TRAIT ASCRIPTION, CAUSAL ATTRIBUTION AND THE ACTOR-OBSERVER HYPOTHESIS

by

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Abstract

This study is an attempt to clear up some confusions which have been prevalent in the research on Jones and Nisbett's (1972) actor-observer causal attribution hypothesis. The central theme is that there is an important difference between trait ascription and causal attribution which has been ignored in past research and which may account for the weak and mixed evidence for the hypothesis. A study was designed to determine whether these two processes are independent phenomena and to test the importance of interpersonal distance as a manipulation of salience. Both strangers and friends were studied. The results provide tentative support for the main hypothesis but no support for the role of distance or level of familiarity. Important differences were found between the actor-observer method and the self-other method, in addition to some unexpected correlations between the age and year at university of subjects and the dependent variables. The significance of these findings and their implications for future research are discussed.

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Introduction

Historical Perspective

For over twenty years the problems of causal attribution have been a major concern in social psychology. What is the underlying process by which people make inferences about social behavior? What kind of information do people use in making these inferences and how thorough is their search for it? The way people perceive and explain social events is considered to be important because people's impressions and attributions affect their behavior. The present study examines the role of perceptual salience and amount of information in this process. It also investigates some problems in the measurement of attributions.

These issues were first raised by Heider (1958), who was interested in the biases and motivational factors that affect attributions. He began by trying to determine "what is a social event?" He had subjects view a film of simple geometric shapes (triangles, circles) that were moving around in groups, bumping into each other, etc.. People described these objects as if they had human traits and were acting as casual centers (e.g., "an aggressive triangle", "a reclusive circle"). The events were meaningfully organized and motives were attributed. This

led to a theory of interpersonal perception and cognition, a "causal calculus" as it is sometimes referred to. For example, how causally important a person is seen to be in a given situation is a result of the combination of two main factors, ability and effort, each formed of many components.

Harris (in Antaki, 1981) attributes Heider's importance to four arguments that he emphasized: a) that much can be learned from the explanations given by normal people; b) that cognitive processes are important causes of behavior; c) that people try to achieve a balance and stability in their cognitions; and d) that people go about their social thinking like naive scientists. More relevant to the subject matter of this paper is Heider's idea that dispositional attributions allow one to simplify and organize the environment more than do situational attributions.

Jones and Davis (1965) and Kelley (1967, 1972) both developed Heider's notions into theories of their own which were more amenable to experimental study. Jones and Davis's (1965) Theory of Correspondent Inferences is concerned with the conditions under which dispositional attributions to another person will be made. (They do not discuss self-attribution.) For example, few inferences

will be made for behaviors that are seen as socially desirable. More inferences will be made for behaviors that break social norms because such behavior is more informative and supposedly reveals more of one's true self. They were also concerned with biases in attributions: for example, according to their concept of "hedonic relevance", whenever another person's behavior has consequences for oneself an inference is more likely to be made.

In Kelley's theory (1967, 1972), people are depicted as full-time scientists with much information and sharp cognitive abilities trying to discover the true causes of behavior. His "analysis of variance" model of attribution asserts that people look at whether behavior occurs in the presence or absence of possible causes and at the covariation between the possible causes and effects of a behavior. In trying to determine the "real" cause, people check for three kinds of information: a) consensus information; that is--whether other people behave the same way; b) consistency, whether the behavior is consistent over time; and c) distinctiveness, whether the person behaves in a similar manner in different situations. People also have "causal schemata" concerning the usual causes of social behavior, and use the "discounting principle" in which a possible cause is discounted if

other causes are also present.

These theories of Heider, Jones and Davis, and Kelley are very general and broad. The writings of Bem (1972) and of Jones and Nisbett (1972) may be seen as a second generation of approaches to attribution that are more limited in range but which have stimulated a great deal of research. Bem's (1972) theory is concerned with self-attribution. People do not have knowledge of the internal causes of their behavior but come to know their emotions and attitudes by inferring them from the context of their behavior.

Jones and Nisbett's (1972) attribution hypothesis is concerned with the divergent causal attributions of actors and observers, and is the subject of this study. Jones and Nisbett proposed that "there is a pervasive tendency for actors to attribute the causes of their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions"(1972, p.86). They suggested three reasons for this difference.

First, different information is salient to actors and observers due to perceptual focus and attention. To the actor the changing environment and the demands of the situation are most salient. To the observer, the actor is

the moving figure and the environment is the ground.

Second, actors and observers differ in historical knowledge, or information level. Taking for granted Mischel's (1968) assertion that stable dispositions exist more in the eye of the beholder than in the actor, Jones and Nisbett said that actors are more aware of their own cross-situational inconsistency and so make more situational attributions about their own behavior. This implies that the more familiar one is with someone, the fewer dispositional attributions one will make about that person's behavior.

Finally, Jones and Nisbett suggest that there is a general human need for people to feel as if they can understand, predict and control present and future events in their environments. To an observer, another person is easier to understand and is more predictable if that person possesses unchanging personality characteristics or dispositions. It is less clear how this need affects the actor. The present study will not be directly concerned with this last suggested reason.

Salience: Perceptual Focus and Attention

Salience has repeatedly been shown to have a

significant effect on attributions of causality. According to Jones and Nisbett (1972), the visual focus of actors is on the situation, and so actors should make situational attributions. The visual focus of observers is on the actor and they should make dispositional attributions.

An experiment by Storms (1973) is often cited as evidence for this effect. He had two actor subjects engage in an unstructured conversation while two observers watched. Each observer was told to watch one actor, or could see only one actor. Videotapes of the conversation were replayed to half the subjects, where observers saw a replay of the actor he had just seen and actors saw the other person in the conversation with them. Later, a questionnaire measured the actors' attributions for his own behavior in the conversation and each observer made attributions for his matched actor's behavior. Both these subjects and subjects who saw no videotape made attributions according to the actor-observer hypothesis.

For a third group, subjects saw a video replay of themselves in the conversation and observers saw a tape of the actor to whom they had not attended. This caused self-viewing actors to attribute more responsibility for their behavior to dispositions than observers did. Taylor

and Fiske (1975) and Taylor, Crocker, Fiske, Springen and Winkler (1979) also varied visual orientation and found actor-observer differences as predicted by Jones and Nisbett. However, Uleman, Miller, Henken, Tsemberis and Riley (in press) replicated Storm's study and found no effects.

More recent studies have been concerned with attention and causal attribution. Aspects of the environment, including people, which "grab" one's attention are seen as more causally important in a given situation than are non-salient aspects (MacArthur & Ginsberg, 1981; MacArthur & Post, 1977; Robinson & MacArthur, 1982). This is usually demonstrated by having observer subjects make attributions about two confederates involved in an unstructured "getting-acquainted" conversation. One of the confederates is made salient by manipulations such as sitting under a bright light, rocking in a rocking chair, wearing a bright striped shirt, and other similar manipulations. Sometimes observers view the conversation live but more often it is seen on videotape. The usual finding is that the salient actor was seen as more causally important/influential in the conversation.

The present study examines the effects of salience on the attributions of actors and observers in a design using

just one actor subject whose salience will be varied for different groups of observer subjects. Taylor (1978) concluded that "causal perception is substantially determined by where one's attention is directed in the environment and that attention itself is a function of what information is salient"(p. 253). If so, interpersonal distance could be used as a manipulation of salience: an actor who is very close to the observer should be more salient to him than an actor who is farther away (Hall, 1966). A difference in attributions would be expected. (The specific kind of difference shall be discussed later on.) This study will vary the distance between two subjects to determine if this is true.

It has also been shown (Taylor & Fiske, 1978, study 2) that salience has a greater effect when the observer-subject is more involved with the actors about whom he makes attributions, in contrast to many experiments where subjects merely view a videotape. The present study will not manipulate involvement as an independent variable but it will have all subjects actively involved in the situation, making it more likely that interpersonal distance will be an important salience variable.

Information Level

Jones and Nisbett (1972) suggested that actor-observer differences may also stem from differences in the amount of information each has about the actor. They assumed that people neither possess stable traits or dispositions nor show much cross-situational consistency in behavior. The actor is alleged to be more aware of his inconsistency and so makes situational attributions. This implies that being more familiar with someone should lead you to make more situational attributions when observing his behavior.

The evidence for this notion is mixed. Sometimes it is supported, sometimes no effects are found, and sometimes the effect is reversed. In a typical experiment, subjects are asked to describe themselves, their best friend, and an acquaintance (or someone who is widely known, like Walter Cronkite) using a list of bipolar trait-adjectives, each with a "depends on the situation" option. When subjects use the situation option for their best friend more often than for an acquaintance (e.g., Goldberg, 1978; 1981), support for the information level notion is inferred. Other studies have found just the opposite (Monson, Tanke & Lund, 1980) or no significant differences (Nisbett, Caputo, Legant & Maracek, 1973; Taylor & Koivumaki, 1976).

There are two important factors which could account for these mixed results. First, in none of these studies are actor asked to perfcrm some behavior while an observer watches him. Subjects simply give general descriptions of themselves and others from memory. In his review of the actor-observer literature, Watson (1982) has refused to call such experiments "actor-observer" studies and refers to them as "self-other" studies instead. The Jones and Nisbett (1971) hypothesis states that

> actors tend to attribute their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions. (p.2)

Having subjects give general descriptions from memory is not an adequate test of this hypothesis.

This assertion is supported by the findings of Monson, Keel, Stephens and Genung (1982). They gave subjects detailed information about the personality characteristics and present life situation of another person. When subjects expected to interact with this person, they made "valid" attributions, in contrast to the "top of the head" attributions of other subjects who did not expect to interact with the person described. In other words, people are more thoughtless and inaccurate in their

attributions when the person being described is not present.

Furthermore, recent experiments that have examined subjects' causal attributions for past behaviors have reported conflicting results: Moore, Sherwood, Lui and Underwood (1979) found a reduced actor-observer difference as time elapsed; Peterson (1980) found a dispositional shift; and Miller and Porter (1980) found that subjects gave more situational attributions as time elapsed. The present study will be a more substantial test of the effect of information level because the subjects will make attributions for an interaction episode in which they had just been involved. In one condition previously acquainted subjects will be used, and in another the subjects will be strangers.

The second important factor that could account for the mixed results on information level (and for the mixed results on actor-observer studies in general) is that the attribution measures which have been used are poor and are not measuring what they are supposed to.

Attribution Measures

Three recent reviewers (Goldberg, 1981; Herzeberger &

Clore, 1979; Watson, 1982) have stressed that the usual methods of determining a subjects' attributions are confusing and inappropriate. Watson described three different kinds of methods in popular use. There are "direct attribution" measures, "trait ascription" measures, and prediction tasks - where subjects are asked to predict whether the actor will behave in a similar manner in a similar situation in the future (Gurwitz & Panciera, 1975; Nisbett, Caputo, Legant & Maracek, 1973, study 1). Viewed altogether, the majority of actor-observer studies may be classified as either trait ascription studies or as causal attribution studies.

In causal attribution-type studies (e.g., Moore, Sherwood, Lui & Underwood, 1979; Storms, 1973; Taylor, Crocker, Fiske, Springen & Winkler, 1979; Taylor & Fiske, 1975) subjects are asked to rate the extent to which they think "something about the situation" and/or "something about the actor/ yourself" is responsible for their own/the actor's behavior during the experiment.

In trait ascription-type studies, which are the more common in actor-observer research, subjects are given a list of trait-adjectives which they use to describe themselves or someone else. Some studies have used a list of bipolar traits on Likert scales where more extreme

responses are interpreted as stronger internal attributions (Funder, 1980a; Monson, Tanke & Lund, 1980; Ross, 1977; Taylor & Koivumaki, 1976). Other studies have used a list of bipolar traits each with a "depends on the situation" option where subjects must decide whether one of the traits or the "depends" option is the best description of the person. Choosing one of the traits is interpreted as a willingness to infer dispositions, whereas choosing "it depends on the situation" indicates a situational attribution (Funder, 1980a; Goldberg 1978; Goldberg 1981; Nisbett, Caputo, Legant & Maracek, 1973).

Herzeberger and Clore (1979) have proposed that there is an important difference between the inference of traits and causal attribution:

> When used in its proper sense, attribution means to postulate an explanation or cause for a behavior. Storms (1973) demonstrated the correct usage of the term when he asked subjects to explain the degree to which behavior was caused by personal or situational characteristics. In other experiments, such as the "trait-depends" study of Nisbett, Caputo, Legant & Maracek (1973), subjects have merely assigned trait-like adjectives to the target

> person. Perhaps it would be best to label this process "ascription". When subjects choose a trait, (a) the subject may have been attributing causal powers to the trait, or (b) the subject may simply have been describing or summarizing the person's typical behavior without reference to causation (p. 11).

Herzeberger and Clore proceed to describe how this difference could account for the mixed results of their study: the attribution measures they used had trait ascription and causal attribution confounded.

Miller, Smith, and Uleman (1981), in a more recent study on the measurement of attributions, reached a similar conclusion: "subjects define dispositional causality as denoting acts freely chosen by the actor, and situational causality as denoting acts for which choice and responsibility are limited," and this is "inconsistent with the definition in actor-observer research, such as Storms (1973), where dispositional causality can be identified with stable traits that determine behavior accross situations"(p. 87). These conclusions prompt one to more carefully inspect the attribution measures and results of other actor-observer studies, too.

To begin with, the popular bipolar trait/depends-on-the-situation measure obviously has trait ascription and casual attribution confounded. Recently, Goldberg (1981) demonstrated that the depends-on-the-situation option confounds true situationality with uncertainty, ambiguity and neutrality. Using a modified version of this measure which unconfounds these four, he found significant actor-observer differences in the direction predicted by Jones and Nisbett. But his new measure still has causal attribution confounded with trait ascription. (For each pair of traits subjects had to choose either one of the traits or one of the following options: uncertain, ambigious, neutral or "the situation".)

Studies that have used bipolar traits on Likert scales would seem to be true measures of trait ascription. But for the most part, these have also had some confounding factor present. Taylor and Koivumaki (study 3, 1976) used such a measure but all their bipolar traits were on a favorable-unfavorable dimension (e.g., pleasant-unpleasant), due to the purposes of their study. One does not get a clear picture of actor-observer differences with such a dimension involved. Funder (1980a) and Goldberg (1981, study 4) used bipolar traits on Likert-type scales but included a depends-on-the-situation option with each set of traits, again confounding trait ascription and

causal attribution.

Most causal attribution-type studies have used the following measure: subjects are asked to rate the friendliness, talkativeness, sincerity (or something similar) of the person on 9-point bipolar scales and for each of these subjects are also asked to rate, again on 9-point scales, the extent to which "something about the actor/yourself" or "something about the situation" caused your/the actor's friendliness, talkativeness, etc.. Not only is the relation between trait ascription and causal attribution unclear here too, but every study that used this measure analyzed only the situation and disposition scales and regarded the trait scales as unimportant [and Regan & Totten (1975), Taylor & Fiske (1975), Taylor & Koivumaki (1976), and Taylor, Crocker, Fiske, Springen & Walker (1979) have all reported problems with this measure]. Added to this confusion is the fact that different studies have not obtained the same results. Storms (1973) and Moore, Sherwood, Lui and Underwood (1979) found actor-observer differences as predicted by Jones and Nisbett, but Taylor and Fiske (1975), Taylor, Crocker, Fiske, Springen and Winkler (1979), Miller, Smith, and Uleman (1981), and Uleman, Miller, Henken, Tsemberis and Riley (in press) found no difference in causal attributions among their groups of subjects. (The

Uleman, Miller, Henken, Tsemberis and Riley study was an exact replication of the Storms study.)

The confounding of trait ascription and causal attribution could also account for two other puzzling findings. One is that dispositional and situational attributions do not work in an opposing or hydraulic manner, as Heider (1958) had originally proposed. Storms (1973), MacArthur and Post (1977), Miller, Smith and Uleman (1981), and Solano (1979) have reported that an increase in situational attribution is not reciprocated by a decrease in dispositional attributions (or vice-versa). Also puzzling are the results of Taylor and Fiske (1975) and Taylor, Crocker, Fiske, Springen and Winkler (1979) who found that the more salient of two actors was perceived to be the more causally important/influential in an interaction episode but that there was no difference in the relative amounts of situational and dispositional attributions for the two actors.

If there is an important difference between causal attribution and trait ascription, what does this imply for the attributions of actors and observers? When one carefully considers the actor-observer hypothesis, "that actors tend to attribute their actions to situational

requirements, whereas observers tend to attribute the same actions to stable personal dispositions", it seems to be referring to internal versus external causes and not so much to trait-adjective descriptions of people. Yet much of the support (and conflicting evidence) comes from trait ascription studies where actors use "depends on the situation" more often when describing themselves than when describing others. If trait ascription and causal attribution are different, why might this be so?

One answer comes from recent work on in-group versus out-group perception. Linville and Jones (1980) hypothesized and demonstrated that people have more complex cognitive schemas regarding their own group than out-groups. This is due to greater learning experience with the in-group, producing more dimensions available to characterize the in-group. This leads people to make more moderate judgements about in-group members than out-group members when faced with relevant information. Why would more complex schemas result in more moderate judgements? Linville and Jones offer three reasons.

First, the greater number of dimensions used in considering a stimulus makes it more likely that some dimensions will be considered good and others bad, resulting in moderate overall evaluations. More extreme

evaluations would be expected for the out-group due to the fewer number of dimensions on which they are evaluated, causing less mixed judgements.

Second, new information would be expected to have more impact on a smaller, simpler schema. "Because schemas concerning the in-group are rich and highly differentiated, evaluative information about a particular in-group meets the inertia of a complex expectancy and has relatively little impact on one's impression of that group" (Linville & Jones, 1980, p. 691).

Finally, they point out that there is a greater chance that new information will be considered incomplete or trivial in the case of complex schemas. This lack of information could result in "reserved or suspended judgements". In contrast, new information would be expected to be more complete and significant for the simple schemas, leading to more extreme evaluations. Apart from their own experiments, studies by Quattrone and Jones (1980) and by Park and Rothbart (1982) also support these ideas.

In the actor-observer situation, where the bulk of the evidence comes from trait ascription studies, actors would be more likely to choose "it depends on the situation" rather than one of the bipolar traits to describe

themselves because they have a more complex schema about themselves than observers do. An unfamiliar person who observes the actor for a couple of minutes would have a very limited impression or schema of the actor and would have little grounds for saying "it depends on the situation". He would describe the actor by using the adjectives. Similarly, being more familiar with someone should lead one to make more moderate judgements about him.

The present experiment will use two attribution measures to examine whether or not there is a significant difference between trait ascription and causal attribution. The trait ascription measure will be similar to the one that Linville and Jones used. Subjects will be given a list of trait-adjectives, each on a 10-point scale, which they will use to describe themselves or the other person. Subjects should make more moderate ratings when describing themselves than when describing others, and observers should be more moderate when describing a familiar other than when describing a stranger.

The trait terms will be presented in a list, one at a time, and not as bipolar pairs (e.g., talkative--reserved), as Linville and Jones and others have done. This was deemed useful since Wiggins (1979)

has shown that although terms such as "talkative" and "reserved" may seem to be polar opposites, this is not necessarily the way in which everyone thinks about them. The trait terms will all be neutral in terms of favorableness and social desirability in order to prevent the confounding effect of self-serving biases (Bradley, 1978).

In order to study extremity of trait ascription (i.e., the willingness to infer trait terms) for single trait terms on scales of one to ten, the scales will have to be recoded. That is, on such scales both ones and tens, for example, represent equally extreme ratings. The same for twos and nines, threes and eights, and fours and sixes. Therefore the trait ascription data will be recoded this way.

The predictions concerning trait ascription conflict with the results of Monson, Tanke and Lund (1980). They found that subjects made more extreme trait ratings about themselves than about others, and more extreme ratings about familiar others than about strangers. A closer look at the trait terms which were used, however, shows why they obtained such results: all of the trait terms were on a favorable--unfavorable dimension (e.g., exciting--dull). Furthermore, Goldberg (1978, study 1) found that more

moderate trait ratings were made about oneself than about others, a finding not mentioned in the Monson et al study.

The other measure to be used in this study is a "causal attribution" measure. Subjects will be asked to rate, on 10-point scales, how important they think internal and situational factors were in causing their own or the other person's behavior in the experiment. It is predicted that there should be no pervasive tendency for actor subjects to make stronger external attributions and for observers to make stronger internal attributions about the actor's behavior. A brief overview of past research will illustrate why this should be so.

Jones and Nisbett (1972) had derived their actor-observer proposition from the results of a number of "indirect" actor-observer attribution studies. These were mainly attitude attribution studies of the following general design: observer subjects read essays (or listened to speeches) that were written by actor subjects. These essays were either for or against some controversial social issue (e.g., abortion, drugs). Some actor subjects had been forced to write an essay supporting one side of these issues and observers were made aware of this. It was found that even when actors were forced to support one side of an issue, observers said that actors really

favored that position whereas actors themselves did not. A number of such findings led to the conclusion that observers are not considerate enough of the situational constraints on actors.

Curiously, there were other "indirect" actor-observer studies which had been published around the same time and which reported opposite findings (e.g., Freedman, 1969; Gross, 1967).

After Jones and Nisbett (1972) had formulated their hypothesis there was a burst of studies which were directly concerned with verifying its various aspects. The evidence from these studies has also been mixed, most of it comes from trait ascription studies, and, as noted above, most of the studies confounded trait ascription and causal attribution in the attribution measures that were used.

A pivotal point in this research was Monson and Snyder's (1977) reformulation of the original hypothesis, although their work does not appear to have had the impact it warranted. After reviewing the research that had been done, they stated that the attributions of actors and observers are often different but not always in the direction predicted by Jones and Nisbett. Some studies support the original hypothesis, some find no effects, and

some report the reverse effect (see their article for a detailed review). Monson and Snyder concluded that sometimes the actors' social behavior is due to situational constraints and sometimes it is due to dispositional factors. Actors should be more aware of which of these is the case and will therefore sometimes make more situational attributions than observers and will sometimes make more dispositional attributions, depending on the situation and on how the actor feels. It is for this reason, combined with the finding that only a few people make causal attributions as Jones and Nisbett predict (Funder, 1980; Herzeberger & Clore, 1979), that no actor-observer differences are expected on the causal attribution measure to be used in this study.

Some researchers have persisted in studying the original Jones and Nisbett proposition and their general conclusion that there is "weak but consistent" support for the hypothesis could be due to their using attribution measures which confound trait ascription with causal attribution.

In summary, there are three sets of hypotheses. The first set have to do with actor-observer differences. It is hypothesized that a) there is no "pervasive tendency" for actors to make situational attributions and for

observers to make dispositional attributions about the actor's behavior, and (b) observers should make more extreme trait ratings about actors than actors make about themselves. Support for these hypotheses would suggest that there is an important difference between trait ascription and causal attribution: people are more willing to make trait ascriptions about others than about themselves due to the size and complexity of their cognitive schemas. Therefore one cannot draw conclusions about internal and external causal perceptions based on trait ascription data, as has been done in much of the research on actor-observer differences.

Second, in accordance with this, it is expected that observers who are previously acquainted with the actor should make more moderate trait ratings about actors than observers who do not know the actor. This also would be due to the size and complexity of cognitive schemas and therefore no differences are expected on the internal--external causal attribution measure.

And third, it is predicted that interpersonal distance, as a manipulation of salience, should show a significant effect on the trait ascription measure but not on the casual attribution measure. Because an actor who is much closer to an observer is more salient to that observer,

more extreme trait ratings are expected than when the actor is further away. This should only be so when the observer is not acquainted with the actor.

Unlike past research, in the present study participants will be either actors or observers, not both. Having a participant complete an attribution measure describing his own behavior would probably affect the way he completes the measure a second time when describing someone else (or vice versa). For the same reason, a participant will complete either a trait ascription questionnaire or a casual attribution questionnaire.

Method

Subjects

Subjects were 152 female and eight male volunteers recruited from psychology classes at the University of Victoria. Their ages ranged from 17 to 35 but most were between 18 and 21 years old. Of a total of 80 pairs of subjects, 40 of these pairs were acquaintances and 40 were strangers. There were no unacquainted opposite-sex pairs of subjects. Acquaintances were obtained by asking volunteer subjects to bring a friend.

Design

The experiment can best be viewed as two 2 x 2 x 2 between subject designs. In one, Trait Ascription is the dependent variable and Interpersonal Distance, Information Level (high and low), and Point of View (actor or observer) are the independent variables. In the other, Causal Attribution is the dependent variable and Interpersonal Distance, Information Level and Point of View are the independent variables.

Setting

The setting was a 2.6 m by 1.85 m carpeted laboratory decorated like a living-room. There were two soft chairs,

a coffee table with magazines, two lamps, a bookcase, paintings on the walls, and a desk. The two soft chairs were always placed at a 90 degree angle to one another. For half the pairs of participants these chairs were placed close together (0.5 m from edge to edge) and for the other half the chairs were placed far apart (2 m from edge to edge) with a coffee table in between.

Procedure

Upon arrival, participants were introduced (if they were strangers) and told that the study was concerned with what they thought should be done in the following moral dilemma, which they were given to read:

> In Europe, a woman was near death from a very bad disease, a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what it cost him to make. He paid $200 for the radium and charged $2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1000 which is half of what it cost. He

told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug for his wife.

Should the husband have done that? Why or why not?

Would you have done the same if the dying person was a friend rather than a spouse? Why or why not?

Would you have done the same if the dying person was a stranger? Why or why not?

Should a judge punish Heinz? Why or why not?

When the subjects finished reading, the experimenter explained that this was a difficult problem to which there are no right or wrong answers, but "what's interesting is that different people have different reasons for doing what they would do in these situations. I'm going to leave the room for a couple of minutes and I would like you to talk it over and see if you agree or not on what should be done in these situations, and especially what

your reasons are. When I return I'll ask you to fill out a short questionnaire." The experimenter assured the participants that the conversation was not being recorded.

The experimenter returned ten minutes later and asked each participant to complete one questionnaire after which they were debriefed and thanked for their participation.

The Questionaire. All subjects first answered four filler questions about the moral dilemma. This was followed by an attribution measure which they completed describing either their own or their partner's behavior during the discussion. Forty pairs of subjects answered the following trait ascription-type attribution measure:

> The following is a list of adjectives on numbered scales. For each one please circle the number which you think best describes your [the other person's] behavior during the discussion of the moral dilemma: (1= a poor description, 10= a good description).

The 15 trait terms were: talkative, serious, relaxed, uninhibited, trusting, passive, firm, quiet, active, reserved, casual, self-controlled, expressive, sensitive, and calm.

The other 40 pairs of subjects answered this causal attribution measure:

> Think about your (or your partner's) behavior during the discussion. Using the scales below please indicate how much influence the following factors had in causing your behavior during the discussion: (1= not very important, 10= very important)
>
> Please read all the items before beginning.
>
> your personality 1 2 3 4 5 6 7 8 9 10
>
> the topic you discussed 1 2 3 4 5 6 7 8 9 10
>
> the arrangement of the room 1 2 3 4 5 6 7 8 9 10
>
> your attitudes 1 2 3 4 5 6 7 8 9 10
>
> the other person's behavior 1 2 3 4 5 6 7 8 9 10
>
> your mood 1 2 3 4 5 6 7 8 9 10
>
> the situation in general 1 2 3 4 5 6 7 8 9 10

Results

Two analyses of variance tests were performed, one using Trait Ascription as the dependent variable, the other using Causal Attribution. There were ten subjects per cell. For the 40 pairs of subjects who knew each other, the mean length-of-acquaintance was 25 months and the standard deviation was 34 months.

Trait Ascription

For each subject who completed this measure an extremity-of-trait-ascription score was computed. This was computed by first recoding the one-to-ten scales into five-to-ten scales; e.g., a one became a ten, a two a nine, etc. Thus, for each trait, a five was the most moderate possible rating and a ten the most extreme. Then the ratings on all 15 traits were added together and divided by 15 for an average trait-extremity score. A test of the reliability of this computed extremity-of-trait ascription scale showed it to be a reliable measure (alpha = 0.84).

No significant effects were found. The results in Table 1 show that observers did make more extreme trait ratings about actors than actors made about themselves but

this difference was not significant (F = 2.97, p = 0.086). Table 2 shows that this was true both when actors and observers were strangers (F = 0.49, p = 0.48) and when they were friends (F = 2.97, p = 0.093).

As for Information Level, it had been predicted that observers who were unacquainted with the actor would make more extreme trait attributions than observers who did previously know the actor, due to smaller and less complex cognitive schemas. But no such effect was found (F = 2.15, p = 0.15).

There were no Interpersonal Distance effects (see Table 3). It had been predicted that observers who were unacquainted with the actor and close to him should make more extreme trait attributions than did observers who were also unacquainted with the actor but farther away from him. But no such effect was found (F = 0.046, p = 0.83). There was no main effect for distance either (F = 1.49, p = 0.23).

Analysis of Trait Ascription Scale Subsets. Goldberg (1981, study 1) and Funder (1980b) found that trait terms differ in the degree to which they show actor-observer differences. Terms which denote overt behaviors (e.g., talkative) showed strong actor-observer differences in the

Table 1. Extremity of Trait Ascription: main effects

	actors	observers	F
Point of View	M 7.68	M 7.97	2.97
	SD 0.72	SD 0.77	
	low	high	F
Information Level	M 7.72	M 7.93	1.59
	SD 0.69	SD 0.81	
	close	far	F
Distance	M 7.93	M 7.73	1.49
	SD 0.74	SD 0.77	

Note. 40 subjects per cell; higher numbers indicate more extreme trait ratings. An "a" indicates $p < 0.05$.

Table 2. Extremity of Trait Ascription: simple main effects.

	actors	observers	F
strangers	M 7.65	M 7.80	0.49
	SD 0.71	SD 0.68	
friends	M 7.72	M 8.15	2.97
	SD 0.76	SD 0.82	
F	----	2.15	

Note. 20 subjects per cell; higher numbers indicate more extreme trait ratings.

Table 3. Extremity of Trait Ascription: simple main effects

	close	far	F
low familiarity observers	M 7.77	M 7.83	0.05
	SD 0.68	SD 0.71	

Note. 10 subjects per cell; higher numbers indicate more extreme trait ratings.

direction predicted by Jones and Nisbett, whereas terms describing internal characteristics (e.g., trusting) showed a reverse actor-observer difference.

Analysis of variance tests were performed on those traits in the present study that fall into these categories. The trait terms in these categories were recoded to form extremity-of-trait-ascription scores instead of leaving them on scales of one to ten. A closer examination of the measure which Goldberg (1981, study 1) used will show why this should be so. In that study, for each trait term subjects had to choose one of the following options when describing themselves and others: 0 .... not an accurate description; A ... average or middle; B ... it depends on the situation; C ... I'm uncertain; D ... the term is unclear or ambiguous; 1 ... accurate as a description. Goldberg's conclusion that trait terms which denote overt behaviors show the expected actor-observer differences whereas terms about internal characteristics show reverse actor-observer differences is based solely on actor-observer differences in how often they chose the situation option (B). Were there actor-observer differences in how often the trait options were chosen? Or in how often the other options were chosen? Goldberg does not say. So although, for example, actors may have used the situation response less often than observers for

items denoting an internal characteristics, one cannot conclude that actors considered those characteristics more (or less) internally caused than observers did.

The peculiar nature of this situation makes it one in which a precise test of the Trait Ascription hypothesis, derived from Linville and Jones, is possible. If actors and observers differ on terms about overt behaviors and internal characteristics, and if these differences are due to the size and complexity of cognitive schemas, then actor-observer differences should appear on the trait terms when those terms are recoded for extremity-of-trait-ascription. There should be no actor-observer differences when the terms are not recoded.

On a combination of the terms denoting internal characteristics (trusting, sensitive, and self-controlled), recoded to form an extremity of trait ascription scale, actor-observer differences were found--see Table 4. Observers rated actors more extremely on these terms than did actors themselves ($F = 7.28$, $p = 0.009$), in accordance with the predictions derived from Linville and Jones (1980). When these trait terms were not recoded for extremity (and remained on a scale of one to ten) no actor-observer differences were found ($F = 3.43$, $p = 0.07$).

Table 4. Trait Ascription for different trait categories

	actors	observers	F
terms denoting internal characteristics			
recoded for extremity	M 7.80	M 8.37	7.28 a
	SD 0.92	SD 1.03	
not recoded	M 7.43	M 8.02	3.43
	SD 1.19	SD 1.60	
terms denoting overt behaviors			
recoded for extremity	M 7.58	M 7.84	1.84
	SD 0.81	SD 0.84	
not recoded	M 6.22	M 6.47	1.84
	SD 0.79	SD 1.08	

Note. 40 subjects per cell: "a" indicates $p < 0.01$.

For a combination of the trait terms denoting overt behaviors (talkative, relaxed, passive, firm, quiet, active, calm), no actor-observer differences were found. This was true both when the ratings were recoded to form extremity scores ($F = 1.84$, $p = 0.18$), and when they were not ($F = 1.34$, $p = 0.25$).

Causal Attribution

For each subject who completed this measure an overall index of the extent-of-internal-attribution was computed. This was done by reversing the ratings on the four external attribution items (e.g., a ten became a one, a two became a nine), adding the resultant scores to the sum of these internal attribution scores, and dividing by seven. The resulting score for each subject is on a scale of one to ten where higher numbers represent greater internal attributions.

The internal consistency of this extent-of-internal-attribution scale was 0.23, implying that the scale was not reliable. Thus, it is not surprising that no significant main effects or interactions were found for this measure (see Table 5).

The poor reliability of this scale is not entirely

unexpected. Herzeberger and Clore (1979) had subjects complete the Storms (1973) causal attribution measure for both their own and someone else's behavior in hypothetical situations. This was done a second time one week later and the test-retest reliability of the measure proved to be very low. (The Storms measure, which is popular in actor-observer research, is the one where subjects are asked to rate the friendliness, talkativeness, etc. of a person on nine-point scales, and the extent to which each of these is the result of internal and external causes.)

In an attempt to salvage the extent-of-internal-attribution scale, two of the items ("the topic that was discussed" and "your/the actor's mood") were deleted; this improved the reliability somewhat (alpha= 0.54). On this revised extent-of-internal-attribution scale a significant difference between actors and observers was found (see Table 6). Actors attributed the causes of their behavior to internal causes to a greater degree than did observers (F = 5.93, p = 0.017). Such a difference was not expected. It had been predicted that there should be no "pervasive tendency" for actors to make stronger external attributions than observers, as Jones and Nisbett would (1972). And although this did not happen, it is surprising that the reverse proved true.

Table 5. Causal Attribution 7-item scale: main effects

	actors	observers	F
Point of View	M 6.36	M 6.04	1.95
	SD 0.98	SD 1.06	
	low	high	F
Information Level	M 6.21	M 6.20	0.48
	SD 1.17	SD 0.87	
	close	far	F
Distance	M 6.12	M 6.28	0.002
	SD 0.99	SD 1.07	

Note. 40 subjects per cell; higher numbers indicate stronger internal causal attributions.

Table 6. Causal Attribution 5-item scale: main effects

	actors	observers	F
Point of View	M 7.27	M 6.52	5.93 a
	SD 1.18	SD 1.58	
	low	high	F
Information Level	M 6.66	M 7.14	2.43
	SD 1.54	SD 1.29	
	close	far	F
Distance	M 6.87	M 6.93	0.04
	SD 1.37	SD 1.52	

Note. 40 subjects per cell; higher numbers indicate stronger internal causal attributions: "a" indicates $p = 0.017$.

The results in Table 7 show that this Point of View difference is confined to pairs of subjects who were unacquainted with one another (F = 5.70, p = 0.022). No Point of View difference was found on this measure when the actor and observer were friends (F = 0.96, p = 0.34).

As for Information Level, observers who did not previously know the actor did not make stronger attributions than observers who were previously acquainted (F = 2.91, p = 0.096). And there was no effect for Interpersonal Distance when observers did not previously know the actors (F = 1.01, p = 0.33; see Table 8).

Two of the Causal Attribution items, "your/the actor's personality" and "the situation in general", are the items on which actor-observer differences should be strongest, according to Jones and Nisbett. When these two items were combined to form an extent-of-internal-attribution scale (computed by reversing the one-to-ten scores on the "situation item", adding them to the "personality" item scores, and dividing by two) no Point of View differences are found (see Table 9; F = 1.34, p = 0.25). There were no Interpersonal Distance (F = 1.68, p = 0.19) or Information Level (F = 1.68, p = 0.46) effects either. These results may be due to this two-item scales' unreliability (alpha = -0.146).

Table 7. Causal Attribution 5-item scale: simple main effects

		actors		observers	F
strangers	M	7.21	M	6.11	5.70 a
	SD	1.23	SD	1.65	
		low		**high**	**F**
friends	M	7.34	M	6.94	0.96
	SD	1.16	SD	1.42	
F		----		2.91	

Note. 20 subjects per cell; higher numbers indicate stronger internal causal attributions: "a" indicates $p = 0.02$.

Table 8. Causal Attribution 5-item scale: simple main effects

	close	far	F
low familiarity observers	M 6.48	M 5.74	1.01
	SD 1.74	SD 1.56	

Note. 10 subjects per cell; higher numbers indicate stronger internal causal attributions.

Table 9. Causal Attribution using "personality" and "the situation in general" as scale items: main effects.

	actors	observers	F
Point of View	M 6.88	M 6.46	1.34
	SD 1.56	SD 1.62	
	low	high	F
Information Level	M 6.44	M 6.90	1.68
	SD 1.56	SD 1.61	
	close	far	F
Distance	M 6.54	M 6.80	0.54
	SD 1.45	SD 1.74	

Note. 40 subjects per cell; higher numbers indicate stronger internal causal attributions.

A number of researchers have found that internal and external attributions do not work in an opposing or hydraulic manner (MacArthur & Post, 1977; Miller, Smith & Uleman, 1981; Storms, 1973; Taylor & Koivumaki, 1976, studies 1 and 2). Actors and observers (or different groups of observers) did not differ in the extent to which they considered internal causes as important but they did differ in the extent to which they considered situational factors as important.

In the present study, a combination of the three internal attribution items ("personality", "attitudes", and "mood") did not prove reliable (alpha= 0.44), but a combination of two of these items (personality and attitudes) did (alpha= 0.76). In accordance with past findings, there were no differences between actors and observers on this strictly internal measure (see Table 10: $\underline{F}$ = 0.12, $\underline{p}$ = 0.73). Nor were there Information Level ($\underline{F}$ = 1.73, $\underline{p}$ =0.19) or Interpersonal Distance ($\underline{F}$ = 0.124, $\underline{p}$ =0.73) effects.

A combination of the four external items did not prove reliable (alpha= 0.39). The most reliable scale was a combination of three of the external items, "the arrangement of the room", "the other person's behavior" and "the situation in general" (alpha= 0.54). On this

Table 10. Internal-item Causal Attribution scale: main effects

	actors	observers	F
Point of View	M 8.59	M 8.15	0.12
	SD 1.62	SD 1.86	
	low	high	F
Information level	M 8.11	M 8.63	1.73
	SD 1.99	SD 1.46	
	close	far	F
Distance	M 8.30	M 8.44	0.12
	SD 1.76	SD 1.76	

Note. 40 subjects per cell; higher numbers indicate stronger internal causal attributions.

Table 11. External-item Causal Attribution scale: main effects

	actors	observers	F
Point of View	M 4.60	M5.56	5.05 a
	SD 1.73	SD 2.03	
	low	high	F
Information Level	M 5.31	M 4.85	1.16
	SD 2.02	SD 1.84	
	close	far	F
Distance	M 5.08	M 5.07	0.00
	SD 1.96	SD 1.93	

Note. 40 subjects per cell; higher numbers indicate stronger external causal attributions: "a" indicates $p < 0.05$.

measure there was a significant Point of View difference (see Table 11), providing more evidence for the conclusion that internal and external attributions do not work in an opposing manner. Of greater interest is the finding that observers made stronger situational ratings than actors (F = 5.05, p = 0.028), contrary to the predictions of Jones and Nisbett. There were no Interpersonal Distance (F = 0.00, p = 0.98) or Information Level (F = 1.16, p = 0.28) effects on this measure either.

Age and Year at University

Subjects were asked to give their age, year and specialization at university when filling out the questionnaire. The age mean was 19.4 with a standard deviation of 2.9. Mean year at university was 1.5 with a standard deviation of 0.74. Pearson correlations of two of these variables (age and year at university) with the dependent measures produced some striking findings--see Table 12. Neither age nor year at university was correlated with extremity-of-trait-ascription (for age, r = -0.09, p = 0.20; and for year at university, r = -0.002, p = 0.49). However, both showed highly significant negative correlations with the five-item extent-of-internal-attribution scale (for age, r = -0.488, p <

Table 12. Pearson correlations between Age, Year at University and the dependent variables

	age	year at university
Extremity of Trait Ascription	-0.09	-0.002
Causal Attribution 5-item scale	-0.49 a	-0.48 a
Causal Attribution internal item scale	-0.36 a	-0.37 a
Causal Attribution external-item scale	0.39 a	0.36 a
Causal Attribution: "personality" and "situation in general"	-0.41 a	-0.35 a

Note. 80 subjects per cell: "a" indicates $p < 0.001$.

0.001; and for year at university, $r = -0.476$, $p < 0.001$).

Because actor-observer differences had been found on the external-item Causal Attribution scale but not on the internal-item causal attribution scale, and because this finding is puzzling and cannot, at present, be explained, it is of interest to look at the correlations of age and year at university with the internal and external items separately in order to see if such a puzzling finding is also present for these correlations. When the overall causal attribution scale was partitioned into two scales (one internal-only scale made of "your/the actor's personality" and "the situation in general", and one external-only scale made of "the situation in general", "the arrangement of the room" and "your/the other person's behavior"), Pearson correlation tests also produced significant results. Age and year of university were negatively correlated with the internal item scale (for age, $r = -0.389$, $p < 0.001$, and for year at university, $r = 0.36$, $p = 0.001$). And age and year of university were positively correlated with the external item scale (for age, $r = 0.389$, $p < 0.001$; and for year at university, $r = 0.36$, $p = 0.001$). The non-reciprocal nature of the internal and external causal attribution items seems to be confined to differences between actors and observers.

Pearson correlation coefficients were also computed for a scale composed of the two items on which actor-observer differences are usually expected: "your/the actor's personality" and "the situation in general". The same effects were found (for age, $r = -0.41$, $p < 0.001$; for year at university, $r = -0.35$, $p < 0.001$).

In other words, as age and year at university increase there is a highly significant tendency for people to make stronger external attributions and less strong internal attributions. (The correlation between age and year of university for subjects who completed this questionaire was high and significant ($r = 0.79$, $p < 0.001$)).

Could this tendency be confined to just actors? or just observers? The figures in Table 13 show these correlations when subjects were divided into actors and observers. There was a Point of View difference in only one case: on the external item scale there was a positive correlation between the year at university of observers and the extent of internal attribution ($r = 0.46$, $p = 0.002$) but no correlation between the year at university of actors and extent of external attribution ($r = 0.21$, $p = 0.097$). This one correlation did not reach significance but it was in the same direction as the observer correlation, and because no Point of View difference was

Table 13. Pearson correlations: Age, Year at University for actors and observers

	age		year at university	
	actors	observers	actors	observers
Causal Attribution 5-item scale	-0.47 a	-0.51 a	-0.35 c	-0.55 a
Causal Attribution internal item scale	-0.42 b	-0.30 c	-0.31 c	-0.42 b
Causal Attribution external-item scale	0.27 c	0.47 a	0.21	0.46 b
Causal Attribution: "personality" and "situation in general"	-0.40 a	-0.41 b	-0.27 c	-0.41 b

Note. 40 subjects per cell: "a" $p < 0.001$: "b" indicates indicates $p < 0.01$: "c" indicates $p < 0.05$.

found on all the other measures, it is safe to conclude that there are no actor-observer differences in the correlations of age and year at university with the dependent variables.

Categories of Causal Attribution

Research on the actor-observer hypothesis has always assumed that internal and external attributions are opposite poles of one dimension. Subjects are called "internals" when they make more internal attributions and "externals" when they make more external attributions. But it is quite possible that this is not the way that everyone thinks about the causes of behavior. In addition to "internals" and "externals", there may also be people who see both internal and external causes as important and there may be others who see neither as very important.

This possibility was examined by forming four categories (internal-only, internal-and-external, external-only, and neither-internal -or-external) and looking at the distribution of subjects across these groups. To do this, the centers of the "personality" and "situation in general" item scales (which was 5.5) were used as the cut-off points. A subject was considered an "internal-only" if he made a "personality" rating greater

than 5.5 and a "situation" rating less than 5.5. A subject was an internal-and-external if he made a personality rating greater than 5.5 and a situation rating greater than 5.5. "Externals-only" were people who made a personality rating less than 5.5 and a situation rating greater than 5.5. And those people who made a personality rating of less than 5.5 and a situation rating of less than 5.5 were "neither internal or externals".

Because "personality" and "situation in general" did not form a reliable scale, as mentioned above, the four categories of causal attribution were also constructed for the most reliable combination of internal items ("personality" and "attitudes") and for the most reliable combination of the external items ("the situation in general", "the arrangement of the room" and "your/the other person's behavior").

The results in Tables 14 and 15 show the frequencies for each of these categorizations. In both cases, the majority of subjects were either internals-only or internal-and-externals. The number of subjects falling into the external-only and neither-internal-or-external categories was negligible. The distribution of subjects across the internal-only and internal-and-external categories was about even: 32 and 42 for the

Table 14. Distribution of subjects among the four categories of Causal Attribution: "personality" and "situationn general" scale

	actors	observers	total
internal-only	18	14	32
internal and external	20	22	42
external-only	0	2	2
neither internal or external	2	2	3

Table 15. Distribution of subjects among the four categories of Causal Attribution: internal and external items

	actors	observers	total
internal-only	26	16	42
internal and external	13	20	33
external-only	0	2	2
neither internal or external	1	2	3

personality-situation analysis and 42 and 33 for the internal and external factors analysis. (A similar distribution is obtained when observers are divided into high and low information observer groups.) The finding that many raters are internal-and-external supports the hypothesis that the causal attribution process is more complex than usually considered.

Chi square tests were performed on the distribution of actors and observers within the internals-only and internal-and-external categories. This was done in order to determine if there was a tendency for actors or observers to fall into one of the categories of causal attribution and not the other. These tests were performed for both the personality/situation analysis and for the internal/external item analysis. In both cases no significant effects were found.

The Actor-Observer method versus the Self-Other method

One possible reason for the lack of significant findings regarding the overall trait ascription hypotheses could be that subjects were either actors or observers, in contrast to most studies in which subjects are both actors and observers (e.g., Funder, 1980a; Goldberg, 1981, 1978; Herzeberger & Clore, 1979; Nisbett, Caputo, Legant, &

Maracek, 1973; Monson, Tanke, & Lund, 1980; Solano, 1979). In his review of the literature, Watson (1982) referred to the former as real "actor-observer" studies and termed the latter "self-other" studies. As mentioned above, subjects were either actors or observers in this study because having people complete a questionnaire once should affect the way they complete it a second time. A proper test of actor-observer differences should not have such an order effect involved. In order to determine if this difference between the present and past studies is important, twenty more pairs of subjects were run. Ten pairs of subjects completed the Trait Ascription questionnaire for both themselves and their partner, and another ten pairs of subjects completed the Causal Attribution questionnaire for both themselves and their partner. (The order of completion of the questionnaires was counterbalanced in both cases.) Five pairs of subjects within each of these blocks were acquaintances and five were strangers. There was no manipulation of distance in this analysis because it did not prove to be important the first time and because of time constraints. Apart from these minor variations, the procedures were the same as those in the first study.

Two analysis of variance tests were performed, one using Trait Ascription as the dependent variable, the

other using Causal Attribution. For the ten pairs of subjects who knew each other, the mean length of acquaintance was 24 months and the standard deviation was 36 months.

Trait Ascription. For each subject who completed this measure, two extremity-of-trait-ascription scores were computed -one for the "actor" questionnaire and one for the "observer" questionnaire. As in the original study, a test of the internal consistency of this scale showed it to be reliable (alpha = 0.91).

No significant effects were found (see Table 16). Observers did not make more (or less) extreme ratings about actors than actors made about themselves (F = 0.62, p = 0.44). This was true regardless of Information Level (F =0.15, p =0.71, for strangers: F =0.67, p =0.42, for friends--see Table 17). And observers who were acquainted with the actor did not make more extreme trait ratings than did observers who did not previously know the actor (F =0.68, p = 0.42).

As in the first study, analysis of variance tests were performed on those trait terms denoting internal characteristics and those terms denoting overt behavior (see Table 18). No Point of View effects were found in

Table 16. Extremity of Trait Ascription: main effects

	actors	observers	F
Point of View	M 7.79	M 8.02	0.62
	SD 0.90	SD 0.92	
	low	high	F
Information Level	M 7.76	M 8.05	0.99
	SD 1.03	SD 0.76	

Note. 20 subjects per cell; higher numbers indicate more extreme trait ratings.

Table 17. Extremity of Trait Ascription: simple main effects

		actors		observers	F
strangers	M	7.67	M	7.85	0.15
	SD	1.06	SD	1.06	
friends	M	7.91	M	8.19	0.67
	SD	0.76	SD	0.77	
F		----		0.68	

Note. 10 subjects per cell; higher numbers indicate more extreme trait ratings.

Table 18. Trait Ascription for different trait categories

		actors		observers	F
terms denoting internal characteristics					
recoded for extremity	M	8.00	M	8.32	0.75
	SD	1.32	SD	1.06	
not recoded	M	7.60	M	7.90	0.46
	SD	1.56	SD	1.44	
terms denoting overt behaviors					
recoded for extremity	M	7.74	M	7.89	0.01
	SD	0.89	SD	0.90	
not recoded	M	6.41	M	6.67	0.44
	SD	1.26	SD	1.14	

Note. 20 subjects per cell.

either case (F = 0.75, p = 0.39 for the internal characteristic trait terms; F = 0.01, p = 0.92 for overt behaviors). This was also true when the traits were not recoded for extremity (F = 0.46, p = 0.50 for internal characteristics; F = 0.44, p = 0.51 for overt behaviors).

Causal Attribution. For each subject who completed this measure, two extent-of-internal-attribution scores were computed from all seven attribution items (one for actors and one for observers). No Point of View difference (F = 0.72, p = 0.40) or Information Level effects (F = 0.09, p = 0.77) were found--see Table 19. The reliability of this scale, however, was very low (alpha = -0.36) and no scale formed from a subset of the items improved the reliability to a reasonable level. (The best was a four item scale where alpha was 0.14.)

As before, the seven items were divided into internal and external groups. A combination of the three internal items did not prove very reliable (alpha = 0.54). The best was a combination of "your/the actor's personality" and "your/the actor's mood" (alpha = 0.63; see Table 20). As in the original study, no Point of View difference (F = 0.001, p = 0.97) or Information Level effects (F = 1.11, p = 0.30) were found on this internal attribution measure.

Table 19. Causal Attribution 7-item scale: main effects

	actors	observers	F
Point of View	M 6.61	M 6.39	0.72
	SD 0.79	SD 0.81	
	low	high	F
Information level	M 6.46	M 6.54	0.09
	SD 0.79	SD 0.82	

Note. 20 subjects per cell; higher numbers indicate stronger internal causal attributions.

Table 20. Internal-item Causal Attribution scale: main effects

	actors	observers	F
Point of View	M 6.20	M 6.17	0.001
	SD 2.12	SD 2.23	
	low	high	F
Information Level	M 6.55	M 5.82	1.11
	SD 2.27	SD 2.01	

Note. 20 subjects per cell; higher numbers indicate stronger internal causal attributions.

A combination of the four external items did not prove reliable either (alpha = 0.44), but a combination of two items ("the situation in general" and "the other person's/your behavior") did (alpha = 0.73; see Table 21). Unlike the first study, on this scale no actor-observer differences (F = 0.39, p = 0.54) or Information Level effects (F = 1.08, p = 0.31) were found.

An extent-of-internal-attribution scale was computed using the two items on which actor-observer differences should be strongest--"your/the actor's personality" and "the situation in general"--see Table 22. As in the first study, no Point of View difference (F = 0.012, p = 0.91) or Information Level effects (F = 0.58, p = 0.45) were found. But also as in the first study, this scale proved to be unreliable (alpha = -0.06).

Age and Year at University. Pearson correlation coefficients were calculated for the relationships between age, year at university and the dependent variables in order to see if the correlations that were present in the original study were also present in this analysis--see Table 23.

As in the original study, these variables did not correlate with trait ascription (for age, r = -0.19, p =

Table 21. External-item Causal Attribution scale: main effects

	actors	observers	F
Point of View	M 5.00	M 5.45	0.39
	SD 2.30	SD 2.21	
	low	high	F
Information Level	M 5.60	M 4.85	1.08
	SD 2.66	SD 1.70	

Note. 20 subjects per cell; higher numbers indicate stronger external causal attributions.

Table 22. Causal Attribution using "personality" and "the situation in general" as scale items: main effects.

	actors	observers	F
Point of View	M 6.92	M 6.30	0.01
	SD 1.46	SD 1.42	
	low	high	F
Information level	M 6.20	M 7.20	0.91
	SD 1.51	SD 1.60	

Note. 20 subjects per cell; higher numbers indicate stronger internal causal attributions.

Table 23. Pearson correlations between Age, Year at University and the dependent variables

	age	year at university
Extremity of Trait Ascription	-0.19	-0.24
Causal Attribution internal-item scale	-0.19	-0.14
Causal Attribution external item scale	-0.02	-0.008
Causal Attribution "personality" and "situation in general"	0.19	0.18

Note. 40 subjects per cell.

0.11; and for year at university, r = -0.24, p 0.08). Surprisingly, there were no significant correlations for the Causal Attribution scales either. This was true for the best internal-item scale (for age, r = -0.19, p = 0.13: and for year at university, r = 0.14, p = 0.19); for the best external item scale (for age, r = =0.02, p = 0.45: and for year at university, r = 0.008, r = 0.48); and for the "personality" and "situation in general" scale (for age, r = -0.19, p = 0.12: and for year at university, r = 0.18, p = 0.13). These findings suggest a reason why the strong correlations which were found in the first study had never been mentioned in past research: the correlations are not present when subjects are both actors and observers, as subjects are in most actor-observer studies.

Categories of causal attribution. The four categories of causal attribution (internal-only, internal-and-external, external-only, and neither internal or external) were again created in order to determine if the distribution of subjects across these categories would be the same as it was in the original study. Also as before, this was done for both the "personality" and "situation in general" scale and for the most reliable internal and external item scales (see Tables 24 and 25).

Table 24. Distribution of subjects among the four categories of Causal Attribution: "personality" and "situation in general" scale

	actors	observers	total
internal-only	9	6	15
internal and external	8	9	17
external-only	3	4	7
neither internal or external	0	1	1

Table 25. Distribution of subjects among the four categories of Causal Attribution: internal items and external items

	actors	observers	total
internal-only	4	7	11
internal and external	8	6	14
external-only	3	1	4
neither internal or external	5	6	11

As before, for both of these categorizations the majority of subjects were either internal-only or internal-and-externals), and the distribution of subjects across these two groups was about even (15 and 17 for personality/situation; 11 and 14 for internal/external). However, unlike the original study, the distribution of subjects in the external-only and neither-internal-or-external categories was not negligible (4 and 11 for the internal/external scale; 7 and 1 for the personality/situation scale). Despite this difference, these results also support the hypothesis that the causal attribution process is more complex than usually considered. Classifying people as internals or externals is apparently not an accurate reflection of what actually happens.

As in the original study, there were no significant differences between the distribution of actors and observers within the four categories.

Discussion

Although the main hypotheses did not recieve the kind of support that it was predicted they would, some results did provide evidence for the central theme of this study. As for the secondary findings, (i.e., the correlations of age and year at university, the categories of causal attribution), these represent substantial issues worthy of discussion and consideration in future research.

The Main Hypotheses

Based on the mixed results of past research on actor-observer differences, on suggestions by some researchers (e.g., Herzeberger & Clore, 1979) as to why this evidence has been mixed, and on other ideas derived from research on in-groups and out-groups (Linville & Jones, 1980), it had been predicted that actors and observers would differ in their willingness to infer traits but not in terms of internal and external causal attributions. Presumably this would be due to differences in the size and complexity of cognitive schemas and not to differences in internal and external causal perceptions. But there were no actor-observer differences on the overall trait-term measure, and the overall causal attribution measure proved unreliable.

The level-of-information (or familiarity) hypothesis recieved no support either. There were no differences between strangers and friends in terms of trait ascription or (causal attribution).

Two possibilities remain as to why no significant effects were found. (A third possibility, the fact that subjects were either actors or observers, was eliminated in the added study.) The most important is that this study was a test of actor-observer differences involving subjects in an actual real-life situation. In contrast, the bulk of actor-observer studies have asked subjects to give general descriptions of themselves and others from memory (e.g., Funder, 1980; Goldberg, 1978,1981; Herzeberger & Clore, 1979; Monson, Tanke, & Lund, 1980; Nisbett, Caputo, Legant, & Maracek, 1973: Solano, 1979; Taylor & Koivumaki, 1976; Turner, 1978).

Certainly this raises the possibility that the attributions of actors and observers do not always differ for real-life social events, in contrast to the original hypothesis (Jones & Nisbett, 1972). The small number of studies that have had both actors and observers in an experimental situation have usually had some confounding factor present. For example, Duval and Wicklund (1973) asked actor subjects to make attributions for liked versus

disliked others. Hansen and Stonner (1978) requested that subjects make attributions of freedom and responsibility. And two attempts to replicate the famed videotape-reversal study by Storms (1973) have failed (Uleman, Miller, Henken, Tsemberis & Riley, in press).

The second possible explanation for the lack of significant findings has to do with the nature of the situation in which the present subjects were involved. It has been noted (Mischel, 1973: Monson & Snyder, 1977) that situations vary in the extent to which they allow personality and individual differences to be expressed. "Strong" situations are ones in which there are pressures and constraints such that a limited number of behaviors are acceptable and everyone behaves the same way. In "weaker" situations there are fewer constraints and a person's behavior is chosen by himself and is more revealing of his personality.

In the present study it is possible that having two people come to a "psychology experiment" and asking them to talk about a moral dilemma is a somewhat overpowering situation, one in which most people would behave in the same way. This could account for the lack of significant effects on the trait ascription questionnaire. This seems especially possible when one considers that in most actor-

observer studies subjects give descriptions from memory.

A related possibility for the lack of significant findings could be the fact that both actors and observers were participants in the same situation--both were equally aware of the situational constraints. This is in contrast to studies such as Storms (1973) or Regan, Strauss and Fazio (1974), where observers viewed the actor through a mirror or on videotape. In such situations observers really are focusing on the actors whereas in the present study observers had to deal with the same situational demands as did actors.

Despite the fact that the overall predictions were not supported, some important findings did emerge. First, on those trait terms denoting internal characteristics observers did make more extreme trait ascriptions than actors (in the original study), as predicted. Second, on the most reliable causal attribution measure (a five-item scale), actors made stronger internal causal attributions than did observers. Third, on the most reliable external-item scale observers made stronger external/situational attributions than did actors.

The significant causal attribution findings were not predicted but they do lend support to the hypotheses developed in this study. Jones and Nisbett (1972) and

other researchers would have expected observers to make more extreme trait ascriptions than actors (as subjects did on the internal traits), and they would have said that this was a reflection of more internal causal attributions having been made by observers. But actors made more internal causal attributions and observers made more external causal attributions. This supports the present hypothesis that generalizations about internal and external causal perceptions cannot be based on trait ascription data, as most studies are. The assigning of traits seems to be influenced by the size and complexity of cognitive schemas.

The fact that actors and observers differed in one direction on one measure and in the opposite direction on the other suggests that there are two ways in which the attributions of actors and observers are different instead of one. More research on this issue is necessary.

At this point, let us again consider the possibility that the experimental situation was too "strong" to allow individual differences to appear. If so, then all subjects would have behaved in about the same manner and one would not expect to find actor-observer differences on those trait terms which denote overt behaviors. One would, however, expect differences on those less

observable trait terms denoting internal characteristics, and this is what was found. This lends further support to the idea that the lack of significant overall effects for trait ascription was due to the nature of the experimental situation and not to false hypotheses.

Another explanation for why actor-observer differences were found on those trait terms describing internal characteristics but not on those terms concerning overt behaviors. Two interactants are not likely to disagree on how "active" or "talkative" one of them was during the interaction because it is equally obvious to both who was the most active or talkative. On the other hand, the extent of "self-control" or "trusting" of one of the interactants is much less obvious and there is more room for disagreement.

The most satisfactory reason for the pattern of trait ascription results, however, is that having two people sit down and talk about a moral dilemma involves very little overt behavior. There is no basis on which to make trait ratings about overt behaviors and no differences should be expected.

Another finding which deserves mention is that the causal attribution items which were used in this study did not together form a reliable scale. One explanation could

be that it is inappropriate to force people to think about the causes of social behavior on an internal-external dimension. On the other hand, perhaps subjects were simply confused when presented with a list of seven possible causes. In order to determine which of these possibilities is the case, it is suggested that in future research the various possible causes (e.g., personality, the situation in general, attitudes, the arrangement of the room) should remain lumped together in two groups--in one internal cluster and in one external cluster--and the reliability coefficient of a scale composed of these two clusters be reported. Although some past researchers have used a measure similar to this (e.g., Storms, 1973), the reliability of this scale has never been reported.

The Hydraulic Assumption. A recurrent and puzzling finding in past research on causal attributions has been that internal and external attributions do not seem to function in an opposing or hydraulic manner. Storms (1973), MacArthur and Post (1977), Miller, Smith & Uleman (1981), and Solano (1979) reported that an increase in situational attributions is not reciprocated by a decrease in dispositional attributions (or vice versa). In this study, it had been suggested that maybe this was due to the confounding of trait ascription with causal attribution in the measures that were used. But the same

results were found here as before. There were no differences between actors and observers on the internal causal attribution scale but there were differences on the external causal attribution scale. This is further evidence for the finding that internal and external attributions are not psychological reciprocals of one another.

Interpersonal Distance as a Manipulation of Salience. Past research has shown that a variety of manipulations of perceptual salience have significant effects on causal attributions. Aspects of the environmnent, including people, which "grab" one's attention are seen as more causally important than are non-salient aspects. In this study, it had been predicted that Interpersonal Distance should also show such an effect. Someone who is close to you should be more salient than someone who is farther away. Unfortunately, no such differences were found on the measures that were used. This does not mean that Interpersonal Distance should immediately be dismissed as an unimportant manipulation of salience. To the experimenter in this study, there were very noticeable differences between pairs of subjects who were close together and pairs who were farther apart. Subjects who were strangers and close together seemed quite uncomfortable (e.g., crossed legs, folded arms, leaning

away from the other person, a hand covering part of the face).

Most salience studies have had observers watch two actors, one of whom is made salient. Perhaps if Interpersonal Distance had been used as a manipulation of salience in a design where observer subjects rated two actors, one close and one farther away, significant effects would have been found.

Another explanation for the lack of significant findings for Interpersonal Distance comes from Argyle and Dean (1965). They found that there is reduced eye contact when people are placed at unusually close distances, and so in the present study the close proximity may have reduced the salience of the actors instead of increasing it. However the visible emotional reactions of those subjects who were close together would tend to discount this possibility. On the other hand, it could be argued that being unusually close to a stranger increased the personal discomfort of subjects and caused their attention to shift away from the person they were with. But if this was the case, one would expect to find a distance effect within actors and no such effect was found.

The Actor-Observer method versus the Self-Other method

Different results were obtained when subjects were both actors and observers as compared to when subjects were actors or observers. This was true for the trait terms denoting internal characteristics, for the extent-of-internal-attribution scale, for the external attribution scale, for the correlations of age and year at university, and for the categories of causal attribution. Clearly, there are important learning effects when subjects complete the same questionnaire twice. Due to the designs of past studies, such an effect has never been reported.

On learning of this, one may be tempted to conclude that having subjects complete both actor and observer questionnaires should be the way to study actor-observer differences, since in real life people are both actors and observers. But this would not be a precise test of the Jones and Nisbett (1972) hypothesis. That hypothesis is concerned with the differences between the attributions which actors make about their behavior in a given situation and the attributions which observers make about actors in the same situation. Therefore the proper method of studying this is for subjects to be either actors or observers.

Because it was found that the two methods did not produce the same results, the difference between self-other studies, to use Watson's (1982) terms, and real actor-observer studies now seems more important than ever. The results from these two paradigms should be treated as separate but related phenomena.

Secondary Findings

The highly significant tendency for subjects to make stronger external attributions and weaker internal attributions as age and year at university increase was truly unexpected, based on past research. Ruble, Feldman, Higgins and Karlovac (1979) had found increasing dispositional attributions with age, but this finding is not directly relevant because they had used subjects from three age groups ranging from nursery schoolers to college students. And, as mentioned above, most past studies would not have found such correlations because the effect is only present when subjects are either actors or observers.

It is remarkable that such a highly significant tendency was found for so small an age range. Because there was a high positive correlation between age and year at university, the correlations with the causal

attribution measures must be the result of one common underlying factor. There seems to be an important change which takes place within university students that causes them to make stronger external attributions and weaker internal attributions with increasing age and year at school. Students generally learn more about external causes (of everything) than about internal causes.

One explanation for this change could have to do with the fact that all of the subjects in this study were recruited from psychology classes. In recent history there has undoubtedly been a shift in how psychologists view the causes of behavior --a shift away from person causes towards situation causes-- and it is possible that as students grow older and take more psychology classes from these professors they also come to see behavior as situationally caused. Support for this notion comes from Antonio and Innes (1978) who found that psychologists tend to make external attributions whereas psychiatrists make internal attributions.

The fact that there were such correlations for Causal Attribution but none for Trait Ascription is further support for the hypothesis that these two processes are different and should not be confused.

Finally, the distribution of subjects across the four possible categories of causal attribution is also of interest and has never before been reported. The results show that it is misleading to divide people into two groups, "internals" and "externals". Most individuals appear to be either "internals" or "internal-and-external". Because there were no differences in the distribution of actors and observers across these groups, as Jones and Nisbett would have predicted, the research implications of this finding are unclear. Possibly an individual difference variable is important (e.g., cognitive complexity).

What this finding should do, however, is to aid in causing a shift in how the causal attribution process is viewed. Because research on the effects of salience on causal attributions has been the most successful and has produced the most clear-cut results, there has been a tendency to view the causal attribution process as a "top of the head" phenomenon in which "availability heuristics" are most important (e.g., Nisbett & Ross, 1980). People mustn't be doing much causal thinking if a manipulation of salience such as wearing a bright striped shirt produces a significant effect on the attributions of observers. But the present finding that many people consider both internal and external causes as important suggests that

some people are more thoughtful than such a view would suppose.

Conclusion

The present findings suggest that trait ascription and causal attribution are two different processes which should not be confused. If future research supports these findings, it will question the validity of past generalizations about actor-observer differences which were based on measures which confounded these two processes. Furthermore, the social perceptions of actors and observers seem to differ in more ways than one.

As for how these divergent perceptions should be studied, the present results suggest that the difference between the self-other method and the actor-observer method is important and should not be ignored. It is also recommended that actor-observer differences be studied in more natural, less overpowering situations.

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Trait Ascription, Causal Attribution, and the Actor-Observer Hypothesis

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