis regarding the relative frequency of Person and Stimulus attributions for actions, emotions and opinions was confirmed for Stimulus attributions but received only partial confirmation for Person attributions.

The mean number of P attributions for actions, emotions and opinions were, respectively, 1.01, 0.60 and 1.15. (The overall frequencies appear in Table 3.) The difference between actions and emotions was significant ($t\ (143) = 3.84$, $p < .001$), as was the difference between opinions and emotions ($t\ (137) = 4.82$, $p < .001$). The difference between actions and opinions was not significant ($t\ (142) = .99$, n.s.). Participants made significantly more P attributions for actions than for emotions but there was no difference in the number of P attributions made for opinions and actions.

The prediction that emotions and opinions would be more often attributed to the Stimulus than would be actions was clearly confirmed. The mean number of Stimulus attributions for actions, emotions and opinions were, respectively, 0.28, 1.73 and 0.65. All differences were significant.

As was the case for P attributions, more PC attributions were made for opinions (.52) and actions (.41) than for emotions (.28). However, the means for actions and emotions did not differ significantly. Results for the number of CS attributions did not parallel results for S attributions. Whereas more S attributions were made for emotions and opinions than for actions, more CS attributions were made for opinions (2.4) than for actions (2.1) or emotions (1.9).

It was also hypothesized that less complex attributions would be made for actions than for emotions or opinions. This hypothesis was not supported. More complex attributions were made for actions (2.2) than for emotions (2.0) or opinions (1.9). All differences were significant (t tests, $p < .05$).

It was predicted that participants would make more Person attributions for positive events than for negative events, and more Stimulus and Circumstances attributions for negative than for positive events. This prediction was not strongly confirmed for C and S attributions and the pattern of results was opposite to prediction for P attributions.

The mean number of P attributions for positive events was 1.34 and for negative events, 1.47. This was opposite to prediction although this difference was not significant ($t\ (134) = .96$, n.s.). The mean number of PC attributions made for positive and negative events followed a similar pattern, and the difference between means was significant ($t\ (134) = 2.31$, $p < .05$). Thus, contrary to prediction, participants tended to make more P and PC attributions for negative events than for positive events.

In line with prediction, participants tended to make more S attributions for negative events (1.41) than for positive events (1.20), although this difference was not significant ($t(134) = 1.65$, n.s.). The pattern of results for CS attributions did not parallel the results for S attributions. Participants made more CS attributions for positive events (3.47) than for negative events (2.79). These two means differed significantly ($t(134) = 3.50$, $p < .001$). The mean number of Circumstances attributions for positive and negative events did not differ significantly.

In summary, participants did tend to make more S attributions for negative events than for positive events, but this was not the case for C or CS attributions. Contrary to prediction, participants tended to make more P and PC attributions for negative events than for positive events.

The interaction between positivity of the event and the self-other distinction was also of interest. It was hypothesized that attributions to the Person would be more likely to occur when events pertained to the self and were positive than when they pertained to others and were positive. There was no support found for this. The ANOVA on the number of P attributions showed a significant interaction for positivity of the event and the self-other factor. More Person attributions were made for negative events involving another (.164) and least for negative events involving the self (.077). For positive events, more Person attributions were made for another (.133) than for the self (.086). Although the results for positive events did not

support a self-enhancement explanation, the results for negative events could be interpreted in this way.

It was also predicted that more attributions to S and C would be made for negative events than for positive events and this would be stronger for self events than for events involving another. There was tentative support for this in terms of S attributions but not for C attributions. Although the interaction was not significant, there was a tendency for participants to make more S attributions for negative events involving the self (.133) than for negative events involving another (.105), although equally often, S attributions were made for positive events involving the self (.118). This result can also be interpreted in self-enhancement terms. The interaction of positivity of the event and the self-other factor was not significant for C attributions and the pattern of results differed markedly from the results for S attributions.

In summary, although the results did not support the predictions made, the results still appeared to support a self-enhancement explanation, i.e., persons tended to externalize negative behaviors and accept the credit for positive behaviors.

Finally, the hypothesis that participants would make more complex attributions for unlikely events than for likely events was not confirmed and the pattern of results was opposite to prediction. The ANOVA on complexity of attribution showed a significant main effect for likelihood of the event ($F\ (1,128) = 9.10$, $p < .005$).[9] However,

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[9]Since BALANOVA, the software package used to perform the ANOVAs, would not accept missing data for this type of design, the complexity scores for uncodable attributions were designated as 1's.

participants made significantly more complex attributions for likely events (2.07) than for unlikely events (1.98).

It was also predicted that participants would make a greater number of attributions for unlikely events than for likely events. Again, this prediction was not confirmed. Participants made about the same number of attributions for likely events (1.28) as for unlikely events (1.24).

The Predictions Involving Individual Difference Variables

Predictions were also made regarding the effects of intolerance of ambiguity and cognitive complexity on the attributions made. There was strong support for the prediction regarding the effect of cognitive complexity; however, intolerance of ambiguity did not affect attributions in predicted ways.

It was hypothesized that complex persons would make more complex attributions than would simple persons. This was confirmed. The ANOVA on complexity of attribution with complexity of the participant as a two level factor showed a significant main effect for cognitive complexity ($F\ (1,128) = 5.527$, $p < .05$). The mean complexity of attribution for simple participants was 1.944 and for complex participants, 2.115.

Attributions: Additional Results

Sex Differences

Sex differences in the mean number of attributions made in each category were examined. The only significant difference was in the number of Circumstances attributions. Males made more Circumstances

attributions (1.92) than did females (1.27), and this difference was significant ($t(133) = 2.41$, $p = .017$). There were no significant differences in mean scores for males and females on the three individual difference measures.[10]

Stimulus Event Variables

Cochran Q's were performed on the frequencies across the 24 events for each attribution category. All of the Cochran Q's were highly significant. It is clear from the frequencies shown in Table 2 that for most of the attribution categories, there were several events with higher frequencies for that type of attribution than the other events, i.e., the frequencies for any one attribution category were not uniform across the 24 events.

With regard to the ANOVAs, there were a great number of significant main effects and interactions. Most of these significant effects accounted for less than 1% of the variance. Results of the ANOVAs relevant to the effects of the stimulus event variables on the number of attributions made in each attribution category are presented below. In addition, results pertaining to complexity of attribution, number of attributions made, and number of multiple sufficient attributions made by participants are discussed. However, to present these findings in the most straightforward manner, in most cases only the significant main effects are presented. (Results organized by attribution category appear in Appendix H. The discussion there focuses on significant main effects and their interaction, if significant.)

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[10] Correlations among scores on the three personality measures were all near zero and nonsignificant.

Self vs. Other events. There were significant main effects for the self-other factor on the number of P, S, PC, CS and PS attributions. There were significantly more P, PC and PS attributions made for other events than self events, and significantly more S and CS attributions made for self events than for other events. A significantly greater number of multiple sufficient attributions were made for other events than for self events.

The pattern which was obvious here was that for events involving another, participants were likely to make an attribution that focused on the actor, and when responding to events involving the self, participants gave explanations that focused on other people or objects (S and CS).

Likelihood of the event. There were significant main effects for the likelihood of the event on all attribution categories except CS. There were significantly more P, S and PS attributions for unlikely events than for likely events, and significantly more C, PC and PCS attributions for likely than for unlikely events. Likelihood of the event also had an effect on attribution complexity. More complex attributions were made for likely than for unlikely events. Also, a significantly greater number of multiple sufficient attributions were made for likely than for unlikely events. It would appear that a greater number of attributions with a circumstantial element were made for likely events than for unlikely events.

Positivity of the event. Positivity of the event had a significant effect on the number of PC, CS, PS and PCS attributions made

but not on the number of P, C or S attributions made. In each of the former cases, there was a significant main effect for positivity of the event. There were significantly more PC and PCS attributions for negative events than for positive events, and significantly more CS and PS attributions for positive events than for negative events. The noticeable pattern here was the effect of positivity of the event on the relatively more complex types of attributions but not on the relatively simple types of attributions. Also, more attributions involving the person (PC and PCS) were made for negative events than for positive events, while more attributions involving the stimulus (CS and PS) were made for positive events than for negative events.

Type of response. The action-emotion-opinion distinction made a difference for all attribution categories. More P, C, PC and CS attributions were made for opinions than for actions or emotions. There were more S and PS attributions for emotions than for actions or opinions and more PCS attributions for actions than for emotions or opinions. The type of event also had an effect on attribution complexity and the number of attributions made. More complex attributions were made for actions than for opinions or emotions and a greater number of attributions were made for actions than for emotions or opinions.

Attribution Complexity

There were significant main effects for likelihood and type of response on attribution complexity. More complex attributions were made for likely events than for unlikely events and for actions

than for emotions or opinions. The two-way interaction was significant with unlikely actions, i.e., "Sue smashed all of her roommate's records" and "Sue loaned her friend $4,000 to help with her emergency medical bills" receiving the most complex attributions and unlikely opinions, i.e., "Gladys believes that her mother has never told a lie," and "Sally believes that her roommate deserved the crippling accident" receiving the least complex attributions.

Multiple Sufficient Attributions

A greater number of multiple sufficient attributions (i.e., an explanation in the form, "either X or Y" caused the event) were made for likely events than for unlikely events and for events involving another than for self events. The two-way interaction of these variables was not significant. There was a significant interaction between positivity and likelihood of the event with positive likely events receiving the most multiple sufficient attributions and positive unlikely events the least. There was also a significant interaction between likelihood, type of response and the self-other factor. The most multiple sufficient attributions were made for unlikely emotions involving others, i.e., "Tom worshipped his professor" and "Judy is terrified of her father" and likely emotions involving the self, i.e., "You are happy to hear Fred's news" and "You are jealous of your husband's (wife's) secretary," and least for unlikely opinions pertaining to the self, i.e., "You believe that your mother has never told a lie," and "You believe that your roommate deserved the crippling accident."

Number of Attributions

There was a significant main effect for type of response on the number of attributions made. Most attributions were made for actions and least for opinions. A significant interaction between positivity of the event and likelihood indicated that most attributions were made for negative likely events and least for negative unlikely events. A significant two-way interaction between likelihood and the self-other factor showed that most attributions were made for likely self events and least for unlikely self events.

Individual Difference Variables

Results of the ANOVAs including each of the personality variables as a two-level factor are discussed in this section. Only the significant main effects are presented. (Summaries and discussion of other significant effects appear in Appendix H.)

There was no significant main effect for the self-monitoring variable on the number of attributions made in any attribution category. However, there was a significant main effect for intolerance of ambiguity on the number of S attributions made. Intolerant persons made significantly more S attributions (.128) than did tolerant persons (.040). Also, a significant main effect for intolerance of ambiguity on the number of PCS attributions indicated that tolerant persons made significantly more of this type of attribution (.290) than did intolerant persons (.224).

The analyses including cognitive complexity as a factor showed several significant and marginally significant main effects. There

was a significant main effect for complexity of participant on the number of P attributions made; simple persons made significantly more P attributions (.136) than did complex persons (.094). There was a marginally significant ($p < .06$) effect for complexity on the number of S attributions; simple participants made significantly more S attributions (.125) than did the complex participants (.094). Another marginally significant effect ($p < .06$) for complexity on the number of PC attributions indicated that complex participants tended to make more PC attributions (.059) than did simple participants (.042). The main effect for complexity on the number of PCS attributions again was only marginally significant ($p < .06$) with complex participants tending to make more of this type of attribution (.285) than simple participants (.228).

As previously discussed, there was also a significant main effect for complexity of participant on attribution complexity with complex participants making significantly more complex attributions (2.115) than simple participants (1.944).

Summary of Attribution Results

An attempt was made to code the attributions made by participants using Kelley's basic categories of attribution: P, C, S, PC, CS, PS and PCS. The number of categories allowed was increased with the addition of another category of Relational attributions and separate designations for the Stimulus Person and the Stimulus Object. The coding indicated that participants were indeed capable of writing rather long and complex explanations for the events. The categories were combined once again for the purpose of analysis.

The majority of attributions contained mentions of two or more elements (combinations of causes), focused on the Stimulus Other or the Person and Stimulus Other in combination. Person attributions were more frequent when the event involved another than when the event involved the self; Stimulus attributions were more frequent for events involving the self than for events involving another.

Likelihood of the event had an effect on complexity of attribution that was the opposite to that predicted. More complex attributions were made for likely events than for unlikely events. This could be attributed to the fact that the attributions for likely events tended to contain mention of Circumstances in addition to other elements, i.e., there were a greater number of C, PC and PCS attributions (and CS attributions, although not significantly) for likely than for unlikely events. Participants made more P and PS attributions for unlikely than for likely events.

Again, contrary to prediction, there was a tendency for more attributions involving the Person to be made for negative events than for positive events (especially when the event involved another than when the event involved the self), and more CS attributions were made for positive events than for negative events. Positivity of the event did not affect the single causal factor attributions (P, C and S) but did affect the attributions involving combinations of causes (PC, CS, PS and PCS).

As predicted, more attributions to the Stimulus were made for emotions and opinions than for action events. However, it was not

the case that more attributions to the Person were made for actions than for emotions or opinions; more Person attributions were made for both actions and opinions than for emotions. Contrary to prediction, more complex attributions were made for actions than for emotions or opinion events.

Attributions of greater complexity were made for unlikely actions than for other kinds of events. More multiple sufficient attributions were made for likely events than for unlikely events, and for events involving another than for self events. Participants listed more causes for actions than for emotions or opinions and for negative likely events than for other kinds of events.

Self-monitoring and intolerance of ambiguity did not affect the types attributions made. However, cognitively complex participants made more complex attributions than cogntiviely simple participants. Complex participants tended to make more PC and PCS attributions than did simple participants; simple participants made more P and S attributions than did complex participants. In line with these results, tolerant persons make significantly more PCS attributions (relatively more complex attributions) than did intolerant persons. Only one sex difference was found; males made more Circumstances attributions than did females.

Information Requests: The Coding Scheme and Categories

Kelley (1972, 1973) described three types of information used in inferring causality. They are consistency, consensus and distinctiveness information. Other types of information have not been examined with the exception of Frieze's work (1976a, 1976b) regarding information requests for success and failure and the work of Garland et al. who reported that 44% of all requests made by participants were general "person" and "stimulus" requests. One purpose of the present study was to examine requests made by participants and to develop categories to define the requests made.

The three categories described by Kelley, i.e., consistency, consensus and distinctiveness information were retained, and the responses of participants were examined to determine if such requests were being made. Requests regarding the Person (P) were designated as another general category as were requests regarding the Stimulus Person (S1). In addition, requests regarding the Stimulus Object (S2), if one were present in the event, was designated as another category of request. (For one event the Stimulus Object was another person.)

The subcategories of information request found for both the Person and the Stimulus Person were as follows:

1. Identification of the person
2. Personality traits or general characteristics of the person
3. Actions, behaviors and habits
4. Preferences, likes, needs or wants
5. Cognitions and perceptions of the person

6. Emotional and mood states
7. Transitory states of a circumstantial nature
8. Background or home life
9. Future state
10. Purposiveness and seriousness of motives or intentions
11. Miscellaneous requests regarding the person.

When the stimulus was an object, only subcategories 1, 2 and 11 applied, i.e., identification of the object, characteristics of the object and miscellaneous requests regarding the object.

In addition, participants made requests regarding affect between persons or the type of relationship present between persons. These requests asked about one person's feelings for another, whether there was mutual positive or negative affect, whether there was a close relationship between two persons or what type of relationship was present (intimates, related by blood, etc.). This category of information request was divided into requests pertaining to:

1. Affect between persons or the feelings one person has for another
2. The type of relationship or state of the relationship
3. Existence of a family tie.

Requests pertaining to the relationship between the Person and the Stimulus Person were placed in one category (R1) and the requests pertaining to either the Person's or Stimulus Person's relationship to the Stimulus Object (or a second stimulus person in one case) were assigned to another category (R2).

Another category of information request pertained to External Factors (E) influencing the event or present at the time of the event. These requests did not refer to either the Person or the Stimulus Person directly but referred to the setting or events leading up to the event in question. Three subcategories were identified:

1. Antecedent conditions or circumstances leading up to or influencing the event in question
2. Situational factors such as the social setting, etc. at the time of the event and detail regarding the event
3. Future consequences of the event and miscellaneous requests.

There were some information requests which could not be assigned easily to the Person, Stimulus or Relational categories since they seemed to deal with elements in combination, e.g., "Is he bigger and stronger than Judy?" "Is she insecure about her marriage?" Here, the questions were not, "Is he big and strong?" or "Is she insecure?" which could have been assigned to the Person or Stimulus categories. Rather the requests focused on a comparison of two persons or a person's feelings about a relationship and seemed to constitute a distinct category of request. This category of information request was labeled an Interaction category.

Finally, there was a general Miscellaneous category for those requests which did not fit any other category and an Uncodable category for irrelevant, incomprehensible or illegible requests.

In addition, some requests were consistency-like, consensus-like, and distinctiveness-like but were not the typical Kelleyian requests

of those types. For example, instead of requesting consistency or distinctiveness information regarding the Person, participants made distinctiveness and consistency requests pertaining to the Stimulus Person ("Does he beat up everyone?" "Does he always talk loudly?") or consistency requests pertaining to a relationship ("Do they fight often?" "How often do they see each other?"). Consensus-like requests asked about others' opinions of the Person ("What do others think of Tom?"). (Traditional consensus requests focused on others' opinions of the Stimulus Person.) These requests were assigned to the appropriate category but were also given a designation as consistency-like, distinctiveness-like or consensus-like requests. (See Appendix I for a more detailed discussion of these requests.)

Also, it was noted that the information requests appeared in several different forms. Many of the requests hypothesized an explanation for the event and simply asked if this were the case, e.g., "Was Sue angry at her roommate?" or "Was their relationship on shaky grounds?" Such requests were referred to as hypothesis-type requests.

Other requests did not hypothesize an explanation but asked for descriptive information. These requests were usually prefaced by such words as how, what, where, and when, e.g., "What was the person doing?" "How do they get along?" They were referred to as descriptive-type requests.

Finally, requests beginning with "why" or "what was the reason" were seen as different from hypothesis-type or descriptive-type requests. When asked about a person, such requests focused on the

motives or intentions underlying a behavior, need, mood, belief, etc. Although such requests were not only limited to persons (e.g., "Why did the accident happen?"), they were called motive-type requests. All requests made by participants were designated as one of these three forms of request.

In summary, each request had several designations. It was coded as belonging in one of the major categories of information request: consensus, consistency, distinctiveness, Person, Stimulus Other, Relational, Interaction, External Factors, Miscellaneous or Uncodable. The form of each request was also noted, i.e., each request received a designation as either a hypothesis-type request, a descriptive-type request or a motive-type request. Finally, those requests not coded as consensus, consistency or distinctiveness information could receive a designation as consistency-like, consensus-like, distinctiveness-like or two or more of these.

Occasionally rules of a rather specific nature had to be adopted in order to code the requests into the major categories of information request. The category scheme was developed to define the majority of requests made and to create categories which were as nearly as possible, mutually exclusive. There were, however, a few requests which could have easily been assigned to more than one category and in such cases a decision had to be made regarding assignment to a category. Percentage agreement between two coders computed on the basis of the coding of 15 protocols chosen at random was .88.

The number of requests made by each participant for each event was counted. Most participants began each question on a new line beginning the request with a capital letter and ending with a question mark. In some cases a single request was counted as two requests when it actually asked for two separate pieces of information and these could not be assigned to one category, e.g., "What are both their personalities like?" or "What are their ages?" These were counted and coded as two distinct requests for information (see Appendix I).

For the purpose of analysis, requests regarding the Stimulus Person and Stimulus Object were combined and they are referred to as requests for Stimulus Others. All Relational requests, regardless of whether they involved the Person and Stimulus Person or the Stimulus Object, were combined. The ten major categories of information request were: consensus, consistency, distinctiveness, Person, Stimulus Others, Relational, Interaction, External Factors, Miscellaneous and Uncodable.

Frequencies of Information Categories

The total number of requests made by participants was 10,609 and the range of requests for any one event was 0 to 13. The mean number of requests made per event (when requests were made) was 2.88.

One of the major points of interest in this research was whether participants would spontaneously request consensus, consistency and distinctiveness information. It was predicted that requests for consensus, consistency and distinctiveness information would not constitute the majority of requests. This prediction was confirmed. These three types of information request only accounted for 1.5% of

all requests (see Table 4). However, of these three, consensus requests were the most frequent, and most of these requests were for the events, "Fred thinks his professor grades too hard," and "You think your professor grades too hard" (see Table 5). Consistency-like, distinctiveness-like and consensus-like requests only accounted for an additional 4.8% of the requests. Since there were so few consensus, consistency and distinctiveness requests made, their value in evaluating predictions regarding the information requests was limited. Therefore, presentation of the results contains no further mention of these categories of information request.

As shown in Tables 4 through 6, requests regarding Stimulus Others (both the Stimulus Person and Stimulus Object) accounted for 43% of all requests and requests regarding the Person accounted for 22% of the requests. Relational information requests accounted for 16%, External Factors accounted for 10% and the Interaction category accounted for 6%. The Miscellaneous category and the Uncodable category each represented less than 1% of the requests.

The most frequent requests in the Person category pertained to the traits and characteristics of the Person (18% of all Person requests), the Person's purposiveness or seriousness of intention (17%) and the Person's actions (15%). Within the Stimulus Person category, most requests were made regarding the Stimulus Person's actions (41% of all Stimulus Person requests), and the Stimulus Person's traits and characteristics (20%).

Table 4

Number of Requests Made in Each Information Category and Subcategory

Subcategories	Person requests (P)			Stimulus Person (S1)			Stimulus Object (S2)		
	No.	% of P's	% of total	No.	% of S1's	% of total	No.	% of S2's	% of total
1. Identification	142	6.02	1.34	314	8.01	2.96	182	27.00	1.70
2. Characteristics	423	17.95	3.99	793	20.22	7.47	416	61.72	3.90
3. Actions	351	14.89	3.31	1,628	41.52	15.35	51	7.57	0.50
4. Preferences	279	11.84	2.63	104	2.65	0.98	3	0.44	0.03
5. Cognitions	67	2.84	0.63	29	0.74	0.27	--	--	--
6. Mood states	256	10.86	2.41	84	2.14	0.79	--	--	--
7. Transitory states	202	8.57	1.90	529	13.49	4.99	--	--	--
8. Background	204	8.65	1.92	185	4.72	1.74	9	1.34	0.08
9. Future state	12	0.51	0.11	36	0.92	0.34	--	--	--
10. Purposiveness	398	16.89	3.75	200	5.10	1.88	4	0.59	0.04
11. Miscellaneous	23	0.98	0.22	19	0.48	0.18	9	1.34	0.08
Totals	2,357		22.22	3,921		36.96	674		6.35

Table 4--Continued

Subcategories	Relational (R1) No.	% of R1's	% of total	Relational (R2) No.	% of R2's	% of total
1. Affect	382	24.27	3.60	53	44.17	0.50
2. Type of relationship	1,090	69.25	10.27	67	55.83	0.63
3. Family relationship	102	6.48	0.96	0	0.00	0.00
Totals	1,574		14.84	120		1.13

Subcategories	External No.	% of E's	% of total
1. Antecedent	494	47.64	4.66
2. Situational	524	50.53	4.94
3. Future	19	1.83	0.18
Totals	1,037		9.77
Interaction	647		6.10
Miscellaneous	55		0.52
Uncodable	60		0.57
Consistency	29		0.27
Distinctiveness	32		0.30
Consensus	103		0.97
Consistency-like	320		3.02
Distinctiveness-like	151		1.42
Consensus-like	21		0.20
Both consistency- and distinctiveness-like	18		0.17

Table 5

Number of Requests Made in Each Information Category for Each Event

Event	Consistency	Distinctiveness	Consensus	Person	Stimulus Person	Stimulus Object	Relational (R1)	Relational (R2)	External Factors	Interaction	Miscellaneous	Uncodable
1	0	0	0	78	236	--	87	--	35	5	3	2
2	0	0	0	57	260	--	79		37	8	2	1
3	0	1	0	117	169	--	95	--	66	14	1	3
4	0	0	0	82	186	--	92	--	68	13	2	1
5	3	0	1	152	184	--	70	--	29	32	1	1
6	6	0	1	142	208	--	59	--	31	44	0	0
7	2	4	0	158	82	19	94	20	24	23	3	0
8	0	2	0	143	131	22	67	21	32	36	2	4
9	0	0	2	49	62	149	107	1	4	11	0	2
10	1	0	0	31	93	179	87	0	5	14	5	1
11	1	4	6	140	141	--	55	--	73	43	0	1
12	0	3	3	71	190	--	47	--	67	34	0	5
13	3	6	1	96	115	127	62	40	14	55	0	2
14	0	2	0	59	129	178	46	38	20	63	2	2
15	5	2	8	106	240	--	41	--	20	26	0	1
16	6	3	5	69	304	--	37	--	38	47	2	1
17	0	1	4	103	232	--	53	--	16	17	9	3
18	1	1	4	49	217	--	46	--	20	11	11	3
19	0	0	5	123	130	--	75	--	19	35	2	4
20	0	0	7	60	150	--	45	--	11	46	6	10
21	0	1	30	199	81	--	17	--	137	17	1	6
22	0	1	25	141	104	--	18	--	140	23	2	0
23	1	1	1	82	125	--	123	--	60	20	0	6
24	0	0	0	50	152	--	72	--	71	10	1	1
Total	29	32	103	2,357	3,921	674	1,574	120	1,037	647	55	60
% of grand total	.27	.30	.97	22.22	36.96	6.35	14.84	1.13	9.77	6.10	.52	.57

Table 6

Number of Requests Made in Each Information Category by Stimulus Event Variables

	Person requests	Stimulus requests	Relational requests	External requests	Interaction requests	Totals
Positive events	960	2,394	869	421	251	5,016
Negative events	1,397	2,201	825	616	396	5,593
Likely events	1,156	2,554	810	488	300	5,461
Unlikely events	1,201	2,041	884	549	347	5,148
Actions	929	1,497	684	322	175	3,653
Emotions	621	1,907	561	241	293	3,708
Opinions	807	1,191	449	474	179	3,248
Self events	954	2,503	754	540	349	5,236
Other events	1,403	2,092	940	497	298	5,373
Totals	2,357	4,595	1,694	1,037	647	10,609
% of Total	22.22	43.31	15.97	9.77	6.10	

Note. Summing across the rows will not equal the numbers in the Totals column because the Miscellaneous and Uncodable requests are not tabled here.

Requests regarding the state or type of relationship were the most frequent (70%) in the Relational category. In the External Factors category, requests were about equally divided between antecedent conditions (48%) and situational factors (50%).

Of the 10,609 requests made, 6,158 (58%) were hypothesis-type requests, 4,008 (38%) were descriptive-type requests and 443 (4%) were motive-type requests.

Information Requests: The Predictions

There were a number of predictions made regarding the effects of the stimulus event variables and the individual difference variables on the information requests made by participants. In order to test these predictions and provide other results, the data were prepared and analyzed in the following manner.

Analysis

The data for analysis were for each participant for each event, (1) the number of information requests made; and (2) the number of information requests in each of the ten major categories of information request. Participants differed in the number of requests they made. In order to take these differences into account, the number of requests made in each category of information request for each event was divided by the total number of requests made by that participant. These proportions of requests rather than the number of requests for each of the information request categories served as dependent measures in the analyses of variance performed (described below). When the results reported are based on these proportions, they are designated as such.

Separate analyses of variance on the proportion of requests made in each of the categories of information request were performed. In addition, an analysis of variance on the number of requests made was performed. Each analysis was a 2 (positive-negative) X 2 (likely-unlikely) X 3 (action-emotion-opinion) X 2 (self-other) entirely within-subjects ANOVA. In addition, five factor ANOVAs with the addition of each individual difference variable in turn as a two-level between-subjects factor were also performed. Subjects with missing data points were deleted from these analyses. In addition, data from several randomly chosen participants were excluded to insure equal cell frequencies. The ANOVAs were performed on data from 108 participants. Other analyses were performed on data from 157 participants.

Predictions Involving Stimulus Event Variables

The only hypothesis advanced involving stimulus event variables pertained to the effects of self and other events on the number of requests made and the kinds of information requested. As predicted, self and other events affected the kinds of information requested. However, contrary to prediction, self and other events did not affect the number of requests made.

It was hypothesized that more Person information requests would be made for events involving another than for events involving the self, and that a greater number of Stimulus requests would be made for self events than for events involving another. The prediction was confirmed. The ANOVA on the proportion of Person requests showed a significant main effect for the self-other factor ($F\ (1,107) = 53.15$, $p < .0005$); a greater proportion of Person requests were made for events

involving another than for self events. There was also a significant main effect fot the self-other factor on the proportion of Stimulus requests made ($F\ (1,107) = 52.99$, $p < .005$). A higher proportion of Stimulus requests were made for self events than for events involving another.

It was also predicted that participants would request more information for events involving another than for events involving the self. This prediction was not confirmed. The mean number of requests for self events was 2.92 and for other events, 2.93, and this difference was not significant.

Predictions Involving Individual Difference Variables

Several hypotheses were advanced regarding the effects of intolerance of ambiguity and cognitive complexity on the kinds of information requested. The predictions were not supported.

It was predicted that persons who are intolerant of ambiguity would request more Person information than persons who are tolerant of ambiguity, and that tolerant persons would request more Stimulus information than intolerant persons. The prediction was not confirmed.

Also, it was predicted that cogntitively complex participants would make a greater number of information requests than cognitively simple participants. The ANOVA on the number of requests showed no significant effect for complexity of the participant although the means were in the predicted direction. The mean number of requests for simple and complex participants were 2.81 and 3.04, respectively.

Information Requests: Additional Results

Sex Differences

Females made a greater number of total requests (74.76) than did males (63.03), and this difference was significant ($t(112) = 2.38$, $p < .05$). Females made significantly more Person requests, Interaction requests and Stimulus requests than did males, although the latter difference was only marginally significant ($p < .06$). The differences in mean proportions of Person and Interaction requests made by males and females were marginally significant ($p < .06$ and $p < .07$, respectively).

Males and females also differed in the total number of hypothesis-type requests they made; females made more of this type of request (43.63) than did males (30.80), and this difference was significant ($t(155) = 2.92$, $p < .005$). The corresponding proportions were 0.63 and 0.48, and this difference was also significant ($t(112) = 2.45$, $p < .05$). The mean proportion of descriptive-type requests for males (0.47) and females (0.33) also differed significantly ($t(112) = 2.61$, $p < .01$). Thus, females made a greater proportion of hypothesis-type requests relative to males while males made a greater proportion of descriptive-type requests relative to females. There was no difference in the proportions of motive-type requests made by males and females.

Correlations Among the Information Categories

Table 7 shows the correlations among the number of requests made in each of the categories of information request by each

Table 7

Partial Correlations Among the Number of Requests Made in Each Information Category Controlling for Number of Requests Made

	Distinctiveness	Consensus	Person	Stimulus others	External factors	Interaction	Relational
Consistency	.095	.003	-.336*	-.191*	.235*	-.115	-.079
Distinctiveness		.234*	.171	-.032	.000	-.039	-.177
Consensus			-.121	-.240*	.004	.227*	-.075
Person				-.374*	-.320*	-.110	-.212*
Stimulus					-.442*	-.013	-.642*
External factors						-.433*	.096
Interaction							-.191*

*p < .05, two-tailed

N = 114.

participant, controlling for the total number of requests made by participants.

The number of Person requests made was negatively related to the number of requests made pertaining to External Factors and to the number of requests made pertaining to Stimulus Others. The number of requests made regarding External Factors was negatively related to the number of Stimulus Other requests and the number of Relational requests. These partial correlations do not suggest an interpretable or consistent pattern.

Stimulus Event Variables

The ANOVAs on the proportion of information requests in each category showed a large number of significant two- and three-way interactions. Most of the significant effects accounted for less than 1% of the variance.

Results of the ANOVAs showing the effects of the stimulus event variables on the proportion of information requests in each category and on the number of requests are presented. Only the significant main effects are discussed, however. (Results organized by information category appear in Appendix J. The discussion there focuses on significant main effects and their interaction, if significant.)

Self vs. other events. Significant main effects for the self-other factor indicated that a higher proportion of Person and Relational requests were made for events involving another than for self events, while a higher proportion of Stimulus requests was made for self events than for other events.

The pattern which emerged was that of greater interest in the Person when the event involved another than when the event involved the self, and a greater interest in Stimulus Others when the event involved the self than when the event pertained to another.

Likelihood of the event. There were significant main effects for likelihood of the event on the proportion of Person requests and Stimulus requests. A higher proportion of Person requests were made for unlikely events than for likely events and a higher proportion of Stimulus requests were made for likely events than for unlikely events. Significantly more requests were made for likely than for unlikely events. Significantly more descriptive-type requests were made for likely than for unlikely events. There appeared to be more interest in the Person when the event was unlikely than when the event was likely and more interest in the Stimulus when the event was likely than when it was unlikely.

Positivity of the event. There were significant main effects for positivity of the event on the proportion of Person requests, Stimulus requests, External requests and Interaction requests. There were higher proportions of Person requests, External requests and Interaction requests for negative events than for positive events, and a higher proportion of Stimulus requests for positive events than for negative events. A significantly greater number of information requests were made for negative events than for positive events. Significantly more hypothesis-type requests were made for negative events than positive events.

Since generally a greater number of requests were made for negative events than for positive events, the greater number of Stimulus requests made for positive events than for negative events was especially noteworthy.

Type of response. The action-emotion-opinion distinction had a significant effect on the proportion of requests made in all categories. The proportion of Person and Relational requests were higher for actions than for emotions or opinions and the proportion of Stimulus and Interaction requests were higher for emotions than for actions or opinions. The proportion of External requests was higher for opinions than for emotions or actions. A greater number of information requests were made for emotions than for opinions or actions, and more hypothesis-type requests were made for emotions than for actions or opinions.

Number of Requests

More requests were made for negative events than for positive events, for likely events than for unlikely events and for emotions than for actions or opinions. The three-way interaction was significant. The greatest number of requests were made for negative likely emotions, i.e., "Jan is jealous of her husband's secretary" and fewest requests were made for positive unlikely opinions, i.e., "Gladys believes that her mother has never told a lie."

Form of the Requests

Significantly higher proportions of hypothesis-type requests were made for negative events than for positive events and for emotions than for actions or opinions. The two-way interaction of these

variables was also significant, with the highest proportion of this type of request being made for negative emotions and the lowest proportion for positive opinions.

There was a main effect for likelihood of the event on the proportion of descriptive-type requests made. A significantly higher proportion of this type of request was made for likely events than for unlikely events.

The type of event had a significant effect on the proportion of motive-type requests made. A higher proportion of motive-type requests were made for actions than for emotions or opinions.

Individual Difference Variables

Separate ANOVAs including each of the individual difference variables in turn as a two-level factor on the proportion of requests in each category were performed. The majority of significant effects involving self-monitoring and intolerance of ambiguity were two-, three- and four-way interactions which were difficult to interpret. There was a marginally significant main effect ($p < .06$) for complexity of the participant on the proportion of External requests made. Complex participants requested a higher proportion of External information (.0044) than did simple participants (.0035). (Descriptions of other significant results for self-monitoring, intolerance of ambiguity and cognitive complexity appear in Appendix J.)

Summary of Information Results

The information requests were coded into a number of categories and subcategories. The majority of requests pertained to the Stimulus Person and the Stimulus Object, especially the Stimulus Person's

actions and characteristics. Other requests (in descending order of frequency) pertained to the Person or actor (especially this person's characteristics and intentionality), affect or the Relationship between persons in the event (especially the state or type of relationship), External Factors and requests involving two or more elements in combination (called an Interaction category). Only a small percentage of requests were consistency, distinctiveness and consensus information requests, although of these three the most frequent were consensus requests. The majority of requests were in the form of hypotheses, i.e., participants proposed an explanation and asked if this were the case. As predicted, more Person requests were made for events involving another than for events involving the self and more Stimulus requests were made for events involving the self than for events involving another. The prediction that a greater number of requests would be made for other events than for self events was not confirmed.

More Person requests were made for unlikely events than for likely events while more Stimulus requests were made for likely events than for unlikely events. Generally, more Person, External Factors and Interaction requests were made for negative events than for positive events; more Stimulus requests were made for positive events than for negative events. More Person and Relational requests were made for actions than for emotions and opinions, and more Stimulus requests were made for emotions than for actions and opinions. More external Factors requests were made for opinions than for emotions or actions. More requests beginning with "why" and "what was the

reason for" (labelled motive-type requests) were made for actions than for opinions or emotions.

A greater number of requests were made for negative events than for positive events, for likely events than for unlikely events and for emotions than for actions or opinions. Females made a significantly greater number of requests than did males. Males and females also differed in the number of hypothesis-type and descriptive-type requests they made.

The effects of self-monitoring and intolerance of ambiguity on the types of requests made were complex with no consistent pattern emerging. Cognitively complex participants did tend to make more External Factors requests than cognitively simple participants.

Relationships Among the Attributions and Information Request Categories

The number of Person attributions made was positively related to the proportion of Person information requests made (see Table 8). The number of Stimulus attributions and CS attributions were positively related to the proportion of Stimulus Other information requests made.

Also noteworthy was the relationship between the proportion of requests made pertaining to External Factors and both the number of PCS attributions made and the complexity of attribution. The proportion of Interaction information requests made was positively related to the number of PS attributions made. And, the proportion of Relational information requests made was positively related to both the number of PCS attributions made and the number of multiple sufficient attributions made.

Table 8

Correlations Among the Number of Attributions in Each Attribution Category and the Proportion of Information Requests in Each Information Category

	Information Requests					
	Person	Stimulus	Relational	Interaction	External	Number of requests
Attributions:						
P	.31*	-.02	-.09	-.02	-.22*	-.06
C	.03	-.03	.03	-.04	.01	-.19
S	-.01	.19*	-.12	.01	-.17	-.02
PC	.14	-.10	-.01	.09	-.01	.05
PS	-.02	-.04	.05	.24*	-.21*	-.09
CS	-.18	.19*	-.12	-.06	.05	-.09
PCS	-.11	-.15	.20*	-.08	.27*	.21*
Multiple sufficient	.02	-.11	.25*	-.15	.01	.09
Complexity	-.10	-.11	.15	-.09	.27*	.28*

*$p < .05$, two-tailed.

N = 114.

Finally, the number of information requests made was positively related to complexity of attribution. There was no relationship between the number of attributions made and the number of information requests made.

CHAPTER IV

DISCUSSION

Attributions

One purpose of the present study was to assess Kelley's proposed attribution categories and to overcome some of the limitations of typical attribution tasks that may bias participants' responses. As noted above, Kelley's categories served as a useful scheme in coding the attributions. Attributions representing combinations of causes were more frequent than attributions representing single causal factors; this coincided with results from other studies in which a structured task was used. It was also noted that participants were able to write complex explanations for events and sometimes described causal chains leading to an event. However, use of this coding scheme raised some important issues. It was very difficult to separate form from content in developing the coding system. In applying Kelley's scheme to free-response attributions, the form of the response was thought to be of primary importance, e.g., when determining whether the focus of the explanation was on elements external to the person or internal to the person. However, the content of the attributions often would not permit such distinctions. The coding scheme developed occasionally allowed content, as well as form, to determine assignment of explanations to categories. Regarding the content of the

attributions, there were frequent references to interpersonal affect or the type of relationship existing between two persons as explanations for the interpersonal events studied here. This was an important finding; a structured attribution task could not have demonstrated this. The discussion to follow focuses on these issues.

The Attribution Categories

Results indicated that attributions representing combinations of causal factors were the most frequent types made and that more attributions involving the Stimulus, and the Person and Stimulus in combination were made than were attributions involving the Person. These results coincided with those of McArthur (1972) and Pilkonis (1977). These investigations found that in the absence of information, participants more often indicated that combinations of factors rather than single causal factors were the best explanations for events. However, McArthur found that more simple P attributions were made than simple S attributions; the results of the present study did not support this finding. Simple P attributions were no more frequent than simple S attributions. The most frequent attributions were CS attributions, and 47% of all attributions involved elements external to the Person (C, S and CS attributions). However, it should be noted that for 6 of the 24 events there was a Stimulus Object in addition to the Stimulus Person, perhaps contributing to the high number of attributions involving the Stimulus.

One reason for the preponderance of attributions involving S or elements external to P might be that in the absence of specific cues

to view the Person, the Stimulus Person and Circumstances as separable, independent and equally important causal factors (as would be implied by the typical choice or rating scale format), participants did not focus attention on the Person as much as on elements influencing the Person. The instructions given to participants were that they were to state why they thought the event occurred. There were no cues to focus on the event from the Person's point of view.

And, according to the discounting principle, dispositional causation may be discounted if situational cues are consistent with or facilitative of the action. Studies have shown that "behavior is attributed less to an actor when there is also present a plausible external cause for that behavior than when no such cause is present" (Kelley, 1972, p. 2).

Perhaps the information given in the descriptions of the events implied the existence of precipitating external factors or strongly implied that an external factor was the most likely or plausible cause of the event; if such were the case, then participants would not infer dispositional causation. Ross (1977) has stated this succinctly: "To the extent that situational or external factors constitute a 'sufficient' explanation for an event, that event is attributed to the situation and no inference logically can be made (and, presumably, no inference empirically is made) about the dispositions of the actor" (p. 180).

It would seem that the "extremity" of the events might have also enhanced such responding. "Extremity" here indicates that the events

were varied in terms of positivity and likelihood, and events falling in the moderate range on these two dimensions were not examined.

The extremity of some of the events may have drawn attention away from the Person and focused participants' attention on the needs, actions, etc. of the Stimulus Person that might have elicited the Person's response. A strongly implied precipitating factor would adequately account for the Person's response and there would be no need to focus attention on the Person's intentions or other characteristics.

A major finding of this research was that some participants were able to write rather long and complex explanations for the events. As indicated earlier, more attributions were made that were combinations of causal factors than single factor attributions.

The following examples show that participants often mentioned several elements in a single attribution:

> He worshipped his prof because he was truly interested in the subject matter and he did good and he was learning. The teacher also graded fair and seemed to like Tom.

> I am jealous of my husband's secretary because she has a career and I have to take care of children and clean up a constant mess. Also, the secretary is attractive and I'm afraid my husband will get tired of me--I always smell like Lemon Pledge and Lycol (sic)--and get romantically/ sexually involved with her.

> Sue likes to study in quiet. Her roommate knows this. She is envious of Sue's high grades. Though constantly asking the roommate not play (sic) the records so loud, when she is studying, it never happens. They are turned up full blast. So Sue got sick of it and smashed the records.

Other explanations outlined a causal sequence or chain, with one element leading to another:

> Sue has a well playing (sic) job. She has been saving money for years also. Sue had once been ill and could not afford payments. Her great aunt offered to pay the bill. She has always been grateful towards this act and now feels she can repay this kindness through her friend who is also in a desperate situation--having little saving (sic) and unable to work for a while from her sickness.
>
> His roommate was probably giving Joe some advice either on his girlfriend or his grades at school and Joe feels inferior and thinks that his roommate is implying that he is incompetent so Joe tells him to shut up as if to cut him off because Joe doesn't want to believe the truth.

With the exception of Smith (Note 1) and Orvis, Kelley and Butler (1976), few researchers have discussed difficulties in coding free response attributions. In coding the attributions, it was difficult to disentangle person and stimulus or person and situation. Although these dichotomies have great appeal, they have presented conceptual and methodological problems for researchers in the area. As Ross (1977) has indicated, a statement such as "Joe bought the house because it was secluded" would be coded as an external (or stimulus) attribution, whereas "Joe bought the house because he wanted privacy" would be coded as an internal (or person) attribution, when one takes into account the form of the responses. The first statement mentions something about the object (the house) and the latter statement mentions something about the person. However, the information conveyed by both is that a particular feature of the house exists and that Joe responds positively to this feature. Thus, for the event "Joe told his roommate to shut up," the statements, "Because the roommate was annoying him" and "Because he was annoyed by his roommate" differ in form, i.e., in their focus, respectively, on the roommate and on Joe, but imply

similar content, i.e., Joe's annoyance with the roommate's annoying behavior. In this particular case, both explanations were coded as PS attributions. Thus, the coding scheme developed in the present study was a hybrid one; it was generally based on the form of the attribution. However, as indicated in the above example, in a few cases in which implied content was very similar, the content determined the coding.

It was also noted that different participants sometimes focused on different parts of a causal chain leading to an event. For example, for the event, "Sue smashed all of her roommate's records," explanations such as "The roommate broke Sue's records" or "Sue wanted to get even" were common. Although both explanations imply a somewhat similar state of affairs, they focus on different points in the causal sequence; they would be coded as Stimulus and Person attributions, respectively. Of course, the assumption here is that "The roommate broke Sue's records" might also imply that Sue wanted to get even, and that "Sue wanted to get even" might also imply that the roommate did something nasty to Sue prior to the event in question. However, these assumptions were not made for the purposes of coding. The coding was done according to what the participants wrote in this case--regardless of the aspect of the causal chain on which the participant focused. However, it was realized that two very different attributions sometimes only referred to different points in a causal sequence.

An alternative coding scheme might have focused solely on the content of the attributions. Although no attempt was made to develop

such a scheme for the purpose of this research, some tentative observations regarding the content of the attributions can be made. Generally, some events elicited a greater variety of explanations than others. For example, for the event, "Sue smashed all of her roommate's records," attributions ranged from hating the records, hating the roommate, getting back at the roommate, dropping the records by accident to being angry and losing control. "Jan is jealous of her husband's secretary" also elicited a variety of explanations focusing on Jan's insecurity, the secretary's positive attributes, Jan and her husband's marriage, the husband's characteristics and previous record with women or combinations of these. For other events, most attributions focused on only one or two pieces of content. For the event, "Jim let his friend stay with him a few days," most attributions focused on the friend's needing a place to stay or some aspect of the relationship between Jim and his friend. Another event which produced very little variety was "Judy is terrified of her father." For this event, most attributions focused on the father's negative characteristics or actions (he beats her, he yells at her).

As Kanouse (1972) has observed, "language used to describe events and actions frequently contains implicit attributions in itself" (p. 133). For example, the events "Judy is terrified of her father" and "Tom worshipped his professor" elicited attributions dealing mainly with the father and the professor since the verbs strongly imply that the other person elicited the response. If one is terrified, it is usually because something or someone terrifying elicits the response;

if one person worships another, it is usually because the other is in some way worthy of worship. The events differed in how strongly they implied a particular attribution. The degree of variety in the content of the attributions perhaps reflected these differences.

The content of some of the attributions reflected a lack of seriousness, defensiveness and/or a showing off of the participant's knowledge of psychology. A frequent attribution for the negative events, especially "Sally believes that her roommate deserved the crippling accident" and "Sue smashed all of her roommate's records," was that the actor was emotionally or mentally disturbed, had a severe personality disorder or was obviously insane. Other participants used their psychological knowledge in more serious ways. For example, for the event, "Joe believes that the child should be praised" many of the explanations read like statements from an introductory psychology textbook:

> Joe is a psychology student and he learned in his behavior class that it is good to praise a child when he has done something right. This motivates him to keep doing things right.

An important element appearing in many of the attributions that participants wrote was the relationship or affective bond between persons mentioned in the event. All of the events included in the present research were interpersonal events and one might expect such mentions. Affect was an important dimension in the attributions; it has been relatively neglected in the attribution area (cf. Passer, Kelley, & Michela, 1978).

Since the events varied in terms of positivity and likelihood (with no events neutral or moderate on these two dimensions), the "extremity" of these events perhaps prompted participants to mention affect and relationships since extreme responses to another person would demand greater justification than less extreme responses. Positive or negative affect or the existence of a close relationship would clearly, in some cases, justify an extreme response toward another.

Indeed, Relational attributions[11] were made for some of the more extreme events. Participants made more Relational attributions for the events, "Sally believes that her roommate deserved the crippling accident" and "Sue smashed all of her roommate's records" than for other events. Positivity and likelihood of the event affected the number of Relational attributions made; most Relational attributions were made for negative unlikely events. Participants also tended to make more Relational and CR attributions for positive likely events, especially for the event, "Jim let his friend stay with him for a few days." More complex attributions with a Relational element in combination with other elements were made for the unlikely and positive event, "Sue loaned her friend $4,000 to help with her emergency medical bills" than for other events.

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[11]These results are based on a collapse of the original 114 attribution categories to 16 categories. This collapse was similar to the seven category scheme described in the text except that the Relational (R) category was preserved as a separate category; the categories representing R in combination with other elements were also retained. This Relational category included all directional and nondirectional relational mentions.

Generally, more Relational attributions and attributions with R as an element were made for unlikely events than for likely events. The effects of positivity of the event on Relational attributions and attributions containing mentions of a relationship were less clearcut (as indicated above). It was the case, however, that relational-type elements were mentioned for more extreme events. Of course, another sample of events might not have produced mentions of affect and interpersonal relationships.

The present study also examined the effects of different kinds of events and individual difference variables on the types of attributions made. The discussion now focuses on these results.

The Stimulus Event Variables

The results of this study strongly supported the notion of actor-observer differences even though the task presented did not involve live behaviors. For events involving another, participants made more Person attributions than for self events, and for self events, participants made more Stimulus attributions than for events involving another. Researchers have suggested several reasons for the actor-observer difference. The results of the present study perhaps reflected both differences in the amount of information available to actors and observers and differences in perceptual focus. However, the latter reason may have been more important in the present context.

The events presented were hypothetical events and when participants confronted an event in which they were presumably the actor,

they would probably ask themselves why they would respond in this way; both their explanations and information requests would reflect a focus on factors that would provoke them to behave in the manner described. However, when explaining another's behavior, it was this other person that was an unknown part of the event; this person was perhaps the initiator of the behavior. Thus, when responding to events involving another, participants would focus on this person to a greater degree than when explaining events involving the self.

These results were in contrast to the results reported by Frieze (Note 4); she found that subjects responded to "you" stimuli in ways similar to stimuli with a third person as the subject of the sentence, i.e., they responded as if the self events were about other people. An initial examination of responses indicated that this might have been the case in the present study. For the "you" events a number of participants responded using "You . . ." in making an attribution (or requesting information) instead of using "I. . . ." One would assume that participants would have used "I . . ." if they had correctly understood that "You" was meant to indicate that they themselves were to be the actor in the event. However, the clear results supportive of the actor-observer distinction argues against this and seems to indicate that participants did respond as if they were the actors for the "You" events but perhaps found it easier to write their thoughts using "You" instead of the first person.

It was predicted that a greater number of attributions and more complex attributions would be made for unlikely than for likely events.

This was based on the results of studies by Cunningham and Kelley (1975) and Kun and Weiner (1975). However, results of the present study indicated the opposite, i.e., more complex attributions were made for likely events than for unlikely events, and there was a tendency for more attributions to be made for likely events than for unlikely events. Also, a significantly greater number of multiple sufficient attributions were made for likely than for unlikely events.

The reason for the discrepancy in results is probably due to differences in the operationalization of likelihood or magnitude. Cunningham and Kelley's study used events of extreme magnitude. The manner in which they manipulated magnitude or intensity was to use an adverbial modifier to intensify the verb (e.g., completely dominates, always avoids, etc.). The authors had participants rate the events in terms of how frequently the events occurred in daily life and found that extreme events were perceived as occurring less frequently. However, extremity cannot be equated with likelihood. Likelihood in the present research was likelihood of occurrence (usualness and unusualness).

In addition, the dependent measures in the two studies were very different. One of the dependent measures in Cunningham and Kelley's study was a rating of the degree to which the actor and the stimulus caused the event. The unstructured task of the present study allowed participants to write fuller explanations regarding the events and to mention specific circumstances surrounding the event in addition to the mention of other elements. Participants sometimes made up a story about the event rather than giving a statement that explained the event.

A story regarding a likely event would tend to contain mention of various elements, elements not only leading up to the event but also tangential elements and circumstantial elements. Indeed, a greater number of attributions with a Circumstances element were made for likely than for unlikely events; this tendency to mention Circumstances was the basis for the finding that more complex attributions were made for likely than for unlikely events. Participants, in creating a story pertaining to a likely event, mentioned particular circumstances in addition to other elements accounting for the event. An unlikely event, on the other hand, was more easily attributed to single causal factors or P and S in combination because an unlikely event is already "circumstantial" in nature. Thus, participants may have felt that less description of relevant circumstances was necessary for unlikely events.

From an information standpoint (cf. Jones and Davis, 1965), a likely event conveys little about the persons involved or the situation, whereas an unlikely event conveys somewhat more information. Participants perhaps "filled in" some of the missing information for the likely events but did not need to "fill in" as much information for the unlikely events.

No predictions were made regarding the effect of likelihood of the event on the types of attributions made. However, results indicated that more attributions involving Circumstances were made for likely than for unlikely events, and more P attributions were made for unlikely events than for likely events. Again, the latter finding

conforms somewhat to the notion advanced by Jones and Davis (1965) that unlikely or unusual behaviors provide more information regarding the actor than do common behaviors. Participants apparently did not view the unlikely events included in the present study as so highly unusual that Circumstances (or chance) explanations were the most plausible (see Younger et al., 1978). They did view the unlikely events as reflecting, in some cases, the characteristics of the Person. Participants viewed the likely events, however, as more apt to reflect a set of circumstances or a number of factors in combination.

The positivity of the event did not affect attributions in predicted ways. Generally more PC and PCS (and more P and S attributions, although these attributions were not significantly related to positivity) were made for negative events than for positive events, contrary to prediction. More CS and PS attributions (and more C attributions, although not significantly related to positivity), were made for positive events than for negative events. Generally, more attributions involving the Person or the Person in combination with other factors were made for negative events than for positive events. More attributions to the Circumstances or Stimulus were made for positive events than for negative events.

In the absence of any other information, participants assigned the cause of a negative event to the actor rather than to the situation and yet called upon situational factors in explaining positive events. Perhaps negative events provided more information regarding the characteristics of the Person; hence a Person attribution was possible.

According to Jones and Davis (1965), the observer of socially undesirable behaviors is more likely to attribute the behavior to the actor since such behavior tells the observer more about the characteristics and disposition of the actor than would socially desirable behaviors. This may have been the case here. For negative events, participants focused on the Person in addition to external causes; hence, they made more attributions involving the Person for negative events than for positive events. Indeed, more of the relatively more complex type of attributions (PCS) were made for negative events than for positive events. For positive events, however, an external cause was perhaps sufficient to explain the event.

Another interesting pattern in the results was the effect of positivity of the event on the attributions reflecting combinations of causal factors (PC, CS, PS and PCS) but not on the single factor attributions (P, C, S). Since there was no consistent pattern among the attributions reflecting combinations of causes or among the attributions reflecting single factors, there is no apparent explanation for this intriguing pattern.

Finally, for Person attributions there was some evidence of self-enhancement, i.e., most Person attributions were made for negative events involving another and least for negative events involving the self. A trend in the results for Stimulus attributions also seemed to indicate self-enhancement, i.e., more Stimulus attributions were made for negative events involving the self than for negative events involving another. (This effect was not significant, however.)

There has been some ambiguity regarding the definition of positivity in the attribution literature. This dimension has been used to indicate positive and negative behaviors, socially desirable and socially undesirable behaviors and behaviors or events with positive consequences (or successful outcomes) and behaviors or events with negative consequences (or unsuccessful outcomes). All of these have slightly different meanings and operational definitions, but apparently have been used somewhat interchangeably and have, in cases, been discussed in one way and operationalized in another way. The present research did little to clarify this situation. Some events in the present research reflected socially undesirable behavior, e.g., "Sue smashed all of her roommate's records" and socially desirable behavior, e.g., "Sue loaned her friend $4,000 to help with her emergency medical bills." There were also some generally positive or negative events, e.g., "Jim let his friend stay with him for a few days," or "Joe told his roommate to shut up." The opinion events were especially difficult to conceptualize in this framework. "Fred thinks that his professor grades too hard" was rated negatively by participants probably because a hard-grading professor is a negative element to undergraduates--and not because Fred's believing it was negative. This was in contrast to the emotion events, such as "Judy is terrified of her father" and "Shirley is happy to hear Fred's news" in which the verbs and not the objects of the belief or emotion, were probably viewed as positive or negative. The issue here is comparability of events and successfully selecting events that vary on several dimensions simultaneously without

sacrificing comparability. The difficulty in varying positivity of the event and type of event is reminiscent of another kind of difficulty, i.e., the difficulty experienced in selecting the stimulus events because of the moderate correlation between the positivity and likelihood ratings of the events. Most researchers in the area have avoided this issue by not attempting to examine several dimensions simultaneously (cf. Eisen, 1979).

This research also examined the effects of different types of response on the types of attributions made. Specifically, it examined action, emotion and opinion type events. Research findings by McArthur (1972) and Zuckerman (1978) indicated that emotions and opinions were likely to be viewed as elicited by stimuli while actions (and accomplishments) were likely to be seen as emitted by persons. Results of the present study indicated that more simple Stimulus attributions were made for emotions and opinions than for actions, and fewer Person attributions were made for emotions than for actions or opinions. Participants did not make more simple Person attributions for actions than for emotions or opinions, as had been predicted. The results for PC and CS attributions were not consistent with results for P and S attributions.

As noted above, more Stimulus attributions were made for emotions than for either actions or opinions and fewer Person attribuions were made for emotions than for either actions or opinions. As discussed previously, the descriptions of some of the emotion events seemed to contain an implicit attribution. "Judy is terrified of her father,"

"Tom worshipped his professor," as well as "Shirley is happy to hear Fred's news," seem to strongly imply that something about Judy's father, Tom's professor and Fred's news elicited the response from Judy, Tom, and Shirley, respectively. A terrifying father, a terrific professor and good news would be the most plausible causes for these events given no other information regarding the event. Inferences regarding the Person would not be necessary. The notion that certain words or phrases may contain implicit attributions accounts well for the above finding.

The prediction that action events would yield less complex attributions than emotions or opinions was not supported. More complex attributions were made for actions than for emotions or opinions. Also, a greater number of attributions were made for actions than for emotions or opinions. These complex explanations tended to involve combinations of the Person, the Stimulus and Circumstances.

Generally, fewer Person attributions were made overall relative to other kinds of attributions. Consistent with the argument presented earlier, the task did not tend to focus participants' attention on the Person, and participants probably looked first for a plausible external cause. The complex attributions made for action events might indicate that an external cause was not viewed as sufficient to explain the action, and the Person was also seen as important in producing the behavior. Thus, relative to emotions and opinions, actions were seen as more attributable to the Person (and other elements) whereas

relative to actions, emotions and opinions were more readily attributed to the Stimulus. Actions were more apt to be explained by a combination of causal factors whereas the explanations for emotions and opinions were more apt to involve a specific factor. Thus, the original prediction received some support but not in the way expected.

The ANOVA's indicated that there were a great number of significant effects involving the type of response factor. It seems that actions, emotions and opinions contributed to variability in response but not always in consistent ways. The great number of 3- and 4-way interactions indicated that it was perhaps the individual events themselves and not their assignment to the action, emotion or opinion trichotomy that produced the variation in response. To summarize, although the action-emotion-opinion distinction may be a meaningful distinction to be made in the attribution area, the present research did not clarify or shed new light on the topic.

The Individual Difference Variables

This study demonstrated a relationship between complexity of the participant (as measured by the modified Rep Test) and complexity of attribution (the number of elements or dimensions present in the explanation). Cognitively complex participants made attributions which were more complex than less cognitively complex participants. (Results for the intolerance of ambiguity variable also tended to mirror this relationship although less dramatically, i.e., tolerant persons made more PCS attributions than intolerant persons.) This

finding encourages a more in-depth examination of the effects of cognitive structure variables on the attribution process; these variables have been relatively neglected. Of course, many problems have accompanied attempts to measure these variables (cf. Gardner & Schoen, 1962; Vannoy, 1965).

A sharper test of the relationship between complexity of the participant and complexity of attribution could have been made if the number of words written in each attribution had been taken into consideration. It may have been the case that the more complex participants simply wrote more lengthy explanations and their attributions were coded as containing mentions of a greater number of elements.

The other individual difference variables (self-monitoring and intolerance of ambiguity) did not affect attributions in predicted ways. There may have been several reasons for this, not the least of which was the unreliability of measurement. Although Budner's Intolerance of Ambiguity scale is quite popular and widely used, its internal consistency is surprisingly low.

Another reason for the lack of consistent or interpretable results involving intolerance of ambiguity or self-monitoring was that a paper-and-pencil task (the free response attribution and information request task) may not have engaged the mechanisms underlying the expression of intolerant and self-monitoring tendencies. Intolerance of ambiguity is conceptualized as a motivational variable; a paper-and-pencil task might not have engaged the motivations the

construct represents. Some differences in behavior on experimental tasks between high and low self-monitors have been demonstrated (e.g., Snyder & Tanke, 1976). However, all of these tasks involved performing or viewing live behaviors and were not solely paper-and-pencil tasks. Again, the task completed by participants in the present study may not have engaged self-monitoring tendencies. In more involving tasks or situations, however, intolerance of ambiguity and self-monitoring may still affect the types of attributions persons make.

Information Requests

Generally, the results of the present study indicated that the information categories proposed by Kelley represented very few of the spontaneous requests made by participants. There were perhaps several reasons for this, including the unstructured nature of the task, the use of hypothetical events and the lack of other information regarding the event. When given consistency, consensus and distinctiveness information, persons can and do use them in logical ways to infer causality. However, when not coached (given cues by the format of the task) or given an attributional focus, participants did not request these kinds of information very often. Other kinds of information were important to participants in the present study. Requests regarding the persons involved in the event (especially the Stimulus Person) were most frequent; the most important aspects of these persons were their behaviors or actions, traits or characteristics, transitory states (often involving specific circumstances) and purposiveness or intentionality. The behaviors and actions of the Stimulus Person were of

more interest than the behaviors or actions of the Person. Stable characteristics and intentionality were of more interest regarding the Person than regarding the Stimulus Person. Participants also made requests pertaining to interpersonal affect or the type of relationship existing between persons in the event and external factors, and they made requests pertaining to elements in combination. This "interaction" category and the category of "transitory states of a circumstantial nature" for both the Person and the Stimulus Person indicated difficulty in separating out person and situation. These issues are discussed in more detail below.

The Information Request Categories

As predicted, consensus, consistency and distinctiveness information requests did not constitute the majority of requests made regarding the 24 interpersonal events presented to participants in this study. These requests constituted only a small percentage (1.5) of all requests. Garland, Hardy, and Stephenson (1975) found that 23% of all requests were consistency, consensus and distinctiveness requests, and 44% were requests regarding the person or the stimulus. The other 33% of all requests represented a residual category in their study. The figures here were not comparable.

It is not known what requests Garland et al., accepted as representing consensus, consistency and distinctiveness information requests. In this research, only requests that fit the strictest definition of consistency, distinctiveness and consensus information were coded as such. For example, the request, "Does she get angry

all the time?" for the event, "Sue smashed all of her roommate's records" could be considered a consistency request; it was not coded as a consistency request in the present study. However, it was coded as a consistency-like request.

Consistency-like, consensus-like and distinctiveness-like requests along with consistency, consensus and distinctiveness requests, still only accounted for a total of 6.3% of all requests.

There are perhaps good reasons for the low percentage of consensus, consistency and distinctiveness requests made by participants in the present study. The Garland et al. study specified an attributional focus, i.e., participants were given the event, "Mary got an A on the chemistry exam" and were then asked "What information would you require in order to say that Mary is intelligent?" The questions that most readily come to mind would be requests for consistency, consensus and distinctiveness information. (What did Mary get on the last chemistry exam? How did the rest of the class do on the exam? How does Mary do in other classes?) However, if participants were asked why the event occurred and no attributional focus was specified, other questions such as "What type of exam was it?" "Is the professor easy?" "Does Mary want to major in chemistry?" might also come to mind. The specification of an attributional focus in the Garland et al. study undoubtedly affected participants' responses and perhaps even restricted the range of responses. Indeed, Frieze's (1976a) work on achievement-related events (in which no attributional focus was specified) indicated that participants requested information pertaining to mood, incentive,

type of task and so on, as well as consensus, consistency and distinctiveness information.

It appears that in a free response task using hypothetical events with no information given about the event, participants did not rely on the application of the covariation principle. Consensus, consistency and distinctiveness information are important, according to Kelley, when one has made multiple observations of an effect. Perhaps in real life when one has made multiple observations of an effect, one applies the covariation principle more readily.

In the present study, participants probably made information requests in order to familiarize themselves with the persons and other elements involved in the event. This is a different task than requesting information for the purpose of explaining the event, although familiarizing oneself with the event would certainly be helpful in explaining the event. The majority of requests pertained to the Person and the Stimulus Person. The cue in the directions, "to help you better know why the event occurred" did not prevent some participants from asking essentially, "Why did the event occur?" Also, some of the requests proposed an explanation and asked if this were the case (hypothesis-type requests). The form of these requests was somewhat unexpected; a different set of directions may have been necessary in order to accurately assess the frequency of consistency, consensus, and distinctiveness requests relative to other types of requests, i.e., to elicit from participants the "types" of information they would want rather than eliciting the information itself.

In conclusion, this assessment of Kelley's information categories indicated that other categories of information were more important. However, it should also be noted that a free response task such as the one used in the present research was perhaps not the best means to an accurate assessment of Kelley's information categories, for the reasons outlined above.

The majority of information requests made pertained to the Stimulus Person. Most of these requests focused on the actions or behaviors of the Stimulus person or the traits and characteristics of this person. Similarly, in her study of information requests regarding achievement events, Frieze (1976a) found that 36% of all requests were requests about the task (type of task or conditions in which the task was done). In the present study, almost twice as many requests were made regarding the Stimulus Person as were made regarding the Person. This general focus on the Stimulus Other was also reflected in the attributions made and was discussed previously. This focus was probably due to the unstructured nature of the task and the extremity of the events which probably initiated a search for information regarding an external cause or element provoking the Person's response.

In contrast to the focus of Stimulus Person requests on his or her actions, requests pertaining to the Person focused on purposiveness or seriousness of intentions, preferences and likes, mood, background and cognititions and perceptions. The provocation of the Stimulus Person was of interest, i.e., the requests focused on this person's role (in performing an act or possessing certain qualities) as one who

might elicit a response from the Person. Requests pertaining to the Person, however, seemed to indicate that the Person was viewed as the initiator of the behavior, and emphasis was placed on the proclivity of the Person (the Person's intentions, mood, needs, cognitions, etc.).

Another interesting finding was the number of requests made pertaining to interpersonal affect or the type of relationship between persons in the event. This category of information request appeared to be an important one for participants in this study, although it has not been given much attention in the attribution literature. As noted earlier, it was an important element in many of the attributions made by participants.

The Interaction category, although not representing a large percentage of requests, was also of interest. It represented difficulty in disentangling elements which have been conceptualized as separable in this area of research, i.e., the person and the situation, in coding the requests. The category forced itself into the coding scheme when many of the requests could not be comfortably coded in the other major categories of request. Since many of the requests were in the form of hypotheses, there was a definite possibility that some of these proposed explanations would represent combinations of causal factors. In addition, the subcategory, "transitory states of a circumstantial nature" for both the Person and the Stimulus Person categories contained requests that focused on circumstances or forces acting on a person and creating a certain state, e.g., running out of money and needing some, being kicked out of the house

and needing a place to stay, etc. Circumstances were implied here and yet the request was phrased in terms of the person and was coded as a request about the Person. However, it was clear that the request was really about both the person and the situation or the person-in-the situation.

The different kinds of events presented and the individual difference variables examined in the present research affected the types of information requested. These results are discussed next.

The Stimulus Event Variables

As predicted, more Person requests were made for events involving another than for events involving the self. More Stimulus requests were made for events involving the self than for events involving another. These results confirmed notions regarding the different perspectives of actor and observer. For self events, participants did not need to ask about the actor (the self) since supposedly one has access to a wealth of information regarding one's own behavior, motives, characteristics, etc. relative to the information one has available regarding another. However, when the event involved another, participants requested information regarding the Person more frequently. This difference in type of information requested for self and other events corresponded to the differences in type of attributions made for self and other events.

However, contrary to prediction, there was no significant difference in the number of requests made for self and other events, although the means were in the predicted direction, i.e., there was

a slight tendency for more information requests to be made for other events than for self events. Thus, despite the differences in the type of information requests made for self and other events, participants made roughly the same number of requests for self and other events. Perhaps this was because the participants felt it necessary to make approximately the same number of requests for each event. Indeed, a cursory inspection of the number of requests made by different participants for the 24 events indicated that some participants made 1 or 2 information requests for each of the 24 events, other participants made 5 or 6 requests consistently, and so on. Participants may have chosen an optimal number of requests per event for themselves and tried to maintain consistency with regard to that number.

More Person requests were made for unlikely than for likely events, and more Stimulus requests were made for likely events than for unlikely events. The focus for likely events was on external elements eliciting the Person's response. However, the unlikely events seemed to draw attention to the Person. According to Jones and Davis (1965), an unlikely behavior tends to indicate more about the Person and the Person's characteristics than a common behavior. Perhaps this was the case here.

Positivity of the event affected the number of Person, Stimulus, Interaction and External Factors requests made. Generally, a greater number of requests were made for negative events than for positive events. There were more frequent Person, External Factors and

Interaction requests for negative events than for positive events and more Stimulus requests for positive events than for negative events. The focus was mainly on the Stimulus in making requests for positive events. As indicated before, participants generally sought more information regarding the Stimulus; there were twice as many Stimulus requests as there were Person requests. However, it appeared that for negative events, participants wanted to know about the Person, indicating that the participants' focus had perhaps shifted from an external provoking agent to the Person as initiator of the act. In addition, participants asked about External Factors and made requests that focused on elements in combination (Interaction requests) more frequently for negative events than for positive events. Thus, the content of the information requests for negative events seemed to indicate that information about an external cause was insufficient to explain a negative event and that information about the Person, or External Factors or combinations of elements (Interaction requests) was desired.

Finally, the action-emotion-opinion distinction affected all major categories of information request. More Person requests were made for actions than for emotions and opinions while more Stimulus requests were made for emotions than for opinions or actions. More External Factors requests were made for emotions than for opinions or actions. These results parallel McArthur's results regarding actions, emotions and opinions, i.e., that emotions and opinions are more likely to be seen as elicited by stimuli (hence requests regarding the Stimulus or

External Factors) while actions are more apt to be viewed as emitted by the person (hence requests pertaining to the Person). Consistent with this, an examination of the form of the requests indicated that more motive-type requests (why, what was the reason for) were made for actions than for emotions or opinions.

The Individual Difference Variables

The predictions made regarding the effects of self-monitoring and tolerance of ambiguity on information requests were not supported. It was predicted that complex participants would make a greater number of information requests than simple participants, and although the means were in the predicted direction, the difference was not significant. Other results pertaining to the personality variables and their effects on information requested were very complex and difficult to interpret. There did not appear to be a consistent pattern in these results. Complex participants did tend to make more requests regarding External Factors than did simple participants. In comparison to the other categories of request, requests in the External Factors category were more abstract and general. Thus, this finding tended to support certain notions regarding cognitive complexity, i.e., that complex individuals are more global and abstract in their thinking while simple persons tend to be less differentiated and more concrete in their thinking than complex persons.

There was a significant sex difference found in the number of requests made; females made significantly more requests than did males. Frieze also noted a trend in her data for women to request more information than men. This might be because of women's greater verbal

ability (Maccoby & Jacklin, 1974) or their greater willingness to expend time and effort on completing the task. Females have shown a greater willingness to volunteer for psychological research than males; this finding has been well-documented (Rosenthal & Rosnow, 1975). The present sample with a male-female ratio of roughly 1 to 2 also demonstrated a higher voluntarism rate for females than for males.

Relationship Between Attributions and Information Requests

The correlations among the various categories of information request and attribution categories, although not strongly positive, indicated some degree of relationship. The number of Person requests made was positively related to the number of Person attributions made and the number of Stimulus Other requests made was positively related to the number of Stimulus and CS attributions made.

Also, the number of requests made pertaining to External Factors was positively related to the number of PCS attributions and complexity of attribution. If requests regarding External Factors are viewed as less concrete and more general than the other types of requests, then this finding would seem to indicate that participants who made more complex attributions also requested less concrete information. If Relational requests are also viewed as representing a more abstract or general level of responding, then the positive relationship found between the number of Relational requests made and the number of PCS attributions made (relatively more complex attributions) also confirms this notion. Although no relationship was found between the total

number of attributions made and the total number of requests made, there was a positive relationship between the total number of information requests made and complexity of attribution.

Even more striking than these relationships, however, was the pattern of results for some of the stimulus event variables for both attributions and information requests. The pattern of results was very similar in some cases. More Person requests were made for events involving another than for events involving the self, and more attributions involving the Person were also made for other events than for self events. On the other hand, more Stimulus Other requests were made for self events than other events, and more Stimulus and CS attributions were made for self events than for other events. Thus, this research found support for actor-observer differences for both the kinds of attributions made and the kinds of information requested.

Although the patterns were less clear, this parallelism in type of information requested and type of attribution made was also evident when considering likelihood of the event, positivity of the event and type of response. More Person requests were made for unlikely events than for likely events, and more Person attributions were made for unlikely events than for likely events. More Stimulus Other requests were made for likely events than for unlikely events, and more attributions involving Circumstances and more CS attributions (although not significantly) were made for likely events than for unlikely events. More Person requests were made for negative events than for positive events, and more attributions involving the Person were made for

negative events than for positive events. Alternately, more Stimulus Other requests were made for positive events than negative events, and more attributions involving the Stimulus were made for positive events than for negative events. Finally, more Stimulus Other requests and requests pertaining to External Factors were made for emotions than for opinions or actions and more Stimulus attributions were made for emotions than for opinions or actions. More Person requests were made for actions than for emotions or opinions and more complex attributions were made for actions than for emotions or opinions.

These patterns support the notion that different types of information may be more useful than others depending on the person's attributional focus (Bassili & Regan, 1977; Garland et al., 1975); i.e., persons actively seek certain kinds of information in order to confirm a certain attribution or in order to conform to a certain attributional focus. On the other hand, the choice of a certain causal explanation is affected by the types of information a person has at his/her disposal or the type of information the individual has sought out. Generally, it would seem that the attribution process does not proceed in a linear fashion; there is constant interplay between information seeking and causal inference.

The relationships between the information requests and attributions found here may indicate that participants responded consistently in terms of one kind of information request and its corresponding attribution. (This perhaps could have been minimized by presenting the attribution question and information question for any one event

on separate pages.) However, the stimulus event variables also seemed to affect the information requests and attributions in similar ways. Again, this may reflect consistent responding on the part of participants. Or it could also demonstrate the interplay between information seeking and causal inference and add to our confidence regarding the effects of the stimulus event variables studied here. The following briefly reviews these effects.

The results indicated that when confronted with negative events, unlikely events, action events and events involving another compared to positive events, likely events, emotion or opinion events and self events, respectively, participants focused relatively more on the Person in both their information requests and attributions. When confronted with positive events, likely events, emotion or opinion events and self events, participants focused relatively more on the Stimulus (or Circumstances).

The argument was developed above that when a situational explanation is sufficient to explain an event, no inference regarding the person is made. Positive events and likely events are typical and expected events; a stimulus could certainly provoke such behaviors. Emotions and opinions are usually seen as elicited by stimuli, and when explaining one's own behavior, one's attention is usually on situational factors.

However, for negative events, unlikely events, action events or events involving another, participants perhaps did not view a situational explanation as sufficient to explain the behavior and did make

inferences regarding the Person. Since negative and unlikely events are unusual and unexpected, provocation by a stimulus or a stimulus alone would not be sufficient to evoke such behaviors; something about the person would be necessary to produce such behaviors. Actions were perhaps viewed as self-initiated and not capable of being evoked by the situation. Finally, in explaining the behavior of another, participants focused on the person to a greater degree than when explaining their own behavior.

Task Considerations

One advantage of the free response task used in the present research was that participants were not cued by the wording of questions nor was any particular logic imposed on participants in thinking about the events. For some participants this was a disadvantage; they seemed to have trouble being active in performing a task that was not completely structured for them. The paucity of instructions given to participants at first was troublesome for some. Some participants had no idea what the information question meant and needed several examples before they understood what was wanted. Frieze (Note 4) gave no indication that the directions were troublesome for her participants, and hence no pilot testing was considered necessary. However, the present research indicated that fuller instructions were needed for some participants. The additional instruction page given to approximately half of the participants did seem to help and fewer questions were asked. In this case, it seemed that one example helped tremendously.

Other aspects of the responses given by participants indicated that perhaps the original instructions were insufficient for this type of task. As noted previously, responses to the events beginning with "You" often were phrased in terms of "You" rather than "I." It was expected that when confronted with such events participants would place themselves in the actor role and respond in the first person. Participants may have responded as if they were the actors although they phrased their responses in the third person. There was evidence that the participants did see themselves as the actors in the self events--not the least of which was the support found for the predictions regarding self and other events. In addition, participants responded to some of the more "extreme" events (such as "You believe that your roommate deserved the crippling accident," and "You believe that your mother has never told a lie") in the following ways--"I would never think that" or "I just can't imagine myself even thinking that way." Obviously some participants did view themselves as the actor and in doing so, found the event unrealistic or untenable. At any rate, a few additional instructions in regard to responding to "You" events may have clarified the task for some participants.

Although the free response task did not structure participants' responses, the wording of the events themselves may have served as cues to participants and affected their responses in subtle ways.

As noted earlier, the results for both the information requests and attributions showed a great number of significant 3- and 4-way interactions when ANOVAs were performed on the data. This was

interpreted as indicating that the specific events themselves contributed variance to participants' responses. Although the variables which were manipulated regarding the events (positivity, likelihood, type of event, self vs. other events) partially accounted for this, other differences among the events perhaps also contributed.

An important issue in presenting hypothetical events is the way in which the events are described. When events are presented in either sentence or paragraph form they must be phrased in either past or present tense. The tense chosen may affect the attributions and information requested. Use of the past tense may convey low consistency information and use of the present tense may convey high consistency information. The events in the present research were worded in both the past and the present tense. Another consideration is whether active or passive voice is used to describe the event. The passive voice might lead participants to over-attribute the behavior to the Stimulus, for example.

The amount of other information or detail conveyed in the sentence describing the event may also vary and may affect participants' responses. By describing a person in terms of a role (e.g., a roommate, a friend, a parent) more information is conveyed than is conveyed when a proper name is used. However, a proper name indicates the sex of the person in most cases, whereas a role designation does not necessarily imply the sex of the person. The events in the present research used both role designations and proper names.

Introducing additional elements or information regarding the event by constructing a more complex sentence may also affect responses. The introduction of a stimulus object in only some of the events decreased the comparability of the events chosen in the present research. Also, if one were to diagram the sentences describing the events, some obvious differences among the events would emerge.

As noted previously, an event may contain an implicit attribution. Certain verbs or phrases may serve as an "attributional focus," e.g., they may draw attention toward a stimulus which could have elicited a response in a person. The events, "Tom worshipped his professor" and "Judy is terrified of her father" seem to convey the notions that the professor was worthy of being worshipped and the father was a terrifying man. An implicit attributional focus may restrict the range of explanations or information requests made regarding an event.

In summary, it is recommended that studies in which comparability of events is important be interpreted with caution. The present research has indicated that attempting to vary events on several dimensions simultaneously may be extremely difficult and that many factors may detract from the comparability of events. The task of developing coding schemes to be applied to a set of such diverse events as the ones examined in the present study also demonstrated these difficulties in a most dramatic way.

Summary

One purpose of the present study was to assess the information and attribution categories proposed by Kelley by allowing participants to respond to an open-ended task. When asked what information was wanted to determine the causes for a variety of interpersonal events, participants very infrequently requested consensus, consistency and distinctiveness information. Participants more often asked about the Person and the Stimulus Person (especially the actions, general characteristics, transitory states and intentionality of these persons), interpersonal relationships, external factors and elements in combination. Several reasons for the low number of consensus, consistency and distinctiveness information requests were discussed, although it was noted that the task used in the present study may not have been the best means of assessing these types of information.

Participants also wrote explanations for interpersonal events in their own words. The attribution categories proposed by Kelley were used as the basis for a scheme to code the attributions. The majority of attributions made represented combinations of causal factors rather than single causal factors and some described causal sequences. Most attributions focused on the Stimulus Person and Circumstances in combination. This perhaps indicated that participants considered situational factors to be sufficient to explain the events and they made no inferences regarding the actor's disposition. Although applying Kelley's scheme to the coding of the attributions was generally successful, an important aspect of the

content noted was the reference to interpersonal affect and relationships. Thus, although prior research using structured tasks have shown that persons can and do use consistency, consensus and distinctiveness information to make Person, Circumstances, Stimulus attributions and attributions representing combinations of these, the present research indicated that in an open-ended task, other types of information were of greater concern and the attributions made were often quite complex and reflected content not investigated previously.

This research also showed that different kinds of events affected the kinds of attributions and information requests made. For events involving the self, participants made more requests regarding Stimulus Others and made more attributions to the Stimulus than for events involving another, whereas for other events, participants made more requests regarding the Person and made more attributions to the Person than for self events. These results were interpreted as strongly supporting the notion of actor-observer differences (Jones and Nisbett, 1972).

Likelihood of the event also made a difference. More Person requests and more simple Person attributions were made for unlikely events than for likely events, and more Stimulus Other requests and attributions involving Circumstances were made for likely events than for unlikely events. Results here were interpreted as reflecting the nature of the open-ended task and the extremity of the events.

There were differences in the kinds of information requested and attributions made as function of the positivity of the event, also.

More Person requests and more attributions involving the Person were made for negative events than for positive events; more Stimulus Other requests and more attributions involving the Stimulus were made for positive than for negative events. These results were interpreted as reflecting the notion that socially undesirable actions provide more information about the actor than socially desirable actions (Jones and Davis, 1965).

The action-emotion-opinion distinction affected the attributions and information requests made. There was some evidence that emotions and opinions were seen as elicited by the Stimulus; participants made more attributions to the Stimulus for emotions and opinions than for actions. Participants made more requests pertaining to the Stimulus and External Factors for emotions and opinions than for actions.

The effects of each of the stimulus event variables were somewhat consistent in terms of both the attributions and information requests. The case was made that for negative events, unlikely events, action events and events involving another participants focused on the Person moreso than for positive events, likely events, emotion and opinion events and self events, respectively. In the latter cases, it appeared that Stimulus attributions and requests were relatively more important. It was argued that in the present task participants focused on situational factors first and only when these were insufficient to explain the event did participants tend to focus on the Person.

Except for the relationship between cognitive complexity and complexity of attribution, there were no other major differences in attributions and information requests as a function of self-monitoring, intolerance of ambiguity or cognitive complexity. Differences may not have occurred because the experimental task was not viewed as one of high importance.

The open-ended task used here was an important tool in assessing the categories of attributions and information requests proposed by Kelley and in extending knowledge regarding the effects of several personality and stimulus event variables. The research also raised important issues regarding the coding of free response attributions and information requests and the comparability of events.

REFERENCE NOTES

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1. Smith, E. R. On the concept and measurement of cause in studies of causal attribution. Paper presented at the annual convention of the American Psychological Association, San Francisco, 1977.

2. Fischer, R. D. Unusual behavior and the attribution of responsibility. Unpublished dissertation, Michigan State University, 1973.

3. Schroder, H. M., & Streufert, S. The measurement of four systems of personality structure varying in level of abstractness (Sentence Completion Method). Unpublished Technical Report No. 11, Princeton University.

4. Frieze, I. H. Studies of information processing and the attributional process in achievement-related contexts. Unpublished dissertation, University of California, Los Angeles, 1973.

BIBLIOGRAPHY

BIBLIOGRAPHY

Arkin, R. M., Gleason, J. M., & Johnston, S. Effect of perceived choice, expected outcome of an action on the causal attributions of actors. Journal of Experimental Social Psychology, 1976, 12, 151-158.

Bassili, J. N., & Regan, D. T. Attributional focus as a determinant of information selection. Journal of Social Psychology, 1977, 101, 113-121.

Bem, D. J., & Allen, A. On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. Psychological Review, 1974, 81, 506-520.

Berscheid, E., Graziano, W., Monson, T., & Dermer, M. Outcome dependency: Attention, attribution and attraction. Journal of Personality and Social Psychology, 1976, 34, 978-989.

Bieri, J., Atkins, A. J., Briar, S., Leaman, R. L., Miller, H., & Tripodi, T. Clinical and social judgment: The discrimination of behavioral information. New York: J. Wiley & Sons, Inc., 1966.

Bradley, C. W. Self-serving biases in the attribution process: A reexamination of the fact or fiction question. Journal of Personality and Social Psychology, 1978, 36, 56-71.

Budner, S. Intolerance of ambiguity as a personality variable. Journal of Personality, 1962, 30, 29-50.

Buss, D. M., & Scheier, M. F. Self consciousness, self awareness and self attribution. Journal of Research in Personality, 1976, 10, 463-468.

Campus, N. Transitional consistency as a dimension of personality. Journal of Personality and Social Psychology, 1974, 29, 593-600.

Cordray, D. S., & Shaw, J. I. An empirical test of the covariation analysis in causal attributions. Journal of Experimental Social Psychology, 1978, 14, 280-290.

Cunningham, J. D., & Kelley, H. H. Causal attributions for interpersonal events of varying magnitude. Journal of Personality, 1975, 43, 74-93.

D'Agostino, R. B. A second look at analysis of variance on dichotomous data. Journal of Educational Measurement, 1971, 8, 327-333.

Eisen, S. V. Actor-observer differences in information inference and causal attribution. Journal of Personality and Social Psychology, 1979, 37, 262-272.

Elig, T. W., & Frieze, I. H. Measuring causal attributions for success and failure. Journal of Personality and Social Psychology, 1979, 37, 621-634.

Federoff, N. A., & Harvey, J. H. Focus of attention, self-esteem and the attribution of causality. Journal of Research in Personality, 1976, 10, 336-345.

Feldman, N. S., Higgins, E. T., Karlovac, M., & Ruble, D. N. Use of consensus information in causal attributions as a function of temporal presentation and availability of direct information. Journal of Personality and Social Psychology, 1976, 34, 694-698.

Fischoff, B. Attribution theory and judgment under uncertainty. In J. H. Harvey, W. J. Ickes & R. F. Kidd (Eds.), New directions in attribution research. Hillsdale, N.J.: Erlbaum Associates, 1976.

Fontaine, G. Causal attributions in simulated versus real situations: When are people logical, when are they not? Journal of Personality and Social Psychology, 1975, 32, 1021-1029.

Frieze, I. H. Causal attributions and information seeking to explain success and failure. Journal of Research in Personality, 1976, 10, 293-305, (a).

Frieze, I. H. The role of information processing in making causal attributions for success and failure. In J. S. Carroll & J. W. Payne (Eds.), Cognition and social behavior. Hillsdale, N.J.: Erlbaum Associates, 1976, (b).

Frieze, I. H., & Weiner, B. Cue utilization and attributional judgments for success and failure. Journal of Personality, 1971, 39, 591-605.

Galper, R. E. Turning observers into actors: Differential causal attributions as a function of "empathy." Journal of Research in Personality, 1976, 10, 328-335.

Gardner, R. W., & Schoen, R. A. Differentiation and abstraction in concept formation. Psychological Monographs, 1962, 76 (Whole No. 560).

Garland, H., Hardy, A., & Stephenson, L. Information search as affected by attribution type and response category. Personality and Social Psychology Bulletin, 1975, 1, 612-615.

Goldberg, C. Prediction and control as mediators of causal attribution. Perceptual and Motor Skills, 1976, 42, 183-195.

Hansen, R. D., & Lowe, C. A. Distinctiveness and consensus: The influence of behavioral information on actors' and observers' attributions. Journal of Personality and Social Psychology, 1976, 34, 425-433.

Hastorf, A. H., Schneider, D. J., & Polefka, J. Person perception. Reading, Mass.: Addison-Wesley, 1970.

Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.

Jones, E. E., & Davis, K. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), Advances in experimental social psychology. Vol. 2. New York: Academic Press, 1965.

Jones, E. E., Davis, K. E., & Gergen, K. J. Role playing variation and their informational value for person perception. Journal of Abnormal and Social Psychology, 1961, 63, 302-310.

Jones, E. E., & Nisbett, R. E. The actor and the observer: Divergent perceptions of the causes of behavior. Morristown, N.J.: General Learning Press, 1972.

Kanouse, D. E. Language, labeling and attribution. Morristown, N.J.: General Learning Press, 1972.

Karaz, V., & Perlman, D. Attribution at the wire: Consistency and outcome finish strong. Journal of Experimental Social Psychology, 1975, 11, 470-477.

Karniol, R., & Ross, M. The development of causal attributions in social perception. Journal of Personality and Social Psychology, 1976, 34, 455-464.

Kelley, H. Attribution theory in social psychology. In D. Levine (Ed.), Nebraska Symposium on Motivation, Lincoln: University of Nebraska Press, 1967.

Kelley, H. Attribution in social interaction. Morristown, N.J.: General Learning Press, 1972(a).

Kelley, H. Causal schemata and the attribution process. Morristown, N.J.: General Learning Press, 1972(b).

Kelley, H. The processes of causal attribution. American Psychologist, 1973, 28, 107-128.

Kun, A., & Weiner, B. Necessary vs. sufficient causal schemata for success and failure. Journal of Research in Personality, 1973, 7, 197-207.

Lowe, C. A., & Hansen, R. D. Motivational influence of behavioral desirability on actors' and observers' attributions. Social Behavior and Personality, 1976, 4, 17-25.

Lunney, G. H. Using analysis of variance with a dichotomous dependent variable: An empirical study. Journal of Educational Measurement, 1970, 7, 263-269.

Maccoby, E. E., & Jacklin, C. N. The psychology of sex differences. Stanford: Stanford University Press, 1974.

Mayo, C., and Crockett, W. H. Cognitive complexity and primacy-recency effects in impression formation. Journal of Abnormal and Social Psychology, 1964, 68, 335-338.

McArthur, L. A. The lesser influence of consensus than distinctiveness information on causal attributions: A test of the person-thing hypothesis. Journal of Personality and Social Psychology, 1976, 33, 733-742.

McArthur, L. The how and what of why: Some determinants and consequences of causal attribution. Journal of Personality and Social Psychology, 1972, 22, 171-193.

Miller, D. T., Norman, S. A., & Wright, E. Distortion in person perception as consequence of the need for effective control. Journal of Personality and Social Psychology, 1978, 36, 598-607.

Miller, D. T., & Ross, M. Self-serving biases in the attribution of causality: Fact or fiction? Psychological Bulletin, 1975, 82, 213-225.

Mischel, W. Personality and assessment. New York: Wiley, 1968.

Mischel, W. Continuity and change in personality. American Psychologist, 1969, 24, 1012-1018.

Mischel, W. Toward a cognitive social learning reconceptualization of personality. Psychological Review, 1973, 80, 252-283.

Monson, T. C., & Snyder, M. Actors, observers and the attribution process. Journal of Experimental Social Psychology, 1977, 13, 89-111.

Nidorf, L. J., & Crockett, W. H. Cognitive complexity and the integration of conflicting information on written impressions. Journal of Social Psychology, 1965, 66, 165-169.

Orvis, B. R., Cunningham, J. D., & Kelley, H. H. A closer examination of causal inference: The roles of consensus, distinctiveness and consistency information. Journal of Personality and Social Psychology, 1975, 32, 605-616.

Orvis, B. R., Kelley, H. H., & Butler, D. Attributional conflict in young couples. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), New directions in attribution research. Vol. 1. Hillsdale, N.J.: Erlbaum Associates, 1976.

Passer, M. W., Kelley, H. H., & Michela, J. L. Multidimensional scaling of the causes for negative interpersonal behavior. Journal of Personality and Social Psychology, 1978, 36, 951-962.

Pilkonis, P. The influence of consensus information and prior expectations on dispositional and situational attributions. Journal of Social Psychology, 1977, 101, 267-279.

Regan, D. T., & Totten, J. Empathy and attribution: Turning observers into actors. Journal of Personality and Social Psychology, 1975, 32, 850-856.

Rosenthal, R., & Rosnow, R. The volunteer subject. New York: Wiley & Sons, 1975.

Ross, L. The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), Advances in experimental social psychology. Vol. 10. New York: Academic Press, 1977.

Ruble, D. N., & Feldman, N. S. Order of consensus, distinctiveness and consistency information and causal attributions. Journal of Personality and Social Psychology, 1976, 34, 930-937.

Schneider, D. J. Implicit personality theory: A review. Psychological Bulletin, 1973, 79, 294-307.

Shultz, T. R., & Butkowsky, I. Young children's use of the scheme for multiple sufficient causes in the attribution of real and hypothetical behavior. Child Development, 1977, 48, 464-469.

Shultz, T. R., & Mendelson, R. The use of covariation as a principle of causal analysis. Child Development, 1975, 46, 394-399.

Siegel, S. Nonparametric statistics. New York: McGraw-Hill, 1956.

Shrauger, S. Cognitive differentiation and the impression formation process. Journal of Personality, 1967, 35, 402-414.

Shrauger, S., & Altrocchi, J. The personality of the perceiver as a factor in person perception. Psychological Bulletin, 1964, 62, 289-308.

Smith, M. C. Children's use of the multiple sufficient cause schema in social perception. Journal of Personality and Social Psychology, 1975, 32, 737-747.

Snyder, M. Self monitoring of expressive behavior. Journal of Personality and Social Psychology, 1974, 30, 526-537.

Snyder, M. Attribution and behavior: Social perception and social causation. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), New directions in attribution research. Hillsdale, N.J.: Earlbaum Associates, 1976.

Snyder, M., & Monson, T. C. Person, situations and the control of social behavior. Journal of Personality and Social Psychology, 1975, 32, 637-644.

Snyder, M., & Tanke, E. A. Behavior and attitude: Some people are more consistent than others. Journal of Personality, 1976, 44, 501-517.

Stephan, W. G. Actor vs. observer: Attributions to behavior with positive or negative outcomes and empathy for the other role. Journal of Experimental Social Psychology, 1975, 11, 205-214.

Streufert, S., & Streufert, S. C. Effects of conceptual structure, failure and success on attribution of causality and interpersonal attitudes. Journal of Personality and Social Psychology, 1969, 11, 138-147.

Streufert, S., Suedfeld, P., & Driver, M. J. Conceptual structure, information search and information utilization. Journal of Personality and Social Psychology, 1965, 2, 736-740.

Tagiuri, R. Person perception. In G. Lindzey and E. Aronson (Eds.), Handbook of social psychology, Vol. 3. Reading, Mass.: Addison-Wesley, 1969.

Taylor, S. E., & Koivumaki, J. H. The perception of self and others: Acquaintanceship, affect and actor-observer differences. Journal of Personality and Social Psychology, 1976, 33, 403-408.

Vannoy, J. S. Generality of complexity-simplicity as a personality construct. Journal of Personality and Social Psychology, 1965, 2, 385-396.

Wegner, D. M., & Vallacher, R. R. Implicit psychology: An introduction to social cognition. New York: Oxford University Press, 1977.

Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. Perceiving the causes of success and failure. New York: General Learning Press, 1972.

Younger, J. C., Earn, B. M., & Arrowood, A. J. Happy accidents: Defensive attribution or rational calculus? Personality and Social Psychology Bulletin, 1978, 4, 52-55.

Zuckerman, M. Actions and occurrences in Kelley's cube. Journal of Personality and Social Psychology, 1978, 36, 647-656.

APPENDICES

APPENDIX A

LETTER REQUESTING THE GENERATION OF EVENTS

I need your help for my dissertation research! I would like you to think of sentences describing events that involve actions, opinions and emotions.

For example:

Action: John laughs at the comedian.

Opinion: Bill thinks his teacher is unfair.

Emotion: Sue is afraid of the dog.

Each sentence should have a subject who is a person. The object of the sentence (i.e., the stimulus or stimuli the person is reacting to) can be either a person or a thing (persons or things). Please be sure to have sentences with both persons or things as stimuli. Please include events that are unlikely or improbable as well as ordinary, everyday events. Include positive, negative and neutral events. Vary your verbs as much as possible within the action, emotion and opinion categories. Write about 6-8 sentences for each category, if possible.

Thank you.

APPENDIX B

EVENTS RATED IN THE SELECTION PHASE

1. Bob wrote a letter to his girlfriend.
2. Susan hugged her father.
3. Jim let his friend stay with him for a few days.
4. Jill gave her friend a present.
5. Carol sang songs to her children.
6. Sue loaned her friend $4,000 to help with her emergency medical bills.
7. Sam persuaded his friend not to commit suicide.
8. Bill risked his life in order to save his friend's.
9. Joe helped his friend build his own house.
10. Bob arranged an audition with a Hollywood producer for his friend.
11. Susan spanked her son.
12. John refused to speak to his roommate all afternoon.
13. Jean wrote a poor letter of recommendation for her assistant.
14. Joe told his roommate to shut up.
15. Sue made a sarcastic remark to the girl living down the hall.
16. Jan threw the vase at her friend.
17. Bill publicly accused John of criminal fraud.
18. Sue smashed all of her roommate's records.
19. Bob threatened the man with a knife.
20. Joe broke his neighbor's arm.
21. Jim enjoys talking with his roommate.
22. Chris likes his new neighbor.
23. Shirley is happy to hear Fred's news.
24. Sue is happy when she is with her friend.
25. The teacher is proud of his student's work.
26. Louis was glad to let his friend crash for three months.
27. Tom worshipped his professor.
28. Frank was ecstatic about his wife's success.
29. Fran still enjoys seeing her ex-husband.
30. Gail still cares for the man who beat her.
31. Jan is jealous of her husband's secretary.
32. Dave is annoyed with his roommate.
33. Jim dislikes the guy who lives down the hall.
34. Lois is bored by the lecturer's speech.
35. The professor was upset by the secretary's performance.
36. Joe can't tolerate being in the same room with his roommate's friend.
37. Judy is terrified of her father.
38. Sam is terribly upset about his professor's actions.

39. Linda is afraid of her ex-husband.
40. Jim feels completely humiliated when he sees the guy down the hall.
41. Dr. Smith believes that his students were highly interested in their classwork.
42. Sally thinks her friend deserves the job.
43. Steven believes his candidate will win the election.
44. Joe believes the child should be praised.
45. Sally thinks that Sue will do well on the test.
46. Joe believes that his friend's book will become a best seller.
47. Sheryl believes her ex-lover will return to her.
48. Judy believes her father is completely cured of cancer.
49. Gladys believes that her mother has never told a lie.
50. Sally believes her runaway son will return.
51. Sue thinks her roommate is promiscuous.
52. Bill disagrees with his friend's political views.
53. John thinks his friend has chosen the wrong career.
54. Bob thinks his mother doesn't pay enough attention to him.
55. Fred thinks his professor grades too hard.
56. Sue believes that the man should receive the death penalty.
57. Joe believes that the woman should be forced to give up her children.
58. Sally believes that her roommate deserved the crippling accident.
59. Cathy thinks that her friends should be expelled from school.
60. Henry thinks his friend was to blame for the burglary.

APPENDIX C

EVENT RATING FORM

The teacher is proud of his student's work.

1. Does the event described involve:

   a. an emotion or feeling
   b. an action or behavior
   c. an opinion, belief, or attitude
   d. other _____

2. How likely is this event to occur?

1	2	3	4	5	6	7
very unlikely						very likely

3. How likely is it that you would be in this situation (experience this emotion, hold this opinion or perform this action)?

1	2	3	4	5	6	7
very unlikely						very likely

4. Please rate this event on the following scales:

good	1	2	3	4	5	6	7	bad
unpleasant	1	2	3	4	5	6	7	pleasant
nice	1	2	3	4	5	6	7	awful
negative	1	2	3	4	5	6	7	positive

APPENDIX D

MEAN RATINGS OF EVENTS--SELECTION PHASE AND FINAL

Selection Phase

Event		%	M	S.D.	N	Event		%	M	S.D.	N
1	action	86			(51)	13	emotion	94			(51)
	likely		6.31	0.99	(51)		likely		5.78	1.27	(51)
	positive		24.31	4.88	(51)		negative		9.28	3.77	(51)
3	action	79			(53)	15	emotion	90			(51)
	unlikely		3.38	1.77	(53)		unlikely		4.06	1.86	(51)
	positive		23.76	4.32	(53)		negative		5.28	2.65	(51)
5	action	79			(52)	17	opinion	85			(53)
	likely		6.25	1.05	(52)		likely		6.15	1.00	(53)
	negative		11.09	4.31	(52)		positive		24.74	4.35	(53)
7	action	79			(53)	19	opinion	90			(51)
	unlikely		2.13	1.27	(53)		unlikely		3.14	1.83	(51)
	negative		5.04	1.91	(53)		positive		17.26	5.56	(51)
9	emotion	94			(51)	21	opinion	92			(49)
	likely		6.41	0.73	(51)		likely		6.39	1.08	(49)
	positive		26.71	2.01	(51)		negative		10.29	5.22	(49)
11	emotion	61			(51)	23	opinion	77			(53)
	unlikely		4.06	1.73	(51)		unlikely		2.53	1.64	(53)
	positive		17.94	5.68	(51)		negative		5.02	2.48	(53)

Final Ratings

Event		%	M	S.D.	N	Event		%	M	S.D.	N
1	action	75			(157)	13	emotion	84			(157)
	likely		6.31	1.24	(157)		likely		5.64	1.45	(157)
	positive		25.40	3.30	(156)		negative		8.56	4.02	(157)
3	action	62			(156)	15	emotion	84			(157)
	unlikely		3.82	1.75	(156)		unlikely		4.74	1.66	(157)
	positive		20.78	6.18	(155)		negative		5.71	3.15	(157)
5	action	66			(157)	17	opinion	67			(155)
	likely		5.88	1.36	(157)		likely		6.30	1.02	(155)
	negative		12.62	4.84	(157)		positive		25.59	4.27	(155)
7	action	69			(157)	19	opinion	76			(157)
	unlikely		3.20	1.83	(157)		unlikely		4.17	1.98	(157)
	negative		6.44	3.86	(157)		positive		19.48	6.64	(157)
9	emotion	89			(157)	21	opinion	75			(157)
	likely		6.50	0.83	(157)		likely		6.12	1.18	(157)
	positive		26.33	2.78	(157)		negative		10.95	4.70	(157)
11	emotion	54			(155)	23	opinion	51			(155)
	unlikely		4.96	1.59	(155)		unlikely		2.63	1.65	(155)
	positive		19.19	5.83	(155)		negative		5.50	3.22	(155)

APPENDIX E

INSTRUCTIONS TO PARTICIPANTS

One question asks you to indicate what information you would need or would find useful in trying to determine what caused the event. You might think about this question as though you were talking to someone who is telling you about the event. What questions would you ask in order to get a better understanding of why this event happened? Or, if the event happened to you, what information would another person ask you for in order to understand the causes of the event? Notice that we are not asking you to come up with a story explaining the event for this question. Instead, we're asking you what questions you would like to ask and what types of information you would like to receive before making an explanation. That is, what questions would, if you could get the answers, help you to come up with the best and most accurate explanation?

For example: Susan hugged her father.
You might want to list any or all of the following:
"how long had it been since Susan saw her father?"
"does Susan get along with her father?"
"did Susan's father just tell her some good news?"
etc.

The other question asks you to state why you think the event occurred. Answer this question as well as you can and in any way that seems appropriate.

How much you write depends entirely on you. The two questions are to be answered independently of each other. Do not think about your response to the first question when responding to the second question.

APPENDIX F

INSTRUCTIONS FOR THE REP TEST

MEASURE OF COMPLEXITY

DIRECTIONS

At the top of each of the following four pages you will find a word or phrase describing or indicating a person in a certain relation to you. You are to think of one person whom you know who is appropriate and place this person's initials in the blank to the right of the description. Then complete the page with that particular person in mind. Please think of four different people.

You will find a set of rating scales on the page. For example:

Wise 1 2 3 4 5 6 7 the opposite of wise

If you feel that "wise" is very characteristic of the person, then blacken in the space for a "1" in the answer column to the right of the rating scale. If you feel that "the opposite of wise" is characteristic of the person, you would then blacken in the space for a "7" in the column to the right. Use the numbers between 1 and 7 to indicate how close to each end of the scale you think the person is. If you feel that the person is neutral on the scale or if both sides of the scale apply, or if the scale seems completely irrelevant to the person then choose the number 4 as your rating.

Please do not omit any of the ratings.

THANK YOU

Best Friend _____

1.	responsible	1	2	3	4	5	6	7	the opposite of responsible
2.	the opposite of loving	1	2	3	4	5	6	7	loving
3.	competent	1	2	3	4	5	6	7	the opposite of competent
4.	warm	1	2	3	4	5	6	7	the opposite of warm
5.	open-minded	1	2	3	4	5	6	7	the opposite of open-minded
6.	the opposite of creative	1	2	3	4	5	6	7	creative
7.	the opposite of friendly	1	2	3	4	5	6	7	friendly
8.	the opposite of determined	1	2	3	4	5	6	7	determined
9.	considerate	1	2	3	4	5	6	7	the opposite of considerate
10.	the opposite of hardworking	1	2	3	4	5	6	7	hardworking
11.	wise	1	2	3	4	5	6	7	the opposite of wise
12.	dependable	1	2	3	4	5	6	7	the opposite of dependable
13.	intelligent	1	2	3	4	5	6	7	the opposite of intelligent
14.	understanding	1	2	3	4	5	6	7	the opposite of understanding
15.	the opposite of honest	1	2	3	4	5	6	7	honest
16.	outgoing	1	2	3	4	5	6	7	the opposite of outgoing
17.	the opposite of effective	1	2	3	4	5	6	7	effective
18.	easy-going	1	2	3	4	5	6	7	the opposite of easy-going
19.	confident	1	2	3	4	5	6	7	the opposite of confident
20.	the opposite of happy	1	2	3	4	5	6	7	happy
21.	the opposite of perceptive	1	2	3	4	5	6	7	perceptive
22.	witty	1	2	3	4	5	6	7	the opposite of witty
23.	skillful	1	2	3	4	5	6	7	the opposite of skillful
24.	the opposite of independent	1	2	3	4	5	6	7	independent

APPENDIX G

CODING PROCEDURE FOR ATTRIBUTIONS

In coding the attributions there were several basic categories of response. Any one attribution could reflect one or all of these categories. The basic categories were P, C, S1, S2, R1 and R2. All combinations were possible with a few limitations.

An attribution was coded as a P or as reflecting a P when there was mention of the characteristics of the person in the event (the subject of the sentence). There could be mention of the person's traits, needs, mood, behaviors or attitudes. The case was similar for the stimulus person (S1) or the person to whom the subject of the sentence responded. An attribution was coded as S1 or as reflecting S1 when there was mention of this person's traits, needs, mood, behaviors or attitudes. In some events there was a second stimulus which was a thing (in only one case was this another person) and S2 was coded when there were mentions of S2's characteristics. A circumstances attribution (C) was made when there was mention of a specific set of events or event that could precipitate the event in question. It was coded in combination with other categories when reference was made to a single instance or a limited time period, i.e., when the response indicated that the action had not occurred before or was not consistent with past behaviors, thus warranting the assumption that the action had occurred only under specific circumstances, although not specified in detail.

Another category used in coding the attributions reflected affective relationships between the persons and/or object in the event. Mention of P's liking for S1 was coded as R1. A subscript p-s was used to describe the direction of the affect, e.g., in the case of the attribution "P likes S1." The affect could also be mutual or there could be mention of the type of relationship between P and S1, e.g., "P and S1 get along well," or "P and S1 are going steady." In such a case no subscript was included in the code. When there was mention of an affective relationship with the object or thing in the sentence (S2), R2 was the notation used. An R2 code could also have subscripts, e.g., if "P likes the records," then $R2_{p-o}$ was the notation used. If "S1 likes S2" then $R2_{s-o}$ was appropriate. A more detailed explanation of the basic categories and their combinations is given below.

P

A person attribution (P) was coded when the explanation for the event implied that some characteristic of the person caused the event. Such characteristics could be long-term and trait-like or temporary states. P was coded when there was mention of any of the following:

a. general traits or characteristics of the person including behaviors consistently engaged in

Fred is lazy.
Gladys is naive.
Judy is scared of everything.
Sue is immature.

b. beliefs or values of the person

Joe believes in praising children.
Shirley likes to see other people happy.
Sue thought it would be funny.

c. the mood or state of the person

Sue was drunk.
Joe lost his temper.
Shirley was in a good mood.

d. the needs or wants of the person

Jim didn't want to be alone.
Tom needs to believe in somebody.
Joe didn't want to talk.

S1

A stimulus person (S1) attribution was coded when the explanation for the event implied that some characteristic of the other person involved in the event precipitated or caused the event. An S1 attribution could refer to any of the following:

a. general traits or characteristics of the stimulus person including behaviors consistently engaged in

The roommate was constantly loud.
The roommate is bossy.
The child is smart.

b. beliefs or values of the stimulus person

Mother believes you always get caught for lying.
Her father believes in child beating.

c. the mood or state of the stimulus person

The friend was lonely.
Her father was upset.

d. the needs or wants of the stimulus person

The friend wanted to visit.
The friend needed some company.

R1 and R2

A relational attribution (R1 and R2) consisted of a mention of the relationship between P and S1, P and S2 or S1 and S2. An R1 or R2 was coded for any of the following:

a. mention of feeling for or affect for another person (or thing). An R was coded with appropriate subscripts indicating direction (a "p" for person, an "s" for the stimulus person and an "o" for the stimulus object) for mentions of liking, disliking, loving, hating, respecting, trusting, adoring, having faith in, being jealous of another. Mentions of reciprocity were included here, such as getting even or taking revenge when stated in so many words, and could also show subscripts.

I love him.
She is jealous of her roommate.
Shirley is interested in Fred.

b. the state of the relationship or the type of relationship. Mention of being good or best friends, being close to, getting close to, knowing well, having an affair with or going steady were included here and did not have subscripts.

They are good friends.
She is my best friend.
The marriage is on the rocks.

c. familial ties.
Mentions of a familial relationship were also coded as R's when a familial relationship was not explicitly given in the event. When a family tie was specified in the event, an R was coded when there was mention of affect or the state of the relationship (as in A and B above) and also when the entire explanation for the event referred to this family tie. (E.g., the explanation, "because she is my mother" for the event "You believe that your mother has never told a lie" would be coded as an R1.)

He is my child.
Shirley is Fred's wife.

C

What constituted a C attribution varied somewhat from event to event. Generally, a C attribution was coded when there was mention of a specific event or set of circumstances external to both P and S1 and not emanating from P or S1. C was also coded for events that occurred in childhood when there was no strong statement of the present beliefs, traits or behaviors of the person.

Joe was praised as a child.
She had a bad experience.
Fred received a 1.0 in the class.

Other examples of C attributions:

There was a weather bulletin on TV.
They were kidding around.
They were seen eating lunch together.
It was an accident.

PC or CS

An explanation was coded as PC (or CS) when it referred to P's feelings, actions, intentions, needs, etc. and also mentioned some set of circumstances that influenced P (or S1) or was influenced by P (or S1). There could be reference to a single instance or a limited time period regardless of the extent of detail. Mention of some action on the part of P (or S1) that occurred only once was also coded as PC (or CS). For example, "He beat her once when she was young" would be coded with a C, whereas, "He is always beating her up" would not be coded with a C. Both the past tense and type of action described were considered, i.e., the past tense alone was not sufficient to assign a C, as shown in the following examples:

I had inherited money and could afford to pay her bills.
Fred doesn't pay attention and gets bad grades.
Jim just broke up with his girlfriend and needed someone to talk to.
It was Sue's birthday and she drank too much and became destructive.
I just totaled the family car.
I have disobeyed my father.

CS

The child helped someone in trouble.
My friend was in a car accident.
He tried to rape her.
She was being careless and fell.
She broke my records.

PS

An explanation was coded as PS when it involved P and S in combination. PS was coded when there was mention of characteristics of both P and S1: "Prof gives rough tests and he is stupid"; when P and S1 were compared on some dimension: "He is bigger and more powerful than she"; when there was a statement of belief or feeling on the part of one person regarding some action or aspect of the other person:

I view my mother as an honest person,
Jan thinks her husband has been unfaithful,
Her father looks scary to her,
Joe was upset with his roommate;

when there was a mention of sharing similar viewpoints or one person's emulating the other:

We have the same views and beliefs,
He is what I want to be,
He always wanted the qualities his professor possessed;

or when there was mention of S1 making P feel a certain way:

Roommate annoys Joe.
Roommate makes me mad.

PCS

In a PCS attribution, both P and S were important in the explanation, but the explanation also had a short-lived or temporary quality and/or introduced some additional external element, such as:

I was mad because she smashed mine.
Roommate was saying something that Joe doesn't want to hear.
The child did something he liked.
Fred did something that made Shirley feel good.
He is adept in a field I wish to do well in.
The friend needed a place to stay and Jim invited him to stay.

CR

An explanation involving mention of an affective relationship plus a specific circumstance or set of circumstances was coded as CR. Mention of a fight or argument between two persons or returning a favor was coded as CR.

He was returning a favor.
They were having a fight.
Jim and his friend are good friends who haven't seen each other for awhile.
Jim likes her a lot and they had lots to talk about.

PR

In addition to some mention of an affective relationship, there was also mention of P's wants, beliefs, feelings, etc. in this type of attribution.

She wanted revenge.
She hates her roommate and wants her to leave.
I felt obliged to lend the money.
He was friend enough so I would want him to stay with me.
Jan is insecure in her marriage.
Gladys may not be close enough to know better.

SR

In this type of attribution there was mention of an affective relationship and some characteristic or quality of S.

She is a close friend who can be trusted and who would do the same for me.
Prof is cool and I have an enormous crush on him.

CSR

A CSR attribution was coded when there was mention of an affective relationship, qualities or characteristics of S and a specific set of circumstances or an affective relationship and a specific act on the part of S.

We had a bad fight in which my roommate did some harm to me or my property.
He is my son and he just won his first race in track.
The friend was a close friend who needed the money.

Other Combinations

PSR

Sue and her friend are very close and would do anything for each other.
Because they thought alike and hit it off great.

PCR

I acted irrationally in response to a disagreement I had with my roommate.
They were fighting and Joe said it in anger.
It was Tom's favorite subject and he had a crush on the prof.

PCSR

Sally had some disagreement with her roommate in which she believed her friend to be wrong in doing something. She is a close friend and I feel since I have the money and she doesn't, I can help her.

Finally, here are some examples of the types of attributions made when the event contained an S2.

PCS2

They were old records that were warped and scratched . . . they were smashed to take out my frustrations.
I am a very jealous person and I think my wife's secretary may steal her from me.

$R2_{p-o}$

I hate punk rock.

$R1_{p-s}$ $R2_{p-o}$

Sue doesn't like her roommate or her records.
Her husband no longer loves her, he loves his secretary.

$PCS1R2_{p-o}$

She plays soul music and I hate soul music and she plays it too loud. I got mad one day.

Special Concerns in Coding the Attributions

1. Words or phrases which might imply an affective bond, such as protecting, defending, helping, paying special attention to and so on, were not coded as R's but were viewed as actions or behaviors on the part of P or S and were coded accordingly.

2. If mention was made of P's liking for a specific aspect of S's behavior or a particular characteristic of S, then the attribution was coded as PS (e.g., She is jealous of her roommate's successful life, she cares about her friend's health), or as a PCS (e.g., the child did something that Joe liked). An R was coded only when there was mention of a general like or dislike for S.

3. An explanation of the sort, "P hates S because of the rotten things S does or the rotten thing S did" was coded as SR or CSR.

4. Generally, if P was feeling a certain emotion and S provoked or elicited it and the emotion could be directed at someone, then the explanation was coded as PS (or PCS). E.g., if P was mad, angry, pissed off, or annoyed with (at) S, or if S made P angry, upset, annoyed, the explanation was coded as PS (or PCS). This did not apply when P was angry, mad, pissed off or annoyed and it was not specified that the anger was directed at S or when S insulted, embarrassed, hurt, disturbed, disrupted, treated badly, or was mean to P. In the latter instances, the verb involved did not imply that the emotion could be directed at S. Such attributions were coded as simply P or S.

5. For the four opinion events, when the subject of the sentence was the respondent and not another person (i.e., participants responded to the event, "You believe the child should be praised") general belief statements not beginning with "I believe" were sometimes coded as P's. For example, if in response to the above event, the participant made a general statement regarding all children or a child (but not the particular child mentioned in the event), the explanation would be coded as a P, e.g., "To make a child have self-confidence in himself." This was viewed as indicating that the person believes that praising a child (any child) will make the child have confidence in him/herself and is expressing P's general beliefs. However, if the statement referred to the specific child mentioned in the event and there was no explicit indication of the respondent's belief (e.g., "because the child finally learned something and should be reinforced") then the explanation was not coded as a P.

6. Although a statement such as "because she broke mine" in response to the event, "You smashed all of your roommate's records," indicated reciprocity, it was not coded as an R. An R was only coded when there was a statement using the words "getting even" or "revenge" specifically.

APPENDIX H

ATTRIBUTIONS: ADDITIONAL RESULTS

The following describes the results of the ANOVAs for each attribution category. The main effects are presented and their interaction, if significant. Additional results pertaining to the effects of the personality variables are also presented. The means are listed following presentation of the results.

P Attributions

Significant main effects indicated that more P attributions were made for events involving another than for self events, for unlikely events than for likely events, and for opinions than for emotions or actions. The three-way interaction was significant, with the most P attributions being made for unlikely opinion events involving another. These events were, "Gladys believes that her mother has never told a lie," and "Sally believes that her roommate deserved the crippling accident." Fewest P attributions were made for unlikely emotion events involving the self, i.e., "You are terrified of your father," and "You worshipped your professor."

S Attributions

More S attributions were made for unlikely than for likely events, for events pertaining to the self than for events pertaining to others and for emotions than for opinions or actions. The two-way interaction for likelihood and type of event was significant, with unlikely emotions receiving the most S attributions. The events involved were, "Tom worshipped his professor" and "Judy is terrified of her father."

C Attributions

More C attributions were made for likely events than for unlikely events and for opinions than for emotions or actions. The two-way interaction between likelihood and type of event was significant, with likely opinions receiving the most C attributions. The events involved were "Joe believes the child should be praised" and "Fred thinks his professor grades too hard." The fewest C attributions were made for likely emotions, i.e., "Jan is jealous of her husband's secretary" and "Shirley is happy to hear Fred's news."

PC Attributions

The significant main effects indicated that more PC attributions were made for negative events than for positive events, for likely events than for unlikely events, for opinions than for emotions or actions and for events involving another than for self events. The four-way interaction was not significant. However, all possible three-way interactions were significant.

CS Attributions

Main effects showed that more CS attributions were made for positive events than for negative events, for self events than for other events and for opinions than for emotions or actions. The three-way interaction was significant. The most CS attributions were made for positive opinions pertaining to the self, i.e., "You believe the child should be praised" and "You believe that your mother has never told a lie." The fewest CS attributions were made for negative opinions involving another, i.e., "Fred thinks his professor grades too hard" and "Sally believes that her roommate deserved the crippling accident."

PS Attributions

More PS attributions were made for positive events than for negative events, for unlikely events than for likely events, for emotions than for actions or opinions and for other events than for self events. The four-way interaction was not significant. The significant three-way interaction between positivity, likelihood and type of event indicated that positive likely emotions received the most PS attributions, i.e., "Shirley is happy to hear Fred's news," followed closely by positive unlikely emotions, i.e., "Tom worshipped his professor." Fewest PS attributions were made for positive likely opinions, i.e., "Joe believes the child should be praised." The significant three-way interaction between likelihood, type of event and the self-other factor showed that the most PS attributions were made for likely emotions pertaining to the self, i.e., "You are happy to hear Fred's news" and "You are jealous of your husband's (wife's) secretary" and least for likely opinions (self and other), i.e., "Joe believes the child should be praised" and "Fred thinks his prof grades too hard."

PCS Attributions

Significant main effects showed that more PCS attributions were made for negative events than for positive events, for actions than for emotions or opinions. The two-way interaction was not significant. However, the main effect for likelihood of the event was marginally significant ($p = .057$). The significant three-way interaction between positivity, likelihood and type of event indicated that most PCS attributions were made for negative likely actions, i.e., "Joe told

his roommate to shut up" and least for positive unlikely opinions, i.e., "Gladys believes that her mother has never told a lie."

Self-Monitoring

The ANOVAs showed no significant main effects for the self-monitoring variable. There was a significant interaction between self-monitoring, type of event and likelihood of event for the number of attributions, a four-way interaction for the number of PC attributions, a significant five-way interaction for the number of CS attributions, and a four-way interaction for the number of PCS attributions, none of which were interpretable. There was a marginally significant main effect ($p = .06$) for self monitoring on the number of multiple sufficient attributions with high self-monitors tending to make more of these type of attributions than low self-monitors. Self-monitoring had no effect on the number of attributions made or complexity of attribution.

Intolerance of Ambiguity

A significant main effect for intolerance of ambiguity on the number of PCS attributions indicated that tolerant persons made significantly more of this type of attribution than did intolerant persons. A significant interaction between positivity of the event, likelihood and intolerance of ambiguity showed that the difference in number of PCS attributions for intolerant and tolerant persons was greatest for negative unlikely events and positive likely events.

Finally, there was a significant interaction involving intolerance of ambiguity on the number of P attributions made. The three-way interaction between positivity of the event, the self-other factor and intolerance of ambiguity indicated that the greatest difference in response for intolerant and tolerant persons was for negative events involving the self, with tolerant person making more P attributions for these events than intolerant persons.

Intolerance of ambiguity had no effect on the number of attributions made, attribution complexity or the number of multiple sufficient attributions.

Cognitive Complexity

There was a significant interaction between cognitive complexity and the self-other factor. Simple participants made more complex attributions for self events than other events while complex participants made more complex attributions for others than for the self. A three-way interaction between cognitive complexity, the self-other factor and positivity of the event indicated that this pattern held for negative events but not for positive events. For positive events, simple participants made more complex attributions for other events than for self events.

A significant interaction between likelihood of the event and complexity of the participant showed that for unlikely events, complex participants made more Circumstances attributions than simple participants, whereas for likely events, simple participants made more Circumstances attributions than complex participants.

Cognitive complexity and the self-other factor affected the number of attributions made. The greatest difference between simple and complex respondents was in their response to self events; simple participants made more attributions for self events than did complex participants while complex participants made more attributions for other events than did simple participants.

Person Attributions--Means

			Degrees of Freedom	F-Ratio	Approx. F Prob.
Main effects:					
Likely		.09744	1,129	12.521	.001
Unlikely		.13269			
Action		.12981	2,258	12.120	<.0005
Emotion		.07596			
Opinion		.13942			
Self		.08141	1,129	50.140	<.0005
Other		.14872			
Interactions:					
Likelihood X Type of Event X Self-Other					
Self--Likely--	Action	.06923	2,258	5.596	.004
	Emotion	.07692			
	Opinion	.07692			
Self--Unlikely--	Action	.11538			
	Emotion	.03077			
	Opinion	.11923			
Other--Likely--	Action	.10385			
	Emotion	.14615			
	Opinion	.11154			
Other--Unlikely--	Action	.23077			
	Emotion	.05000			
	Opinion	.25000			
Also Significant:					
Positivity X Likelihood			1,129	6.536	.012
Positivity X Self-Other			1,129	5.309	.023
Likelihood X Type of Event			2,258	17.672	<.0005
Likelihood X Self-Other			1,129	4.454	.037
Positivity X Likelihood X Self-Other			2,258	9.709	<.0005

Personality Variables:		Degrees of Freedom	F Ratio	Approx. F Prob.
Simple participants	.135890	1,128	4.546	.035
Complex participants	.094231			
Intolerance X Positivity X Self-Other				
Intolerant--Positive--Self	.08205	1,128	4.783	.031
Intolerant--Positive--Other	.12051			
Intolerant--Negative--Self	.05641			
Intolerant--Negative--Other	.17179			
Tolerant--Positive--Self	.08974			
Tolerant--Positive--Other	.14615			
Tolerant--Negative--Self	.09744			
Tolerant--Negative--Other	.15641			
Stimulus Attributions--Means				
Main Effects:				
Likely	.09679	1,129	5.605	.019
Unlikely	.12179			
Action	.03365	2,258	73.915	<.0005
Emotion	.21058			
Opinion	.08365			
Self	.12564	1,129	11.271	.001
Other	.09295			
Interactions:				
Likelihood X Type of Event				
Likely--Action	.05769	2,258	11.238	<.0005
Emotion	.17307			
Opinion	.05962			
Unlikely--Action	.00962			
Emotion	.24807			
Opinion	.10769			
Also Significant:				
Positivity X Likelihood		1,129	3.921	.050
Likelihood X Type of Event		2,258	11.238	<.0005
Positivity X Likelihood X Type of Event		2,258	7.422	.001
Positivity X Type of Event X Self-Other		2,258	9.585	<.0005
Positivity X Likelihood X Self-Other		2,258	3.815	.023

Personality Variables:		Degrees of Freedom	F Ratio	Approx. F Prob.
Intolerant persons	.12821	1,128	5.495	.021
Tolerant persons	.09038			
Circumstances Attributions--Means				
Main Effects:				
Likely	.08269	1,129	18.197	<.0005
Unlikely	.04423			
Action	.06634	2,258	12.940	<.0005
Emotion	.03365			
Opinion	.09038			
Interactions:				
Likelihood X Type of Event				
Likely--Action	.09808	2,258	7.099	.001
Emotion	.02692			
Opinion	.12308			
Unlikely--Action	.03462			
Emotion	.04039			
Opinion	.05769			
Also Significant:				
Positivity X Likelihood		1,129	4.260	.039
Positivity X Type of Event		2,258	7.751	.001
Type of Event X Self-Other		2,258	4.625	.011
Positivity X Likelihood X Type of Event		2,258	73.180	<.0005
Positivity X Likelihood X Self-Other		1,129	14.215	<.0005
Personality Variables:				
Complexity of Participant X Likelihood				
Simple--Likely	.09744	1,128	4.057	.046
Simple--Unlikely	.04103			
Complex--Likely	.06795			
Complex--Unlikely	.04744			
PC Attributions--Means				
Main Effects:				
Positive	.14551	1,129	4.301	.040
Negative	.11026			
Likely	.04230	1,129	8.685	.004
Unlikely	.05833			

		Degrees of Freedom	F Ratio	Approx. F Prob.
Action	.04904	2,258	4.244	.015
Emotion	.03654			
Opinion	.06538			
Self	.03589	1,129	14.622	<.0005
Other	.06474			
Also Signficant:				
Positivity X Likelihood		1,129	15.061	<.0005
Positivity X Type of Event		2,258	8.438	<.0005
Likelihood X Type of Event		2,258	32.623	<.0005
Likelihood X Self-Other		1,129	8.470	.004
Type of Event X Self-Other		2,258	7.148	.001
Positivity X Likelihood X Type of Event		2,258	10.254	<.0005
Positivity X Likelihood X Self-Other		1,129	6.811	.010
Positivity X Type of Event X Self-Other		2,258	4.028	.019
Likelihood X Type of Event X Self-Other		2,258	13.600	<.0005
CS Attributions--Means				
Main Effects:				
Positive	.28910	1,129	11.293	.001
Negative	.23269			
Action	.25192	2,258	4.309	.014
Emotion	.23750			
Opinion	.29327			
Self	.29359	1,129	22.251	<.0005
Other	.22821			
Interactions:				
Positivity X Self-Other X Type of Event				
Positive--Self-- Action	.26923	2,258	3.154	.044
Emotion	.20769			
Opinion	.47308			
Negative--Self-- Action	.26154			
Emotion	.31923			
Opinion	.23077			
Positive--Other--Action	.28461			
Emotion	.18077			
Opinion	.31923			
Negative--Other--Action	.19231			
Emotion	.24231			
Opinion	.15000			

Also Significant:			Degrees of Freedom	F Ratio	Approx. F Prob.
Positivity X Likelihood			1,129	17.979	<.0005
Positivity X Type of Event			2,258	24.616	<.0005
Likelihood X Type of Event			2,258	7.814	.001
Type of Event X Self-Other			2,258	4.241	.015
Likelihood X Type of Event X Self-Other			2,258	6.763	.001
PS Attributions--Means					
Main Effects:					
Positive		.14551	1,129	9.272	.003
Negative		.11026			
Likely		.11154	1,129	7.438	.007
Unlikely		.14423			
Action		.09423	2,258	48.414	<.0005
Emotion		.20962			
Opinion		.07981			
Self		.11410	1,129	7.375	.008
Other		.14167			
Interactions:					
Positivity X Likelihood X Type of Event					
Positive--Likely--	Action	.09615	2,258	6.535	.002
	Emotion	.25769			
	Opinion	.01923			
Positive--Unlikely--	Action	.11923			
	Emotion	.24231			
	Opinion	.13846			
Negative--Likely--	Action	.02692			
	Emotion	.23462			
	Opinion	.03462			
Negative--Unlikely--	Action	.13462			
	Emotion	.10385			
	Opinion	.12692			
Likelihood X Self-Other X Type of Event					
Likely--Self--	Action	.05385	2,258	3.290	.039
	Emotion	.25000			
	Opinion	.02692			
Likely--Other--	Action	.06923			
	Emotion	.24231			
	Opinion	.02692			
Unlikely--Self--	Action	.07692			
	Emotion	.19231			
	Opinion	.08462			
Unlikely--Other--	Action	.17692			
	Emotion	.15385			
	Opinion	.18077			

Also Significant:		Degrees of Freedom	F Ratio	Approx. F Prob.
Positivity X Type of Event		2,258	4.006	.019
Likelihood X Type of Event		2,258	17.354	<.0005
Likelihood X Self-Other		1,129	4.787	.030
Type of Event X Self-Other		2,258	5.828	.003
PCS Attributions--Means				
Main Effects:				
Positive	.23526	1,129	9.009	.003
Negative	.27820			
Action	.36442	2,258	52.636	<.0005
Emotion	.18557			
Opinion	.22019			
Interactions:				
Positivity X Likelihood X Type of Event				
Positive--Likely-- Action	.16538	2,258	51.425	<.0005
Emotion	.13846			
Opinion	.33077			
Positive--Unlikely--Action	.48077			
Emotion	.21538			
Opinion	.08077			
Negative--Likely-- Action	.52308			
Emotion	.18077			
Opinion	.28846			
Negative--Unlikely--Action	.28846			
Emotion	.20769			
Opinion	.18077			
Also Signficant:				
Positivity X Likelihood		1,129	23.109	<.0005
Likelihood X Type of Event		2,258	24.154	<.0005
Type of Event X Self-Other		2,258	5.962	.003
Positivity X Type of Event X Self-Other		2,258	4.138	.017
Positivity X Type of Event X Likelihood X Self-Other		2,258	6.855	.001
Personality Variables:				
Intolerant persons	.22372	1,128	4.863	.029
Tolerant persons	.28974			

Positivity X Likelihood X Intolerance			Degrees of Freedom	F Ratio	Approx. F Prob.
Positive--Likely--	Intolerant	.15128	1,128	7.706	.006
	Tolerant	.27179			
Positive--Unlikely--	Intolerant	.25641			
	Tolerant	.26154			
Negative--Likely--	Intolerant	.31026			
	Tolerant	.35128			
Negative--Unlikely--	Intolerant	.17692			
	Tolerant	.27436			

Attribution Complexity--Means

Main Effects:

Likely	2.0744	1,129	8.974	.003
Unlikely	1.9846			
Action	2.1808	2,258	31.640	<.0005
Emotion	2.0038			
Opinion	1.9038			

Interactions:

Likelihood X Type of Event

Likely-- Action	2.0846	2,258	21.832	<.0005
Emotion	2.1000			
Opinion	2.0385			
Unlikely--Action	2.2769			
Emotion	1.9077			
Opinion	1.7692			

Personality Variables:

Cognitive Complexity X Self Other

Simple-- Self	1.9923	1,128	4.872	.029
Other	1.8962			
Complex--Self	2.1026			
Other	2.1269			

Cognitive Complexity X Positivity X Self-Other

Simple-- Positive--Self	1.9359	1,128	7.000	.009
Other	1.9615			
Simple-- Negative--Self	2.0487			
Other	1.8308			
Complex--Positive--Self	2.1103			
Other	2.1179			
Complex--Negative--Self	2.0949			
Other	2.1359			

Also Significant:		Degrees of Freedom	F Ratio	Approx. F Prob.
Positivity X Likelihood		1,129	8.702	.004
Positivity X Type of Event		2,258	7.892	<.0005
Type of Event X Self-Other		2,258	4.994	.007
Positivity X Type of Event X Likelihood		2,258	33.961	<.0005
Positivity X Type of Event X Self-Other		2,258	7.322	.001
Positivity X Type of Event X Likelihood X Self-Other		2,258	4.369	.014
Number of Attributions Made--Means				
Main Effects:				
Action	1.3115	2,256	13.500	<.0005
Emotion	1.2711			
Opinion	1.2028			
Interactions:				
Positivity X Likelihood				
Positive--Likely	1.2564	1,128	4.557	.035
Unlikely	1.2564			
Negative--Likely	1.3038			
Unlikely	1.2307			
Likelihood X Self-Other				
Likely--Self	1.2974	1,128	7.145	.008
Other	1.2628			
Unlikely--Self	1.2128			
Other	1.2743			
Multiple Sufficient Attributions--Means				
Main Effects:				
Likely	.04166	1,128	6.070	.015
Unlikely	.02821			
Self	.02885	1,128	5.211	.024
Other	.04103			
Interactions:				
Positivity X Likelihood				
Positive--Likely	.04487	1,128	6.958	.009
Unlikely	.01666			
Negative--Likely	.03846			
Unlikely	.03974			

APPENDIX I

CODING PROCEDURE FOR INFORMATION REQUESTS

The information requests were coded into a number of main categories and subcategories. Three of the categories represented consensus, consistency and distinctiveness information requests as defined by Kelley.

Distinctiveness requests asked whether the Person (the subject of the sentence) responded in the same or similar way to other objects or persons:

> Is Judy afraid of all men?
> How many profs has Tom worshipped?
> Has Sue smashed any other objects before?
> Is Jan jealous of other women too?

Consensus information requests asked whether other persons responded to the Stimulus Person (or Object) in the way that the Person (P) did:

> Are others terrified of him?
> Did everyone else worship this professor?
> Do others feel the child should be praised?
> Would others be happy to hear Fred's news?

Consistency information requests asked how P responded to the Stimulus in the past or whether P has responded to the Stimulus in the past.

> How often is she terrified of her father?
> Does Joe tell his roommate to shut up all the time?
> Has Sue smashed records before?
> Has Jan always been jealous of the secretary?

The other main categories of request involved information requests referring to P (the Person or the subject of the sentence), S1 (the Stimulus Person in the sentence), S2 (the Stimulus Object and in one case a second Stimulus Person), the Relationship between P and S1 (R1), the Relationship between the Stimulus Object and P or S1 (R2) and External Factors. There was also a category of request labeled Interactions; these requests did not pertain to P or S or R alone but to two elements in combination. Such requests differed from requests for affective or relational information and should not be confused with these. There was also a Miscellaneous category for

requests not defined by any other category and an Uncodable category which included requests that were incomprehensible, irrelevant or illegible. Explanations of the main categories and subcategories, including examples, will now be presented.

P and S1

There were eleven subcategories which defined the information requests made regarding P or S1. These subcategories reflected a range of information which might be requested regarding a person. The discussion is phrased in terms of P but the subcategories applied to S1 in a similar manner. The examples given include examples for both P and S1.

P-1. Identification of the person. Requests regarding the identity of P as well as P's age, sex, race, marital status and where P lives constituted requests for basic identifying information and were coded as P-1's (or S1-1's).

Is the friend male or female?
How old is Jim?
Who was his friend?
Where does Sally live?

P-2. Personality traits or general characteristics of the person. Requests regarding appearance (Is P good-looking?), character (Is P honest?), personality traits (Is P shy?) or other characterizations (Is P moody, nice?) were coded as P-2's (or S1-2's). Characterizations referring to adjustment and competence were included here, i.e., is P sane, well-adjusted, neurotic, etc. Requests were usually in the form, "Is P (adjective)?" although "Is P (noun)" were also possible (e.g., "Is she an interesting person?). This category also included such requests as "What type or kind of person is P?" "What is P's personality like?" and requests for "information about P."

What is her mother like?
What does he look like?
Is the child smart?
Does she get upset easily?
Is he a poor student?

P-3. Actions, behaviors and habits of the person. Requests focusing on specific actions or behaviors of P ("Did P do X?" or "What was P doing?") were coded as P-3's (or S1-3's). Behaviors implying negative or positive affect if stated in terms of an action verb (e.g., "Does she show her love?") were included here.

Did she run away from home?
Did he ask to stay?
What did Judy do?
Does the secretary flirt?

P-4. Preferences, likes, needs or wants of the person. These requests pertained to the person's preferences, likes and dislikes (when not directed toward S1 or S2), wants or needs (psychological, intrapsychic needs). "Is P religious?" or "Is P homosexual?" were included in this category.

Did he like the class?
What kind of music does he like?
Does she want to see her suffer?
Did he want company?

P-5. Cognitions and perceptions of the person. These requests were less psychological than the requests in P-4. They focused on cognitive and perceptual processes. Words such as intends, plans, suspects, is aware of, knows, understands, thinks that, and believes that (when not directed toward S or an aspect of S) usually indicated that such requests belonged in this category.

Does Tom intend to be a professor?
Is Tom thinking of majoring in that subject?
Did she plan to repay the loan?
What were his thoughts about graduating?

P-6. Emotional and mood states. These requests focused on the internal feeling states of the person--is P lonely, upset, scared, in a good mood, feeling guilty, feeling proud, etc. "Is P having (personal) problems" was also coded as P-6 (or S1-6).

Does she feel responsible?
Does the child feel neglected?
Was the friend feeling badly?
What was her emotional state?

P-7. Transitory states of a circumstantial nature. Requests implying or indicating that certain circumstances or an outside force were operating on P were coded as P-7's (or S1-7's). Requests asking whether P was in trouble, out of money or out of work were included in this category. Questions regarding P's needs were also included here when the need was not intrapsychic, i.e., when P needed something material or something specific due to circumstances, e.g., needing a place to stay.

Does the friend need a place to stay?
Was I being careless?
Did he run out of money?
Was Joe busy?
What situation was he in?

P-8. Background or home life. Requests for information regarding P's recent past (What happened to P during the day?), far past (Was P praised as a child?) or homelife (Does P have a mother?) were coded as P-8's (or S1-8's).

Does he live alone?
Does she have a family to help out?
Was she brought up in a strict household?
Had he been down on his luck lately?
Does he usually get good grades?

P-9. Future state. Requests regarding the state of P following the event were coded in this category. Such requests focused on how the event would affect P in the immediate or the far future.

Will the news change Fred's life drastically?
What are the lifelong effects?
Will the news brighten Shirley's day?
Will this give the roommate her freedom?

P-10. Purposiveness or seriousness of motives or intentions. Requests such as "Did P do it on purpose?" "Did P plan it?" "Was it P's fault?" "Did P deserve it?" "Did P really feel this way?" "Will P benefit or gain by this?" "Was P just trying to be or do X?" (suggesting an alternative or underlying motive) as well as "Why did P do X?" or "What was the reason for P doing X?" were coded as P-10's (or S1-10's).

Was Sue pressured into it or did she do it willingly?
Was I forced to believe this?
Did I have good reason to tell him to shut up?
Did I say something I didn't mean?
What did she gain by this?
Did roommate deserve such a judgment?
Is there any reason for Gladys to believe otherwise?

Some of the requests assigned to this category asked whether the cause of event could be assigned to P or to not-P or to S or not-S .

Was it just her imagination?
Should I worship him?

This was also the case for opinion events when the questions were "Does the professor grade too hard?" "Has the mother ever lied?" or "Does she deserve the accident?" These questions essentially asked, "Is it true that S behaved in the way described in the event?" The answer to such a question would allow one to assign the cause of the event to S or not-S. These requests were coded as S1-10's.

P-11. Miscellaneous. Requests regarding P but not clearly falling into any other subcategory were coded as P-11's (or S1-11's).

What is her lifestyle?
Does Jim have room for his friend?

S2

When there was a stimulus object present in the event, not all of the above subcategories applied. However, the first and second subcategories were used frequently.

S2-1. Identification of S2

Which records?
What is the news?

S2-2. Characteristics of S2

What type of records were they?
Were they old records?
Was the news optimistic?
Is it important news?

Relational Information Requests

Requests regarding the affective relationship between the person and the stimulus person were defined by three subcategories:

R1-1. Affect between persons or the feelings one person has for another. Requests asking whether one person feels a certain way about another or how one person feels about another were included in this subcategory.

Does Sally hate her roommate?
Does Tom respect his professor?
How does Judy feel about her father?

R1-2. The type of relationship or state of the relationship. Requests regarding the type or state of a relationship were coded as R1-2's. This category included requests regarding mutual affect as well as requests regarding revenge or returning favors.

Do they get along well?
Do they like each other?
Is this a close friend?
How well does Gladys know her mother?
Are they fighting?
Are you dependent on him?
Did Sue do it for revenge?
What is the relationship between them?

R1-3. Existence of a family tie. Some requests focused on whether the two persons in the event were members of the same family or were married. These requests were coded as R-3's.

Is Tom related to the prof?
Is Shirley married to Fred?
Is the child Joe's child?
Was this her real mother?

Similarly, Relational information requests were made pertaining to the Stimulus Object when it was a thing, e.g., "Does Sue hate the records?" "Does Shirley like the news?" These requests were coded as R2-1's. When the Stimulus Object was a second person, the three subcategories described above were applicable.

External Factors Information Requests

Requests for information pertaining to External Factors or circumstances influencing the event or requests for further detail regarding the event were coded into four subcategories.

E-1. Antecedent conditions or circumstances leading up to or influencing the event. Such requests focused on events or circumstances that might have been present prior to the event in question or may have influenced the event in question.

What were events leading up to the friend coming over?
Who told her this?
What went on before the accident?
What caused the accident?
Were they seen together privately?
What events made her jealous?

E-2. Situational factors such as the social setting, at the time of the event or detail regarding the event. Questions which requested greater detail regarding the event were coded as E-2's.

Who was in the room at the time?
Whose stereo were the records being played on?
What was the topic of conversation?
How long did the friend stay?
Is the emergency bill necessary?
Did her roommate see it happen?
What kind of accident was it?

E-3. Miscellaneous requests including future consequences of the event. Requests regarding the situation following the event in question or consequences of the event were coded as E-3's.

How will this affect their lives?
What will happen after the accident?
When will the money be repaid?

Interaction Information Requests

Such requests could not be assigned easily to P or S or R but had meaning in terms of two elements in conjunction. This was the case for requests focusing on a comparison between two persons or requests focusing on one person's thoughts or feelings about a specific act on the part of another. Thus, requests of the form "Has P ever seen, or caught S1 doing X?" or "Does P know or is P aware of S1 doing X?" were coded as Interactions.

Had I ever seen him hurt someone else?
Does she suspect her husband is unfaithful?
Does he expect too much of me?
Is she better looking than I?
Was roommate bothering him?
Did she trust her to pay it back?
Did she hold different opinions than Sally?
What things do Tom and his prof have in common?
Does she not like the music her roommate likes?

In addition, the Interaction request could focus on a person and a relationship in combination.

Is she insecure about her marriage?
Is she insecure about his feelings for her?
How does Jan feel about their relationship?

Consistency-like, Distinctiveness-like and Consensus-like Requests

It was noted that certain information requests were similar to the traditional consistency, distinctiveness and consensus information categories defined by Kelley. When Kelley discussed these types, they were defined from the point of view of the actor, i.e., does the Person respond in a similar way to similar stimuli (distinctiveness), how has the Person responded in the past to the same or similar stimuli (consistency) and do others respond to the stimulus in the same way (consensus).

Some distinctiveness-like requests were made that made an assumption regarding S's behavior or treatment of P and then asked whether S treated all persons this way (distinctiveness of S's behaviors).

Does he beat up everyone?
Is the roommate cruel to everyone?

Other distinctiveness-like requests pertained to P's behavior, but not to the behavior described in the event.

Does she hate all cripples?
Does he like all children?

Consistency-like requests often focused on how S responded in the past.

Does he always talk loudly?
How often has he beaten you?
("He" is the Stimulus Person.)

Consensus-like requests focused not on others' opinions of the stimulus but rather on others' opinions of the Person.

What do other people think of Tom?
(Tom is the Person, i.e., the subject of the sentence.)

Other requests which were consistency-like focused on the history of the relationship between two people.

How long have they known each other?
Do they fight often?

Finally some information requests represented combinations of consistency and distinctiveness information.

Does he always treat everyone this way?

In each case these requests were assigned to the appropriate category depending on content and also received a designation as either consistency-like, consensus-like, distinctiveness-like or as both consistency-like and distinctiveness-like.

Form of the Requests

Some of the requests hypothesized an explanation for the event and simply asked if this were the case, e.g., "Was Sue angry with her rommate?" or "Was their relationship on shaky ground?" Such requests were referred to as hypothesis-type requests, and were designated as such. Other requests asked for descriptive information. These requests were usually prefaced by words such as how, what, where and when. "What was the person doing?" "How do they get along? or "What was his age?" were designated as descriptive-type requests. Some requests began with "why" or "what was the reason." When asked about a person, these requests focused on the motives or intentions underlying a behavior, need, mood, belief, etc. Although such requests were not limited to persons (e.g., "Why did the accident

happen?") they were called motive-type requests and were designated as such. Each request made received a designation as one of these three forms of request.

Special Concerns in Coding the Information Requests

1. Some single requests appeared to be asking for two pieces of information or asked which of two explanations applied (e.g., Was it X or Y?). Requests such as, "What was each of them doing?" "What were both of their personalities like?" or "Is the friend feeling ill or lonely?" were coded and counted as two requests. In such cases the content of the two aspects of the request could not be assigned to one category.

However, if the content of the two parts of the request could be assigned to the same category, the request was coded as one request. "Are they friends or lovers?" was coded as R1-2 since the question basically asked for information regarding the type of relationship between two persons. Similarly, "Does the husband seem impressed with the secretary or is it just Jan's imagination?" by posing two alternatives, asked if there was justification for P's behavior and belonged with requests in subcategory 10.

2. Requests in the form, "What has S done to make the event occur?" (e.g., What did the professor do to make Tom worship him?) were coded as S1-3's.

3. The categories were not necessarily mutually exclusive. Some requests often could be placed in more than one category. E.g., "Did she warn her roommate first?" could be viewed as an Antecedent Condition (E-1). However, since its focus was on P's actions, it was coded as P-3. "Is he homosexual?" or "Is she religious?" could be viewed as characteristics of P as well as preferences. These were coded as P-4's but could have also been coded as P-2's. "What is his attitude toward himself?" and "Does he have a poor self-image" were coded as P-4 and P-2, respectively, because of the slightly different form of the requests. However, they could have easily been placed in the same category because of similar content.

A rule of thumb generally used was to code requests, if at all possible, according to the form they took, e.g., "Did she warn her roommate first?" as a P-3 or "What great thing has he done to make Tom worship him?" as a S1-3. However, certain subcategories such as P-8 and P-10 (or S1-8 and S1-10) focused more on the content of the request rather than its form. In such cases, it was the overall meaning of the request that sometimes took precedence over its form.

APPENDIX J

INFORMATION REQUESTS: ADDITIONAL RESULTS

The following describes the results of ANOVAs for each category of information request. The main effects are presented and their interaction, if significant. Additional results pertaining to the effects of the personality variables are also presented. The means are listed following presentation of the results.

Person Information Requests

Higher proportions of Person information requests were made for negative events than for positive events, for actions than for emotions or opinions, for unlikely events than for likely events and for events involving another than for self events. The four-way interaction was not significant. There was a significant interaction between likelihood of the event, positivity of the event and type of event on the proportion of Person requests made. The highest proportion of Person requests were made for negative unlikely actions, i.e., "Sue smashed all of her roommate's records," and lowest for positive likely emotions, i.e., "Shirly is happy to hear Fred's news."

Stimulus Information Requests

Higher proportions of Stimulus requests were made for positive events than for negative events, for likely events than for unlikely events, for emotions than for actions or opinions and for events involving the self than for events involving another. The four-way interaction was not significant. The three-way interaction between positivity, likelihood and type of event indicated that the proportion of Stimulus requests was highest for negative unlikely emotions ("Judy is terrified of her father") and negative likely emotions ("Jan is jealous of her husband's secretary") and lowest for negative likely opinions ("Fred thinks his professor grades too hard").

Relational Information Requests

Significantly higher proportions of Relational requests were made for events involving another than for self events and for actions than for emotions or opinions. The two-way interaction was not significant. The significant three-way interaction between likelihood of the event, type of event and the self-other factor indicated that the highest proportion of Relational requests were made for unlikely actions involving another, i.e., "Sue loaned her friend $4,000 to help with

her emergency medical bills," and "Sue smashed all of her roommate's records," and the lowest proportion for likely opinions involving the self, i.e., "You believe that the child should be praised" and "You think your professor grades too hard."

External Information Requests

Higher proportions of requests pertaining to External Factors were made for negative events than for positive events and for opinions than for actions or emotions. The two-way interaction was significant with negative opinions receiving the highest proportion of these requests. The events involved were "Fred thinks his professor grades too hard" and "Sally believes that her roommate deserved the crippling accident." The lowest proportion of requests were made for positive opinions, i.e., "Joe believes the child should be praised" and "Gladys believes that her mother has never told a lie."

Interaction Information Requests

Higher proportions of Interaction requests were made for negative events than for positive events and for emotions than for actions or opinions. The two-way interaction was significant, with negative emotions receiving the highest proportion of these requests, i.e., "Jan is jealous of her husband's secretary" and "Judy is terrified of her father." The lowest proportion of requests was for positive actions, i.e., "Jim let his friend stay with him a few days," and "Sue loaned her friend $4,000 to help with her emergency medical bills."

Self-Monitoring

There was a significant three-way interaction between type of event, the self-other factor and self monitoring on the proportion of Person requests made. For actions and opinions, the highest proportion of Person requests was made by low self-monitors for other events and the lowest proportion was made by low self-monitors for self events. For emotions, the highest proportion of Person requests was made by high self-monitors for other events and the lowest was made by high self-monitors for self events.

There was also a significant interaction between likelihood of the event, the self-other factor and self-monitoring on the proportion of Person requests made. For likely events, the highest proportion of Person requests was made by low self-monitors for events involving another. For unlikely events, the highest proportion of Person requests was made by high self-monitors for events involving another.

A marginally significant ($p = .051$) two-way interaction between type of event and self-monitoring on the proportion of Stimulus requests made indicated that for emotions and opinions high

self-monitors made higher proportions of Stimulus requests than low self-monitors while for actions, low self-monitors made a higher proportion of Stimulus requests than high self-monitors.

Finally, there was a marginally significant ($p = .053$) interaction between type of event and self-monitoring on the proportion of Interaction requests made. For emotions and opinions low self-monitors made higher proportions of Interaction requests than did high self-monitors. For actions, the opposite pattern occurred.

Intolerance of Ambiguity

There was a significant interaction between positivity of the event and intolerance of ambiguity on the proportion of Relational requests made. The highest proportion of Relational requests were made by tolerant persons for negative events and the lowest proportion by intolerant persons for negative events.

There were significant interactions between likelihood, type of event and intolerance on the proportion of Relational requests made and between likelihood, the self-other factor and intolerance on the proportion of External requests made.

Cognitive Complexity

A significant interaction between positivity of the event and complexity of the participant indicated that for negative events complex participants requested a higher proportion of External information than did simple participants; for positive events simple participants requested a slightly higher proportion of External information than did complex participants.

A significant interaction between the type of event and complexity of the participant indicated that complex participants requested a higher proportion of External information than did simple participants for emotions and opinions, whereas for actions, simple participants requested a slightly higher proportion of External information than did complex participants.

There was a significant interaction between type of event and complexity of the participant on the proportion of Stimulus requests made. For actions and emotions, complex participants made a higher proportion of Stimulus requests than simple participants; for opinions, the opposite pattern held. There was a significant three-way interaction and a significant four-way interaction involving complexity of the participant on the proportion of Person requests made.

Finally, there was a significant interaction between likelihood of the event and complexity of the participant on the proportion of motive-type requests made. Simple participants made a higher proportion

of motive-type requests for unlikely events than likely requests; complex participants made a higher proportion of motive-type requests for likely than for unlikely events.

Person Information Requests--Means

Main Effects:			Degrees of Freedom	F Ratio	Approx. F Prob.
Positive		.00759	1,107	35.725	<.0005
Negative		.01073			
Action		.01116	2,214	19.559	<.0005
Emotion		.00718			
Opinion		.00914			
Self		.00755	1,107	53.145	<.0005
Other		.10177			
Likely		.00865	1,107	4.979	.028
Unlikely		.00967			
Interactions:					
Postivity X Likelihood X Type of Event					
Positive--Likely--	Action	.00645	2,214	4.699	.010
	Emotion	.00330			
	Opinion	.00707			
Positive--Unlikely--	Action	.00984			
	Emotion	.01034			
	Opinion	.00856			
Negative--Likely--	Action	.01338			
	Emotion	.00723			
	Opinion	.01445			
Negative--Unlikely--	Action	.01496			
	Emotion	.00785			
	Opinion	.00649			
Also Significant:					
Positivity X Likelihood			1,107	40.400	<.0005
Positivity X Type of Event			2,214	8.549	<.0005
Likelihood X Type of Event			2,214	22.045	<.0005

Personality Variables:			Degrees of Freedom	F Ratio	Approx. F Prob.
Self-Monitoring X Self-Other X Type of Event					
Low SM--Self--	Action	.00959	2,212	3.614	.029
	Emotion	.00648			
	Opinion	.00716			
Low SM--Other--	Action	.01297			
	Emotion	.00898			
	Opinion	.01109			
High SM--Self--	Action	.01056			
	Emotion	.00414			
	Opinion	.00738			
High SM--Other--	Action	.01151			
	Emotion	.00911			
	Opinion	.01095			
Self-Monitoring X Likelihood X Self-Other					
Low SM--Likely--	Self	.00703	1,106	5.425	.022
	Other	.01056			
Low SM--Unlikely--	Self	.00846			
	Other	.01144			
High SM--Likely--	Self	.00756			
	Other	.00941			
High SM--Unlikely--	Self	.00716			
	Other	.01164			
Stimulus Information Requests--Means					
Main Effects:					
Positive		.01879	1,107	8.313	.005
Negative		.01685			
Likely		.01972	1,107	26.991	<.0005
Unlikely		.01593			
Action		.01688	2,214	38.438	<.0005
Emotion		.02200			
Opinion		.01459			
Self		.01984	1,107	52.995	<.0005
Other		.01581			

Interactions:			Degrees of Freedom	F Ratio	Approx. F Prob.
Positivity X Likelihood X Type of Event					
Positive--Likely--	Action	.02268	2,214	9.013	<.0005
	Emotion	.02262			
	Opinion	.02169			
Positive--Unlikely--	Action	.01591			
	Emotion	.01580			
	Opinion	.01404			
Negative--Likely--	Action	.01808			
	Emotion	.02463			
	Opinion	.00862			
Negative--Unlikely--	Action	.01082			
	Emotion	.02495			
	Opinion	.01402			
Also Significant:					
Positivity X Likelihood			1,107	31.593	<.0005
Positivity X Type of Event			2,214	36.767	<.0005
Likelihood X Type of Event			2,214	8.306	<.0005
Type of Event X Self-Other			2,214	8.946	<.0005
Personality Variables:					
Cognitive Complexity X Type of Event					
Simple--	Action	.01641	2,212	5.563	.004
	Emotion	.02076			
	Opinion	.01609			
Complex--	Action	.01734			
	Emotion	.02324			
	Opinion	.01309			
Self-Monitoring X Type of Event					
Low SM--	Action	.01841	2,212	3.028	.051
	Emotion	.02156			
	Opinion	.01449			
High SM--	Action	.01534			
	Emotion	.02244			
	Opinion	.01470			
Relational Information Requests--Means					
Main Effects:					
Action		.00882	2,214	20.871	<.0005
Emotion		.00651			
Opinion		.00545			

			Degrees of Freedom	F Ratio	Approx. F Prob.
Self		.00622	1,107	18.084	<.0005
Other		.00763			
Interactions:					
Likelihood X Self-Other X Type of Event					
Likely--Self--	Action	.00678	2,214	6.016	.003
	Emotion	.00812			
	Opinion	.00305			
Likely--Other--	Action	.00799			
	Emotion	.01019			
	Opinion	.00315			
Unlikely--Self--	Action	.00951			
	Emotion	.00371			
	Opinion	.00617			
Unlikely--Other--	Action	.01100			
	Emotion	.00401			
	Opinion	.00945			
Also Significant:					
Positivity X Likelihood			1,107	15.718	<.0005
Likelihood X Type of Event			2,214	58.889	<.0005
Positivity X Likelihood X Type of Event			2,214	8.116	<.0005
Personality Variables:					
Positivity X Intolerance					
Positive--Intolerant		.00715	1,106	5.619	.020
Tolerant		.00722			
Negative--Intolerant		.00567			
Tolerant		.00767			
Likelihood X Intolerance X Type of Event					
Likely--Intolerant--	Action	.00692	2,212	3.739	.025
	Emotion	.00786			
	Opinion	.00289			
Likely--Tolerant--	Action	.00786			
	Emotion	.01045			
	Opinion	.00329			
Unlikely--Intolerant--	Action	.00966			
	Emotion	.00432			
	Opinion	.00681			
Unlikely--Tolerant--	Action	.01084			
	Emotion	.00339			
	Opinion	.00881			

External Factors Information Requests--Means		Degrees of Freedom	F Ratio	Approx. F Prob.
Main Effects:				
Positive	.00319	1,107	21.973	<.0005
Negative	.00468			
Action	.00319	2,214	22.465	<.0005
Emotion	.00295			
Opinion	.00568			
Interactions:				
Positivity X Type of Event				
Positive--Action	.00432	2,214	84.477	<.0005
Emotion	.00367			
Opinion	.00160			
Negative--Action	.00205			
Emotion	.00223			
Opinion	.00975			
Also Significant:				
Positivity X Likelihood		1,107	44.027	<.0005
Likelihood X Type of Event		2,214	52.592	<.0005
Positivity X Likelihood X Type of Event		2,214	3.819	.023
Personality Variables:				
Simple participants	.00345	1,106	3.652	.059
Complex participants	.00442			
Positivity X Cognitive Complexity				
Positive--Simple	.00330	1,106	15.618	<.0005
Complex	.00310			
Negative--Simple	.00361			
Complex	.00575			
Type of Event X Cognitive Complexity				
Action-- Simple	.00330	2,212	6.831	.001
Complex	.00307			
Emotion--Simple	.00279			
Complex	.00311			
Opinion--Simple	.00427			
Complex	.00709			

Interaction Information Requests--Means		Degrees of Freedom	F Ratio	Approx. F Prob.
Main Effects:				
Positive	.00209	1,107	24.242	<.0005
Negative	.00336			
Action	.00215	2,214	11.659	<.0005
Emotion	.00372			
Opinion	.00230			
Interactions:				
Positivity X Type of Event				
Positive--Action	.00103	2,214	14.729	<.0005
Emotion	.00242			
Opinion	.00282			
Negative--Action	.00327			
Emotion	.00503			
Opinion	.00178			
Also Significant:				
Positivity X Likelihood		1,107	23.041	<.0005
Positivity X Self-Other		1,107	4.173	.044
Likelihood X Type of Event		2,214	3.455	.033
Positivity X Likelihood X Type of Event X Self-Other		2,214	4.370	.014
Personality Variables:				
Self-Monitoring X Type of Event				
Low SM-- Action	.00204	2,212	2.980	.053
Emotion	.00448			
Opinion	.00258			
High SM--Action	.00226			
Emotion	.00296			
Opinion	.00203			
Total Number of Requests--Means				
Main Effects:				
Positive	2.7716	1,106	39.179	<.0005
Negative	3.0818			
Likely	3.0031	1,106	13.136	<.0005
Unlikely	2.8503			

			Degrees of Freedom	F Ratio	Approx. F Prob.
Action		3.0012	2,212	20.316	<.0005
Emotion		3.0567			
Opinion		2.7222			
Interactions:					
Positivity X Likelihood X Type of Event					
Positive--Likely--	Action	2.9306	2,212	3.550	.030
	Emotion	2.6389			
	Opinion	2.7129			
Positive--Unlikely--	Action	2.9676			
	Emotion	2.9491			
	Opinion	2.4306			
Negative--Likely--	Action	3.1574			
	Emotion	3.5000			
	Opinion	3.0787			
Negative--Unlikely--	Action	2.9491			
	Emotion	3.1389			
	Opinion	2.6667			
Also Significant:					
Positivity X Likelihood			1,106	18.204	<.0005
Positivity X Type of Event			2,212	7.228	.001
Positivity X Self-Other			1,106	9.191	.003
Likelihood X Type of Event			2,212	4.729	.010
Type of Event X Self-Other			2,212	10.817	<.0005

Note: F ratios for Total Number of Requests are from analysis including cognitive complexity as a factor.