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HOW WE JUDGE OTHERS:
THE ATTRIBUTION OF RESPONSIBILITY

A Thesis
Presented to the
Department of Sociology
and the
Faculty of the College of Graduate Studies
University of Nebraska at Omaha

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Brad B. Richardson
August 1978

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Accepted for the faculty of the College of Graduate Studies of the University of Nebraska at Omaha, in partial fulfillment of the requirements for the degree Master of Arts.

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Attribution Theory

Attribution theory is concerned with the process by which people infer causation from "parts of the relatively stable environment" (Heider, 1958:297). This process is a function of the need to control the environment through explanation and prediction similar to the way scientists attempt descriptions that render predictions. This analogy has also been drawn by Kelley (1967), who has concluded that the way in which causal attributions are made is similar to the way data is analyzed by means of the analysis of variance procedure. Another example of the parallel between the scientific method and attribution processes has been made by Kelley (1971) regarding compensatory causes.¹ These have been shown to be similar to the principles involved in scalogram analysis as developed by Guttman (1950), in that the underlying characteristics of action are examined and analyzed (see Kelley, 1971). While the scientific method can be seen as a model of the way in which people make attributions, so too, the way in which people make attributions can be seen in the scientific method, though the "naive psychology" (Heider, 1958) of the "man on the street" is less systematic. "A naive version of J. S. Mills' method of difference provides the basic analytic tool" (Kelley, 1967:194). The following illustrates this method using movies as the exemplary entity:

The effect is attributed to that condition which is present when the effect is present and which is absent when the effect is absent. This basic notion of

1. Compensatory causes take into account the possibility of multiple causality. That is, not merely covariation with the effect, but also degrees of each perceived cause when the effect occurs.

covariation of cause and effect is used to examine variations in effects (responses, sensations) in relation to variations over (a) entities (movies), (b) persons (other viewers of the movie), (c) time (the same person on repeated exposures), and (d) modalities of interaction with the entity (different ways of viewing the movie). The attribution to the external thing rather than to the self requires that I respond differentially to the thing, that I respond consistently, over time and over modality, and that I respond in agreement with a consensus of other persons' responses to it.

Kelley (1967) has developed a three dimensional model that visually illustrates the conditions set forth above. The three dimensions include: a) entities, b) time/modality, c) persons. Entities correspond to things in the environment (in the example above, movies). Persons are divided into "self" and "others" and interact with the entities. Time/modality is that aspect concerned with responses to the same stimuli at different times and in different situations, under a variety of circumstances.

As stated above, attributions are based on the evaluation of distinctiveness, consistency, and consensus information. For Kelley (esp. 1967), responses of high magnitude over each of these variables results in an attribution to the stimulus "thing". Low consistency results in circumstance attribution (McArthur, 1972), and low distinctiveness and consensus accompanied by high consistency leads to a dispositional attribution. The following chart illustrates these connections:

TABLE I

Evaluation of information
for stimulus attributions

		Distinctiveness	Consistency	Consensus
Evaluation of Information	hi	X	X	X
	lo			

TABLE II

Evaluation of information
for circumstance attributions

		Distinctiveness	Consistency	Consensus
Evaluation of Information	hi			
	lo		X	

TABLE III

Evaluation of information
for dispositional attributions

		Distinctiveness	Consistency	Consensus
Evaluation of Information	hi		X	
	lo	X		X

Kelley (1967) has provided a utilizable example which lends credibility (face-validity) to the model. This example is concerned with the dynamic processes involved in persuasion and influence as these are related to the three dimensional model of causal attribution. This example is an extension of some of the work done by Thibaut and Kelley (1959).

The first aspect of this example begins with information dependence. "Person A is informationally dependent upon B if B can raise A's level of information to a higher level than A can attain from alternate sources" (Kelley, 1967:199). Information dependence can be, like "outcomes"², objectively effective and desirable, but may also be subjective "in terms of anticipated or experienced effects" (Kelley, 1967:199). Thibaut and Kelley suggest that "objectively available outcomes" do not necessarily correlate with what is actually experienced or expected. Kelley (1967) similarly applies this notion of subjectivity to information dependence. For a participant to continue to engage in a particular behavior (e.g. information seeking) requires that the outcomes remain substantially above the "comparison level"³ and above the "comparison level for alternatives"⁴. "Anticipated information dependence affords the basis for seeking information.....(and) we may expect persons to be dissatisfied with their information state when it falls below the expected level" or below the "CLalt"-the alternative being information seeking behavior in

2. "Outcomes" (Thibaut and Kelley, 1959) are cost benefit analyses of individual interactions.
3. "Comparison level" ("CL") is defined as an average of outcomes above which satisfaction results and below which dissatisfaction results (see Thibaut and Kelley, 1959:81).
4. "Comparison level for alternatives" ("CLalt") is the lowest acceptable outcome level for a person when that person is presented with alternatives. When the outcome level is below the "CLalt" the social relationship will be terminated.

this instance-(Kelley, 1967:199-200).

Person A will be more susceptible to influence the more variable his prior attribution has been. Attribution instability (and hence, susceptibility to influence) will be high for a person who has (a) little social support, (b) prior information that is poor or ambiguous, (c) problems difficult beyond his capabilities, (d) views that have been disconfirmed because of their inappropriateness or nonveridicality and (e) other experiences engendering low self confidence (Kelley, 1967:200).

Given person A in the present state, and that B wishes to influence A, B may attempt to influence A on one of two dimensions of Kelley's attribution model. B may utilize either the consistency or consensus aspects of the process. In the first case (operating on the consistency aspect of the attribution process) B may provide information which will aid A in achieving consistency over the time/modality dimension. This may be done through what Kelley has termed either "instruction" or "education". In the second case (choosing to operate on the consensus aspect of the process) the persuader (person B) provides information concerning his own or other's opinions. The difficulty in this second case of influence is that:

Person B's message is itself an effect, and A's problem is to attribute it, either to that part of their common environment under discussion (in which case it is considered valid), to B himself (his role, desires, etc.), or to the situation or target (A himself, the particular circumstances (Kelley, 1967:201-202)).

What attribution will be made by A, essentially what A will perceive and infer causality from for the message, the cause, will be determined by those factors mentioned earlier (A's evaluation over the distinctiveness,

consistency, and consensus dimensions).

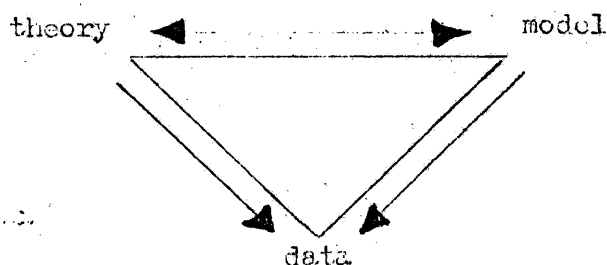
Heider (1958) has also posited a number of concepts, the experience and evaluation of which are deemed to determine the nature and direction of causal attributions (i.e. whether or not the attribution will be made personally or environmentally). Evaluation of, for example, information on the difficulty of the task, amount of effort, and ability, are said to lead the attributor in making a causal attribution to either the environment or the person. Heider (1958:296) proposes that, "We try to make sense out of the manifold of proximal stimuli by ordering them in terms of the distal invariants and their relevant dispositional properties." This "ordering and classifying" is Heider's concept of attribution.

Jones and Davis (1965) hold a perspective of attribution similar to Heider's. These researchers have, however, reorganized some of the processes that Heider set forth. Their's is not an extension of Heider's thought as much as it is a reformulation of the processes that Heider originally outlined. A brief look at the "theory-data-model triangle" developed by Leik and Meeker (1975) will aid in clarifying the similarities as well as the differences between the thought of Heider, Kelley, and Jones and Davis.

The "theory-data-model triangle" (TDMt) is a mathematical model developed for use in scientific endeavors. The purpose of substantive theory is seen as the formulation of social variables into propositions so that social facts may be explained and predicted. Likewise, the purpose of developing a theory of causality for the naive psychologist is to make explanation and prediction possible so that a better control over the environment can be achieved. Two modes or paths of analysis are discussed by Leik and Meeker who suggest that these be labelled "inductive modes" and "deductive

nodes"⁵. These paths of analysis of the social world are determined by the point at which one begins the analysis. The general propositions about the social world that make explanation and prediction possible are contained within that point of the triangle labelled "theory". For the naive psychologist this theory point may contain propositions about the social world that may take on the characteristics of axiomatic statements (e.g. stereotypes). The point at which observations are made is the data point of the TDm. The point labelled "model" is, in the Leik and Meeker formulation, not concerned with substantive material directly. "The model (point) is a set of statements in mathematical form involving abstract variables which may be equated for theoretical purposes with substantive variables in whatever field is being examined" (Leik and Meeker, 1975:10). For the naive psychologist the model point may be considered the formula that the data is put into in order to make the necessary analyses. The model includes all those pieces of information that the attributor has come to know as indicative of causality and is consequently valuable for the purposes of inferring causality.

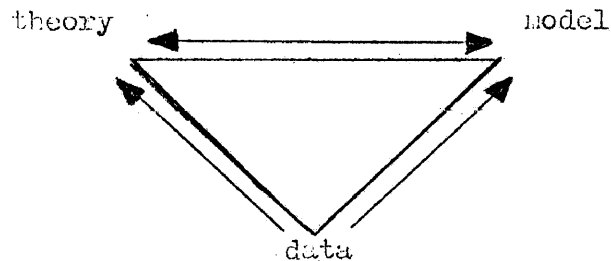
For Leik and Meeker, the deductive mode develops from an interaction between the theory and model points of the triangle, and then predicts toward the data point of the triangle. This may be illustrated as:



D₁. Deductive Mode

5. These labels have been referred to as suggestions because they may not be ubiquitously accepted as induction or deduction.

Alternatively, the inductive mode develops from the observation of empirical facts (i.e. the data point). The data point has an influence on the theory and model points of the triangle through interpretation and generalization of the data. This process is illustrated in D_2 :



D_2 . Inductive Mode

The specific processes involved in the deductive mode have been outlined by Leik and Wecker (p. 10) as:

1. Formalization of theory.
2. Derivation of substantive interpretation of mathematical patterns.
3. Mathematical prediction or extrapolation.
4. Substantive prediction.

The processes involved in induction are:

1. Mathematical generalization of theory.
2. Substantive interpretation of mathematical patterns.
3. Mathematical generalisation of empirical patterns.
4. Substantive interpretation of data.

Deduction begins with a mathematical pattern of a particular substantive area (e.g. juvenile deviance, person perception, etc.) Once this mathematical pattern is developed from some hypotheses about the substantive area, a theory is formalized. Mathematical predictions develop from the model point while substantive predictions develop from the theory point of the TDM.

Induction has as its beginning a mathematical generalization of the observations made about the data. The theory point is the result of interpretations of the mathematical formulations. The data is then examined and generalizations and interpretations are made toward the respective model and theory points.

Cartwright and Harary (1956) have constructed a generalization of Heider's balance theory (1944). This formalization demonstrates the inductive process of Heiderian thought. The mathematical formula that Cartwright and Harary developed is:

$$b(G) = \frac{C^+(G)}{C(G)},$$

"where $b(G)$ is the degree of balance of a graph G ,

$C^+(G)$ is the number of positive cycles of G , and

$C(G)$ is the total number of cycles of G ."⁶

A substantive interpretation of this mathematical generalization takes the form of a proposition (following the TDMt inductive mode). An exemplary proposition for balance theory has been set forth by Leik and Meeker (p. 73): "The structural balance principle states that people want to agree with their friends and disagree with their enemies." The interaction between theory and model is an ongoing process that operates to improve the theory and modify the model. Indeed, Davis (1972) has developed the cluster model as a modification of balance theory. The cluster model has retained the assumption that people want to agree with their friends, but has discounted the proposition that people want to disagree with their enemies. "Instead, ...people avoid getting themselves into a situation in which there is a set

6. This formula is contained in Leik and Meeker (1975), they add, "The measure $b(G)$ will range between 0 and 1 and will equal 1 when G is balanced....(and) that amount of tension in the system will be proportional to the degree of imbalance" (p. 61).

of three people with exactly one negative relationship" (Leik and Meeker, 1975:67). Cluster theory presumes that there is only one imbalanced triad and that is one that includes one negative relationship and two positive relationships.

In the inductive process the impetus for the interaction between theory and model is the mathematical generalization of observations ("empirical patterns") and the "substantive interpretation of data". The data for the Cartwright and Harary example is information about the positive and negative attitudes of persons involved in a set of relationships.

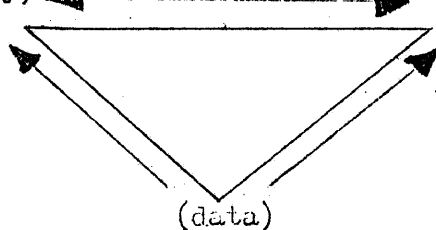
To put the theory into more formal terms, begin by considering a set of three persons... the theory states that for P to feel comfortable and the situation to be stable, if P likes O, P and O should agree on their evaluation of O', either both liking O' or both disliking him. When other combinations occur, the situation is unstable, because P will feel uncomfortable and tend to change his evaluations (Leik and Meeker, 1975:55).

The TDNT for Cartwright and Harary may be illustrated as:

people want to agree
with their friends and
disagree with their
enemies (theory)

$$b(C) = \frac{C + (G)}{C(G)}$$

(model)



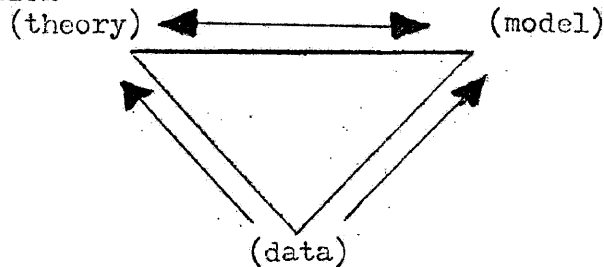
information about the
positive and negative
attitudes of persons
involved in a set of
relationships

3. Theory Data Model triangle of Cartwright and Harary

The naive psychologist, as the attributor has been referred to here, operates from a TDMT also. If the schema presented above is an accurate representation of the objective experience of the naive psychologist, then the naive psychologist may be subjectively represented as:

I should agree with people I like and disagree with those I dislike because this reduces tension.

Is there tension in this situation (i.e. is it imbalanced or unstable)



1. evaluation of others in this relationship (positive or negative)
2. evaluations of others' evaluations (positive or negative)

D₄. TDMT of the naive psychologist

Empirical support for the contentions contained in these models may be found in Regan, Straus, and Fazio (1974) who found that "good" actions are attributed to the dispositional quality of a liked actor, while the same action is attributed to situational factors for disliked actors. Likewise, "bad" actions of those whom the observer likes are attributed to the situation, while "bad" actions of disliked others are attributed dispositionally. Heider recognized similar tendencies, for example, that persons would see others as either positive or negative in all respects⁷.

Returning to Heider's formulation of attribution theory, it is now possible to analyze it in terms of the TDMT. At the theory point of the triangle propositions such as, "man needs to refer observables to invariances

7. Studies on perceptual bias have focused on such concepts as the "halo effect" (Dion, Berscheid, and Walster, 1972) and the "positivity bias" (Sears & Whitney, 1973), both of which derive in large part from Heider.

in the environment", "the underlying cause of events, especially others' motives, and the invariances of the environment", and "causes are either personal (intended or unintended) or impersonal", are contained. These propositions derive from observations that people make from their earliest experiences. The data for these propositions are contained in what Heider has referred to as the "raw data". The data point is modified, experientially bifurcated, in this attribution theory. On the one hand there is an almost automatic assignment of causality to some part of the environment (either personal or impersonal), on the other, information such as intention, sentiments, ought, and may, are weighed to be sure that the attribution is correct. The attributional inference of causality is inductively processed into the theory point. Meanwhile, other information factors out luck and opportunity and leaves one with a model of the combined effects of effort, ability, and the difficulty of the task. Heider (1958) details this process which is illustrated in D₃. One must note that the function of the triangle is to control the environment through explanation and prediction. Heider points out that action is determined or decided upon based on the inferences from observations (both experiential ones and transmitted ones, e.g. books, verbal communication, etc.). Again the inductive process is evident.

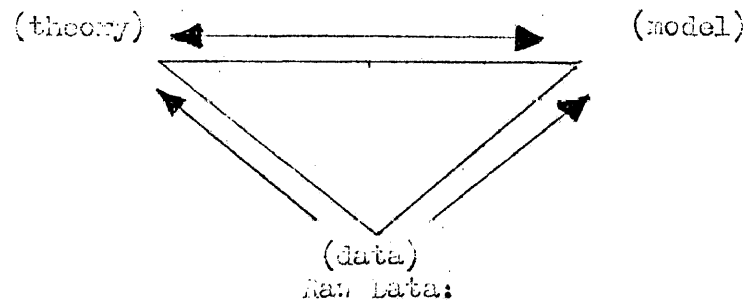
Propositions:

- a) We try to make sense out of the manifold of proximal stimuli by ordering them in terms of the distal invariants and their relevant dispositional properties.
- b) causes are either personal or impersonal
- c) man needs to refer observables to invariances in the environment.

Formula:

- a) effort and ability are stable dispositional properties.
- b) task difficulty is a stable environmental property.
- c) luck and opportunity are environmental properties that affect task difficulty.

- d) the underlying causes of events, especially motives of others, and the invariances of the environment.



impersonal or
personal cause

information concepts:

- a) can
- b) trying
- c) sentiments
- d) belonging
- e) ought and may

D₅. Inductive Mode of Heider

The theoretical process here is from observation to construction of generalizations that encompass the data. Heider summarily describes the factors involved in this inductive process as follows:

Of special importance for the interpretation of the social world is the separation of the factors located in persons, and those that have their source in the environment of these persons. Many examples of this implicit "factor analysis" were given, for instance, in Chapter 3, visibility of object as the personal factor; in Chapter 4, difficulty of task vs. ability; in Chapter 5, desirability of object as the environmental and personal factors in enjoyment; in Chapters 6, 10, and 11, the factors that are responsible for what happens to the person; in Chapter 8, objective requirements and personal wishes; in Chapter 9, the factors leading for induced action (1958:227).

Valley (1967) attempted to present systematically the main points of Heider's theory, and in addition show their relevance to social psychology

in general. He has discussed the concepts, with regard to Heider, mentioned here, as well as a number of others that were used to show this connection between social psychology and attribution theory, particularly as related to motivation. Kelley (1971) points out that there is evidence of a schema that people use in attributing causality. The types of causal schemata have been divided into:

1. multiple sufficient causes
2. multiple necessary causes
3. compensatory causes
4. effect
5. graded effects

Multiple sufficient causes are said to operate primarily for easy tasks, that is, when task difficulty is not high. Simply stated, "with the plausible external cause absent, an appropriate internal cause is inferred to be present; with the external cause present, the presence of the internal cause is cast in doubt, ..the effect of the presence of one cause (for example, the external one) is to render ambiguous the inference regarding the other cause" (Kelley, 1971:155). For Heider too, the more influence that is attributed to environmental factors, the less influence there is to be attributed to personal factors. For more difficult tasks multiple necessary causes are considered. These causes are presumed to operate when there appears to exist more than one cause, but these causes are weak. "The hypothesis can be proposed that the more extreme the effect to be attributed, the more likely the attributor is to assume that it entails multiple necessary causes" (Kelley, 1971:156). Both of these types of causes assume that the attributor, our naive psychologist, is aware that more than one factor is responsible for an outcome. To which factors, and consequently

whether a situational or dispositional attribution will be made, sometimes not only requires that the factors be present or absent, but that they be present in certain degrees. This is the focus of compensatory causality. "In scientific practice the schema appears in the form of Cuttman's procedure for scalogram analysis (1950), which affords a scaling of persons in terms of the degree (to which they perform)" (Kelley, 1971:157). The naive psychologist is able to distinguish to what degree causes must present in order for a particular effect to occur. These effects that have been referred to here are also not only present or absent, but graded. The greater the effect, and as will be discussed in the present research, the more serious the consequence, the clearer the inference that the causes present are present to a high degree. For Jones and Davis, this is a highly significant aspect of their theory. They have proposed that the more negative the outcome, the more informative it is in terms of the attributes of the person (Jones and Davis, 1965).

Generally speaking, Jones and McGillis (1976) point out that effects that are not common increase correspondent inferences (i.e. inferences about the dispositional characteristics of the actor). Correspondent inferences have been defined by Jones and McGillis as "a shift in expected valences so that the target person is seen as desiring certain consequences more or less than before the behavioral observation" (p. 417).

Kelley (1971a) has categorized causation in yet another way. Causes may be facilitative, inhibitory, or contain a discounting effect. Facilitative causes are those factors perceived to enhance the probability of the occurrence of the effect, while inhibitory causes work against the occurrence of the effect. Ability and effort may be assessed along this dimension. Also to be noted is the role of discounting in the attribution

process. "The role of a given cause in producing a given effect is discounted if other plausible causes are present" (Kelley, 1971a:8), thus, with multiple causes it is clear that the attributor may not, in fact, make an attribution every time an action is perceived (see also Jones and McGillis, 1976). When an inhibitory cause exists it requires that the facilitative causes be much stronger (at least in terms of the perception of the attributor). Attributions to the dispositional or environmental factors requisite for the occurrence of an effect are thus dependent upon the causes discussed above (i.e. the causal schemata, discounting, facilitative and inhibitory causes, the "ANOVA cube", and the four attributional criteria of distinctiveness, consensus, and consistency over time and modality).

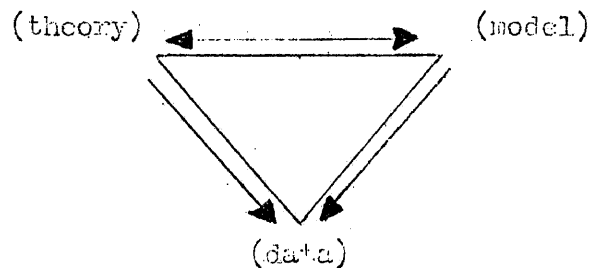
From the information presented above it is now plausible that a TDMt be constructed for Kelley's theory of attribution.

dispositional or
environmental
causes produce
effects.

$$\text{Attributional} = \frac{D}{C+Cs} ,$$

Validity

where: D=distinctiveness,
C=consensus,
Cs=consistency.



D₀. Kelley's Attribution
Theory

As Kelley (1967:207) has pointed out, "the person is concerned about the validity of an attribution regarding the environment. He applies several criteria in an attempt to rule out person-based sources or "error" variance." As was presented earlier (p. 2), Kelley perceives the attribution process

as one of elimination culminating in the remainder of the one plausible explanation. This is indeed a process of deduction, from theory and model to data.

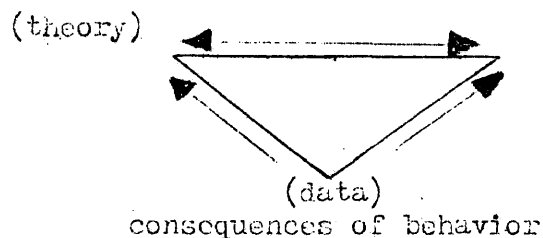
Jones and Davis (1965) supply an alternative TFDt which follows the inductive mode. Both Jones and McGillis (1976) and Kelley (1967) conclude that their theories have different goals. While Kelley's attributor attempts to rule out "person-based" factors, Davis and Jones maintain that attributions are based on "person-caused variance".

This divergence between the theoretical efforts is illustrated by the differences in dependent measures used in experiments to test them. In the attitude attribution experiments testing correspondent inference theory, specific attitude or trait attribution scales are used as dependent measures and subjects are requested to indicate the degree to which the target person possesses the given attitude or trait. In research to test Kelley's theory, on the other hand, dependent measures reflect the theory's orientation towards allocating causal attributions to either the person or the environment (Jones and McGillis, 1976:406).

This divergence is shown by comparison of the previous diagram (D₃) with the diagram below that illustrates the major points of the Jones and Davis inductive process.

people not constrained physically or socially (i.e. people with behavioral freedom) will attempt to achieve desirable results for their behavior.

Attributional
Validity: $I = K+A+Bf$,
where I = intentions
 K = probable knowledge
 A = ability to achieve the consequences observed when desired
 Bf = behavioral freedom
(model)



D₇. Correspondent Inference Theory

Here, rather than looking for distinctiveness, consistency, and consensus information within the data, the attributor infers intentions from the consequences of the behavior. These intentions are paramount in the determination of whether the personal characteristics or the particular setting is responsible for the outcome.

Jones and Davis recognize that the consequences of any behavior are many. These are referred to as "multiple consequences". The inference of intention is complicated by this fact. However, once the particular consequence is focused upon, the attribution to the person or the setting for that consequence is based on the three factors listed in the model (see D_H). A focus upon a particular consequence with a "noncommon effect" is necessary because only those effects "provide a discriminating reason for the choice".

Something in the combination of non-common effects chosen and foregone has guided the actor's behavior in the observed direction. As a first approximation, we might say that a dispositional inference is correspondent to the extent that an act and the disposition are similarly described by the inference (for example, "his domineering behavior reflects an underlying trait of dominance") (Jones and McGillis, 1976:391).

Further intentionality information is contained in the assessment of the person's ability to achieve the consequence desired. If a person is seen not to have the ability to achieve the desired consequence, then that person will not be assigned intentionality. Likewise, intentionality requires that the person have the ability to foresee the consequence of the behavior ("probable knowledge"). "Attributions of probable knowledge are facilitated by any evidence that that the actor has the ability to achieve the consequences observed when desired" (Jones and McGillis, 1976:390).

Jones and McGillis (1976) have added to the Jones and Davis (1965) theory of correspondent inference theory. They wish to extend correspondent inference theory from attributions toward strangers based on one-time observations to inferences about persons that information is accumulated on ("information gain"). Jones and McGillis introduce two types of criteria that are believed to operate in the two different circumstances (attributions to strangers and attributions to acquaintances).

Category-based expectancies are those based largely upon normative information. Stereotyping is an example of this type of expectancy for behavior. Target-based expectancies, on the other hand, pertain to information gained about the particular actor and the influence of this information on the attributions made by an observer. Both of these types of expectancies operate under the influence of the attributor's own theory of personality or behavior with regard to the expectancies for behavior from the individual actor under observation. Category-based expectancies, however, are assumed to operate more in attributions toward strangers than in attributions toward others that are familiar. Familiar others are subject to target-based expectancies for their behavior.

Jones and McGillis (1976) have also attempted to show that Kelley's theory of attribution and correspondent inference theory are conceptually similar. For example, parallels have been drawn between target-based expectancies and the distinctiveness and consistency variables. "If it were stated that a specific behavior was performed consistently in the same or similar settings, this could be treated as either an example of target-based prior probability manipulation or as equivalent to Kelley's consistency over time and modality variable" (Jones and McGillis, 1976).

Distinctiveness information has been cited as similar to target-based

expectancies in that both of these operate from information on the actor's behavior in prior situations with similar circumstances and stimuli (Jones and McGillis, 1976). Jones and McGillis have recognized that "the analogy between target-based expectancy and distinctiveness break down", however, they cling to their contention that, "The low-distinctiveness case can be compared to the high probability case of Jones et al., and the high distinctiveness case is comparable to the low prior probability manipulation" (p. 409).

A link has also been established between consensus and category-based expectancies.

Consensus, according to Kelley, has to do with veridicality, with the likelihood that behavior is caused by the situation or entity rather than the person. If everyone likes the movie, then the movie and not its viewers must be the prepotent causal factor. Prior probability variables in correspondent inference theory are treated in much the same way: behavior in line with expectation is not informative concerning the person. One only knows that he is like everyone else - by implication, that he places the same value on the situation in which he finds himself (Jones and McGillis, 1976:408).

While the attempt of Jones and McGillis to show the similarity of purpose between Kelley's theory of attribution and the correspondent inference theory is commendable, much is left to be desired in terms of the conceptual linkage between the two. Though the parallels between theoretical concepts may not be as veridical as Jones and McGillis wish, they have contributed to the theoretical literature, which has traditionally not been well constructed. The parallels that the authors have attempted to show merely lay the groundwork for the major thesis, that Kelley's theory and correspondent inference theory have potential for integration. In this

light it is not so important that the concepts be shown equivalent, but that the processes of the two be set forth so that the important aspects of each may be considered under one theoretical tenet. While Kelley's theory is useful in providing three elements of attribution (person, circumstance, or stimulus), correspondent inference theory is designed to show what factors cause particular attributions (Jones and McGillis, 1976). By combining the two theoretical perspectives, Jones and McGillis have provided the theoretical literature with a more complete theoretical construction of what attribution theory is. Their effort has helped fill the gap in theory construction.

The integrated framework to which I have referred here is illustrated in flow chart form by Jones and McGillis (1976:415). They propose the following outline as depicting "The Conceptual Variables of an Integrated Attributional Analysis":

I. Prior probability variables

A. Category-based expectancies

Type 1: Stereotypic

Type 2: Normative

B. Target-based expectancies

Type 1: Replicative

Type 2: Conceptual replicative

Type 3: Structural

II. Noncommon effect variables

III. Knowledge and ability variables

Throughout the analysis Jones and McGillis recognize the important aspects of the two theoretical perspectives, that correspondent inference theory is concerned with establishing the cause of a single behavior and its

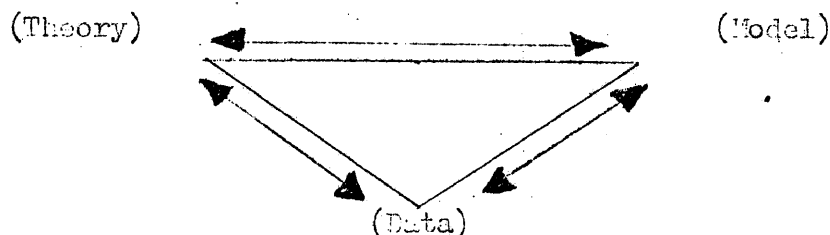
consequence while Kelley's theory is concerned with the accumulation of information and judgements based on past observed behavior. This integration lends itself to the construction of a TDMT that incorporates both theories. In retrospect, the integrated framework for attributional analysis lends itself more to a mathematical model than do the other "pure" theories of attribution. The integrated framework is not solely inductive or deductive as a result of the integration of the two "opposite" modes. As Leik and Meeker have pointed out, "Both inductive and deductive modes will be evident in the use of mathematical models as well, with both modes appearing between the model and substantive theory and between the model and the data" (1975:11-12). As will be demonstrated in the diagram below, this holds quite true for the integrated framework of attributional analysis.

Propositions:

1. Expectancies of behavior
 - a. category-based
 - b. target-based
2. ... lead to attributions of intention or emotion
3. ... which in turn lead to inferences about the dispositional properties

Model of analysis

Given: Intention = Emotion
 Intention Consistency
 Consistency = persistently striven for effects
 $\text{Intention} = K + A + Bf$
 where, K=knowledge
 A=ability
 Bf=behavioral freedom



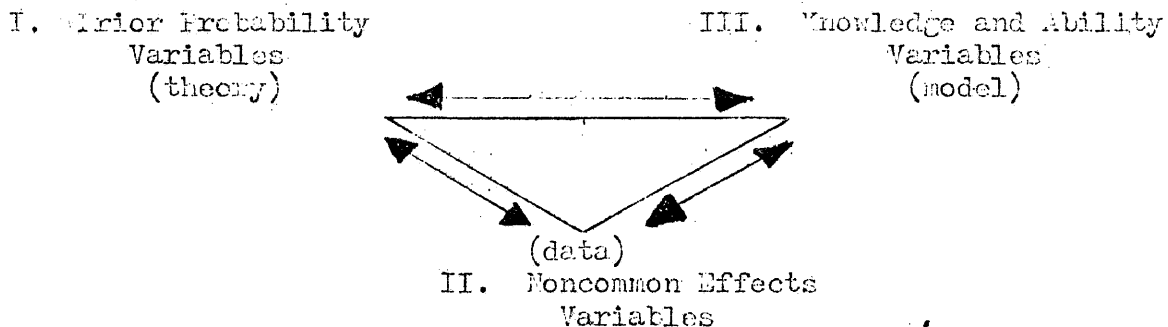
Observation:

1. actor acting in commerce with the environment.
2. perception of situation
 - a. figural entity
 - b. background context
3. noncommon effects analysis
 - a. effects chosen
 - b. effects foregone

In addition to both modes (induction and deduction) being present between theory and model, and between model and data, both modes are also present between theory and data for the attributor. Expectancies of behavior for future behavioral episodes are influenced by the observation of the previous behaviors. At the same time, observations have been affected by the theory of personality that one holds. This determines what particular expectancies will be held, both in terms of targets and categories.

The perception of the situation, including a noncommon effects analysis, is crucial in arriving at an attribution of intention or emotion. Intention and emotion information is also fed into the theory influencing future expectancies for behavior, especially by way of consistency evaluations.

The flow chart presented by Jones and McGillis is much more linear in its theoretical perspective, however. Simply shown, the attribution process might look as follows:



D₉. Simple Integrated Framework

And literally:

1. Observation → 2. Noncommon effects analysis → 3. Prior Probability Analysis → 4. Knowledge & Ability validation → 5. Intention vs. Emotion → 6. Inference → 7. Feedback → 8. Observation → ...

D₁₀. Linear Integrated Framework

The linear theory has been adapted to the TDMT here (D_5 and D_6), however, due to the theory's "better fit" into the triangle than the line. The linear analysis of the attribution process may, in fact, be an oversimplified version of the process. It is felt that feedback from one point to another is probably more common within the framework than is illustrated by the unidimensional illustration of the line between "feedback" and "observation". By comparison of D_6 with D_7 it is clear that the triangular model depicts this complexity in the attribution process more accurately. That is, the TDMT shows that feedback occurs throughout the process and does not "play down" the importance of the Gestalt influence in attribution theory (see, for example, Heider, 1946, 1958; Kelley, 1967; Jones and McGillis, 1976). The linear method of analysis and illustration, and its consequent effect on theoretical thinking, does limit this apparent Gestalt influence on the theory.

Still, Jones and McGillis (1976) have made some strikingly important observations about research in attribution. Their attempt to bring correspondent inference theory and Kelley's "ANOVA cube" to terms has shown the commonality of purpose amongst divergent perspectives in attribution theory and research. This follows from their position that many theories about attribution have been posited without any real attempt to establish an eclectic approach, as has been done, for example, in personality, and social psychology in general.

The attributional "flow chart" has provided this kind of eclectic framework with which to work. The outline of this attributional framework has added insight into how people go about making attributions; heretofore not provided in the existing theoretical literature. Jones and McGillis (1976:418) have stated:

The would-be attributor appraises the effects of the observed act and of plausible alternative acts, considers the effects in terms of his prior expectancies of people in general and the actor in particular, validates the knowledge-of-effects assumption, and makes inferences about intentions and ultimately more stable dispositions. These dispositional attributions become expectancies influencing subsequent attributional inferences when more behavior by the same actor is observed.

Basically, this is the process that the interactional framework follows as presented in D₅.

Jones and McGillis also point out that their integrated framework should suggest areas of needed further research. The role of intention versus emotion is one such area. This is an area with much potential but little research; Snyder's (1974) work has been the only research recognized by Jones and McGillis dealing primarily with this aspect of attribution. Jones and McGillis (1976) recognize that, "In spite of the apparent complexity of the flow chart, it is, of course, merely a series of sign posts that point to further complexities" (p. 417).

One of the complexities that these so-called "sign posts" point to is what are the factors that affect attributions? Once discovered, are these factors differentially important, that is, do some factors account for (in Kelley's terms) more of the variance than do others? If so, how much? Clearly these questions pose more than one research endeavor, but in the next section an investigation into some of the research findings on what the factors are will aid in narrowing the focus for the present research.

Factors Affecting the Attribution Process

A number of factors have been cited as highly influential in making attributions. Whether the attributor is making the attributions to the self or to others, how serious the outcome and consequences of the situation are, and how closely the observer identifies with the actor are but a few examples. In this section the various factors that affect what attributions will be made are discussed.

The factor having been given the most attention in the current research literature is the difference between attributions made by the observer compared to attributions made by the actor. Jones and Nisbett (1971) have proposed that actors and observers have a natural tendency toward making different attributions. "We wish to argue that there is a pervasive tendency for actors to attribute their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions" (p. 80).

Jones and Nisbett have cited numerous research examples that support their contention. McArthur's (1970) study involved the presentation of information about a person to which the subject (the observer) was to respond with an attribution to: a) the person, b) the stimulus, c) the circumstances of the situation, or d) a combination of two or more of the reasons listed. The greatest proportion of responses were "pure person attributions" suggesting that observers do indeed tend to attribute dispositional reasons for an actor's actions.

Jones and Nisbett (1971) have pointed out that a shortcoming in the McArthur study was that "information about the actor's behavior was given

to observers only in printed, verbal forms" (p. 82). This artificial quality may have some impact upon the observers' attributions. This must be kept in mind in research of this sort, however, this should not completely discount the importance of such studies. McArthur's (1970) study is said to "come very close to being a direct test of the proposition that actors attribute cause to situations while observers attribute cause to dispositions" (Jones and Hisebett, 1971:82), in that she compared the attributions made by an actor and an observer of the same situation.

Jones and Hisebett (1971) present two studies that are said to improve on the methodological quality of actor-observer experiments such as McArthur's. These studies present the actor and the observer with more equivalent forms of information. The criticism of the printed, verbal format is thus avoided.

Hisebett and Caputo (1971) utilized responses made by a subject as both an actor and an observer. Subjects were to write reasons for their having chosen their girlfriend and their major (actor attribution), and secondly, why they thought their best friend had chosen his girlfriend and major (observer attribution). The result was that when the response was from the actor's perspective attributions were phrased in predominantly situational language, whereas when the response was from the perspective of the observer (regarding the best friend's choice of girlfriend and major) the responses were phrased in predominantly dispositional language.

Hisebett, Legant, and Marecek (1971) had observers and actors respond to the same questions about a situation that both had just experienced. The actor had just been involved in a situation where he was offered either high or low payment to volunteer to show visitors around the campus. The questions involved whether or not the actor's choice of action was a result

of dispositional qualities or something about the situation. It was found that observers were more willing than actors to infer dispositional reasons for the actor's behavior. While actors attributed their actions largely to the situational requirements, observers were willing to infer that the actor who had volunteered in this situation would be likely to volunteer in other situations too.

Jones and Nisbett (1971) conclude from this evidence that the reason for the variance between actor and observer attributions is two-fold:

- a) actors and observers have different points of view.
- b) actors have more information about their own past behavior than observers which usually shows his "nature" to be more situationally dependent.

In line with the "integrated framework" presented earlier (p. 22) Jones and Nisbett state that, "For the observer behavior is figural against the ground of the situation. For the actor it is the situational cues that are figural and that are seen to elicit behavior" (1971:93). As the actor performs his behavior the observer sees the behavior as indicative of the underlying stable dispositional qualities of the actor, while the actor tends to see his behavior as a reaction to the requirements of the situation. The availability of more (target-based) information for the actor may be seen as one reason why this occurs. The observer sees the actor as part of the larger environmental situation. As a result, the behavior of the actor is more salient for the observer's "explanation and prediction" in his effort to control the environment that surrounds him.

That actors and observers have a different focus of attention has also been investigated extensively (Duval, 1972; Storms, 1973; Arkin and Duval, 1975; Duval and Hensley, 1976). In these studies the variance in attribu-

tions between actors and observers are examined in terms of their different informational perspectives (i.e. their different points of view; Jones and Nisbett, 1971). Since the actor does not see himself as much as other stimuli in the environment his focus of attention is said to be on the environmental factors. Because of this focus on the environment the actor attributes causality to environmental factors much more readily. This may serve as a sort of "self-fulfilling prophecy" in the methodology of the naive psychologist.

On the other hand, the observer sees the actor as a dynamic figure in the environment. Arkin and Duval (1975) use Koffka (1936) as one way of looking at this. They indicate that the argument has been made "that objects which have the property of being figure rather than ground are precisely those objects which attract the focus of attention". The attribution of causality is a result of the focus of attention. As such, it is clear that the actor would tend to make situational attributions while the observer would make dispositional attributions.

Arkin and Duval (1975) tested the focus of attention hypothesis that is founded on the assumption that the actor is figural to the observer. They contended that if this were true it meant that the observer must see the actor as a "novel stimuli"⁸.

The results of the Arkin and Duval experiment support the notion that as novel stimuli, actors are the focus of attention, and as a consequence of this are assigned responsibility for causality with high frequency by observers.

8. Beryline (1958) has shown that novel stimuli gain attention. Attention, or the focus of attention in the present case, is linked to the attributional process. Thus, the focus of attention will be on novel stimuli, and these novel stimuli will be attributed with causality.

On a related topic, Shaver (1971) found that observers may, under conditions where an accident has occurred, infer dispositional attributions as a means of defending themselves⁹ against the possibility that a similar misfortune could happen to the observer herself. Shaver attempted to find support for the proposition that: "An observer of an accident, to preclude the possibility that he could cause such a misfortune, will attribute responsibility for its occurrence to a person potentially responsible and will attempt to differentiate himself from that person; further, this tendency will increase with the probability of occurrence and the severity of the accident's consequence" (1971:101).

Defensive attributions, it was concluded (Shaver, 1971), do operate under conditions of severe consequences and personal similarity. Additional evidence for the contention that increasing seriousness of consequences leads to dispositional attributions has also been found by Walster (1966). Walster suggests that people apply stricter moral sanctions to persons attributed with the responsibility for causing a serious accident. In addition to the increased tendency to blame persons for serious accidents rather than some environmental factor, Walster (1966) found that people wish to attribute a responsibility to someone in order to reassure themselves that accidents do not "just happen". If someone is seen as responsible for the occurrence of an accident, especially the victim, then the observer can reassure herself that such an occurrence could not happen to her.

From the evidence provided here it seems that people not only wish to differentiate themselves from "unfortunate others", but also wish to differentiate themselves from the possibility that "unfortunate circumstances" might befall them (Shaver, 1971; Walster, 1966). Some studies (e.g. Davis
9. Shaver (1971) refers to this as a "defensive attribution".

and Jones, 1960; Lerner and Simmons, 1966) have gone so far as to suggest that when one is seen as an "innocent victim" that person will be rejected by others as an undesirable person to justify the unfortunate occurrence. Moreover, Lerner and Matthews (1966) have found support for the hypothesis that when a person sees herself as responsible for an other-person's fate, the person perceiving herself as responsible devalues the other person to justify that fate.

Lerner (1966) has developed this concept of a "belief in a just world". Lerner proposes that there are only three causes for suffering and that these are the low worth of the person, the person's behavior, and chance. When the person perceives herself as responsible for causing an unfortunate occurrence to happen to another, the person attempts to attribute the occurrence to chance (something in the situation). On the other hand, when that person sees herself as not responsible for inflicting suffering, and as a possible victim, chance is discounted as a possible reason for the occurrence. Rather something about the persons involved are responsible for the occurrence (e.g., "she deserved what she got"). The latter may be seen as "the belief in a just world" and results in dispositional attributions to others who "deserve it".

Alternatively, Shaw and Skolnick (1971) have concluded that perceiving another as experiencing "good fortune" will result in an attribution to the situation by the observer. When others' experience positive consequences, in order to enhance the subjective probability that such a positive consequence could happen to them the actor is attributed less responsibility and chance or situational factors are seen as responsible for the positive outcome.

Medway and Lowe (1975) have combined the factors of severity and outcome in their analysis of the attribution process. They have found that severity

of outcome, especially in the negative direction, influences the attribution of responsibility; to the actor. Support was found for Weiner's (1966) conclusion that severe negative outcomes result in dispositional attributions, while mild outcomes move the attribution away from the person. In addition, the ego-defensive attribution hypothesis of Shaver (1970) was supported by the findings that, "A significant interaction of severity and outcome was obtained" (Medway and Lowe, 1975:214).

Thares and Wilson (1972) presented subjects with a number of court cases. Subjects were to attribute responsibility based on the information contained in the cases which varied severity and clarity. The findings suggest that the attribution of responsibility to the defendant is greatest where the situation was clearly defined (structured), and the outcome of the accident was severe and in a negative direction. Thares and Wilson also point out that in the ambiguous situations "no relationship between responsibility attribution and severity of outcome (exists)" (p. 400). When the situation is clearly defined (structured) it is suggested that "judges" find it easy to determine who is responsible. This is not the case under ambiguous circumstances. Thares and Wilson conclude that there is a positive relationship between the interaction of severity and clarity, and the attribution of responsibility to the actor.

In the study above it was also found that Internals tend to attribute more responsibility to actors than do Externals. Developed by Rotter (1966), the I-E dimension reflects the generalized expectancy of the observer regarding the cause of events, both good and bad, that happen to him. Collins (1974) found support for the notion that one would score external on Rotter's scale if he believed in a "difficult world", an "unjust world", a "world governed by luck", or that the "world is politically unresponsive".

There is considerable evidence, however, that many of the conclusions reached by an observer have more to do with the observer than the stimulus person. Dornbusch, Hastorf, Richardson, Muzzy, and Vreeland (1965), for instance, reported greater overlap among descriptions when they are generated by the same observer about different people than when the descriptions are generated by different observers about the same person (Collins, 1974:331).

The findings here indicate that the observer's own theory of personality may influence the degree of personal responsibility attributed to an actor. Observers, because of their need to control (which necessarily includes being "right"), may attribute responsibility based upon their generalized expectancy for reinforcement of their own behavior. This would imply that those who link reward with their own behavior (Internals) would tend to attribute responsibility to actors in other situations. This, then, would be a result of their generalized expectancy for the control of reinforcement (Rotter, 1966). The Phares and Wilson (1972) study, it must be pointed out, found that the I-E dimension did not change the tendency toward attributions based on the interaction between severity and outcome, but merely enhanced the extent to which the environment or person was held responsible for the consequences.

Anthony (1973) divided subjects into C-attributors and I-attributors¹⁰. The variables of identification, seriousness, and intentionality were analyzed in terms of the two types of attributors. Subjects (attributors) were asked to read a story that involved a victim, a perpetrator, and manipulations of the seriousness, intentionality, and similarity to the

10. C-attributors and I-attributors may be defined as external and internal (as per Rotter, 1966). C-attributors are those who tend to attribute the cause of events to circumstances while I-attributors tend to attribute the responsibility for outcomes of situations to the behavior of persons involved. This is in line with the generalized expectancy inference made above, that those who see their own behavior as producing rewards also see others as responsible for the outcomes of their behavior.

actors. The results showed that C-attributors who identified with the victim attributed more responsibility to the perpetrator when the outcome was serious and attributed less responsibility to the perpetrator when the outcome was not so serious, or mild. C-attributors who identified with the perpetrator assigned responsibility to a greater extent under less serious outcomes than under serious outcomes. I-attributors who identified with the victim were found to assign "minimum AR (attribution of responsibility) in the less serious-unintentional outcome" (Anthony, 1973:89).

Interactional Effects of Attribution

The research findings and the theoretical literature (especially that of Heider, Kelley, and Jones and Davis) have been shown to be consistent. Factors that have been found to influence the nature of attributions have been researched and this research has shown that whether an attribution of personal responsibility or that something about the situation will be held responsible for the perceived deed is dependent upon:

- 1) the perspective of the attributor.
- 2) the severity of the consequences.
- 3) the clarity of the situation.
- 4) the personal relevance to the actor.
- 5) the personal characteristics of the attributor.

That there is a pervasive tendency on the part of actors to make situational attributions and for observers to infer dispositional causes, and thus responsibility, has been well established (Jones and Davis, 1965; McArthur, 1970, 1972; Jones and Nisbett, 1971; Nisbett and Caputo, 1971; Nisbett, Legant, and Marecek, 1971). The reasons for this occurrence are not as well established, however. Some (e.g. Jones and Nisbett, 1971) indicate that the different informational perspectives are responsible for this

variation. They have suggested that the actor's behavior is figural against a situational ground, while the actor sees the situation as figural in her process of analyzing and attributing responsibility. Arkin and Dival (1975) explain this process similarly as the differences in the focus of attention. Walster (1966) and Shaver (1971) have explained the occurrence from a more psychologically based orientation. They suggest that the reason for the observers tendency to attribute responsibility, especially for negative outcomes the results of which are severe, to the actor is centered around the observer's need to disassociate herself from the actor. By so doing the observer rationalizes that such an outcome would not happen to her because she is somehow different than the actor. Lerner (1966) has produced a plausible ideology behind this kind of process. He indicates that people believe in a "just world" and that people get what they deserve and deserve what they get. This being the case the observer can simply rationalize that since they deserve better outcomes, negative outcomes such as the ones that they observe will not befall them. Alternatively, Shaw and Skolnick (1971) found that, as might be expected, when good fortune happens to someone the attribution by the observer is made to the situation. This indicated that the good fortune has just as much probability of happening to the observer as to the actor, at least as far as the observer is concerned.

Not only does the positivity or negativity of the outcome sway the attribution of the observer, so too does the severity, or mildness, of the consequences of the action. Medway and Lowe (1975) have found substantial support for this interaction between severity and outcome. If the outcome is severely negative the attribution by the observer tends to be highly dispositional. On the other hand, a severely positive outcome would preclude a dispositional attribution.

Mild consequences for either a positive or a negative outcome seems to present the observer with some ambiguity in regard to what to attribute the occurrence of a deed to. As Phares and Wilson (1972) have shown, there seems to be no relationship between the severity of the consequences for an outcome and the attribution of responsibility when an ambiguous situation arises. When the situation seems clearly defined to the observer, however, the attribution of responsibility seems to be greatest, assuming that the conditions of severe consequences and a negative outcome are met.

There has been some evidence (Shaver, 1971; Walster, 1966) that suggests the perceived similarity to the actor has an influence on the attribution of responsibility. Such factors as sex, age, and the perceived likelihood that a similar situation could occur to the observer, are factors that have been investigated as ego-involving. The involvement of the ego in making attributions may account for the defensive attribution process that Shaver has demonstrated.

Rotter (1966) and Collins (1974) have developed the concepts of Internal and External general expectancies for the control of reinforcement. These are assumed to operate in "different types of people". Those who score Internally on Rotter's (1966) scale are believed to generally attribute responsibility to persons, while those who score External are believed to see the world as governed by luck, unjust rewards, and political unresponsiveness (Collins, 1974). The converse of these assumptions are also held as true by Collins.

Anthony (1973) has also pursued this line of reasoning in her research on the perceptions and attributions of people she defines as C-attributors and I-attributors. She has investigated the impact of these personality types

in conjunction with the attributor's identification with the perpetrator or victim of a crime. Her findings support the notion that these personality and social factors have a predictable impact on the direction of attributions.

Together, these research results lead us to the conclusion that many factors acting in concert direct attributions in one of two directions, either toward the dispositional or situational end of the attribution spectrum. It would seem certainly erroneous to assume that those factors that have been researched and discussed in this paper make up the whole range of factors that influence attributions. Even if these factors were to be considered as all the possible influential factors in the attribution process, their interactional effects have not been determined.

Clearly, research on the attribution process is faced with the task of bringing to light the many other factors that influence attributions. It is the purpose of the present research, however, to look at the interactions of those factors that have been shown by previous research to have a definite effect on the attribution process. Through the discovery of the interactional effects of these factors some hypotheses regarding other factors may be developed.

The previous research on attribution has determined that variables such as outcome, severity, clarity, and ego-involvement, have a predictable influence on the direction of attributions. This study will seek to assess the interaction of these factors. This is necessary in light of the fact that research up to now has failed to do this. How the clarity of the situation, the nature of the outcome, and the severity of the consequences interact will be examined. It had been hoped that these conditions could be examined under both ego-involved and non-ego-involved conditions, however, not enough subjects in the present

study felt that the situation was personally relevant to give reliable results. As a result, this aspect of the research was aborted in the analysis of the data.

Hypotheses

From the research findings one might arrive at the conclusion that the outcome of a specific situation, as perceived by the observer, is very important in terms of influencing the observer in either a situational or personal direction. So too, however, are the severity of the consequences for this outcome. Negative outcomes would seem to be most influential and these outcomes would result in a personal attribution. These two factors are further complicated when the conditions of ambiguity and clarity are introduced. These latter two conditions seem to influence the attributor, not so much in the specific attribution, but rather in the degree of confidence with which the attribution is made. That is, since the person is figural against the ground of the situation, and a clear situation would seem to produce a more confident state in the attributor, then a clear situation will be met with relatively greater attribution to the person than an ambiguous situation. In addition, it is expected that severe consequences will elicit more extreme responses than mild ones. Negative outcomes will be assigned more personal responsibility and positive outcomes will be assigned situational responsibility. Furthermore, when a situation appears clearly defined, the attribution of responsibility should reflect this by being further in the dispositional direction than the ambiguous situation containing the same variable conditions for outcome and severity. The specific hypotheses may be rank ordered to illustrate the variance in relative magnitude of the attribution as follows:¹¹

1. If the conditions of a situation are ambiguous, with severe consequences for a positive outcome, then the attribution of respon-

11. These hypotheses are ranked according to increasing amounts of personal responsibility.

sibility by an observer will be, relative to the other combinations of these variables, least.

2. If the conditions of a situation are clear, with severe consequences for a positive outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, second least.
3. If the conditions of a situation are ambiguous, with mild consequences for a positive outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, third least.
4. If the conditions of a situation are clear, with mild consequences for a positive outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, fourth least.
5. If the conditions of a situation are ambiguous, with mild consequences for a negative outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, fourth most.
6. If the conditions of a situation are clear, with mild consequences for a negative outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, third most.
7. If the conditions of a situation are ambiguous, with severe consequences for a negative outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, second most.
8. If the conditions of a situation are clear, with severe consequences for a negative outcome, then the attribution of responsibility by an observer will be, relative to the other combinations of these variables, most.

These hypotheses are based on empirical assumptions. Following from Heider, there exists an inverse relationship between the attribution of personal responsibility and the attribution of situational responsibility. That is, the attribution to the person is not exclusive of all attribution to the situation, rather one dominates the other. This would suggest that there exists some proportion between dispositional and situational responsibility. Heider's balance theory may have had some impact upon his thought in terms of attribution theory. That a proportion between situational and dispositional attributions exists involves an assumption of balance between the two. It might be suggested that the fraction of situationally attributed responsibility is equal to one minus the fraction of personally attributed responsibility in any one given situation. The inverse of this equation would also hold true.

Other support may be found for the order of the hypotheses in Valster's (1963) research that found people making dispositional attributions of responsibility for negative outcomes, especially when consequences were severe, and alternatively found that people are predisposed to making situational attributions when outcomes are positive. Shaw and Sholnick (1971) found similar results, that when "good fortune" happens to an actor the situation (chance) is held responsible for the occurrence to "increase the likelihood that similar good fortune could happen to them".

METHOD

Design and Procedure

Eight stories were written, identical to each other except for variations in the nature of the outcome (positive or negative), the severity of the consequences (mild or severe), and the clarity of the situation (clear or ambiguous). These stories were in large part derived from the studies of Tiedney and Lowe (1975), Walster (1966), and Shaw and Skolnick (1971).

Each story began with the same paragraph:

Two days before the midterm examination week begins John's (Joan's) psychology professor announces that the midterm examination will consist of three comprehensive essay questions. He then hands out a list of eight questions from which he will eventually select three to be asked on the mid-term examination. The class can prepare the answers for the eight questions in advance, but the students must take the midterm examination in class on the designated day.

Subjects then read one of the two sentences that follow:

1. Due to the fact that John has another midterm examination the day after his psychology midterm John selects four of the eight questions and prepares the answers for these questions thoroughly.

This sentence was indicative of a clear situation where John was subject to external factors. Subjects exposed to the ambiguous situation read only that:

2. John selects four of the eight questions and prepares for these questions thoroughly.

The outcome of John's preparation was indicated in the ensuing paragraph which contained either information that the outcome was: positive;

1. The actual midterm examination consisted of three essay questions, all of which John had previously prepared thoroughly and as a result he received an A.

or negative;

2. The actual midterm examination consisted of three essay questions, none of which John had previously prepared thoroughly and as a result he received a D.

The final paragraph described the consequences of the grade John or Joan received. All subjects read:

In addition to the midterm examination a ten page research paper was required of all the students in the class. This professor has been known in past classes to delete or add pages to the research paper depending on the outcome of one's grade on the midterm.

The final sentence stated the severity of the consequences as being:

severe for the negative outcome;

1. Since John received a D on the midterm examination he had to turn in a twenty page research paper.

mild for a negative outcome;

2. Since John received a D on the midterm examination he had to turn in a fifteen page research paper.

severe for a positive outcome;

3. Since John received an A on the midterm examination he only had to turn in a two-page typed bibliography.

mild for a positive outcome;

4. Since John received an A on the midterm examination he only had to turn in a five page research paper.

Subjects

Sixty seven undergraduate students enrolled in introductory sociology at the University of Nebraska at Omaha served as volunteers for extra credit. Tests were administered in small groups of from six to fourteen persons on a scheduled basis. In an attempt to reduce variation based on sex, male subjects read stories about a male target person (John) while female subjects read stories about a female target person (Joan) to accomplish this. The statistical analysis indicates that this reduction was successful in that a significant variation based on sex was not approached ($F=0.09$, $df=7/260$).

Subjects answered each of four questions on a seven point scale and this scale found quantitative basis for analysis. Question 1 ("Was what happened... positive or negative?") was rated from "very negative" (1) to "very positive" (7). Question 2 ("Should John or Joan have expected the consequences?") was rated from "should not have expected the consequences" (1) to "should have expected the consequences" (7). Question 3 ("How much effort... put forth?") was rated from "very little effort" (1) to "very much effort" (7). Question 4 ("How responsible was John or Joan...?") was rated from "not at all responsible" (1) to "very responsible" (7). While questions two and three were only tangentially related to the experimental design, they did serve to disguise the attribution of responsibility question as being the essential question of the study. These two questions will not be elaborated on here, but it was expected that the mean for the attribution of responsibility would be approximated by the mean for expectancy. That is, one is not expected to foresee consequences that one is not responsible for, but when one is held responsible the expectation that the person should foresee the outcome and consequences is present.

In addition, effort should also follow this pattern as it is an information source about the disposition of the actor (Heider, 1958). The means for expectancy, effort, and the attribution of responsibility are presented for comparison and for reference by future researchers in Table IV (page 45).

RESULTS

TABLE IV

Comparative means for effort,
expectancy, and the attribution
of responsibility

Story	1	2	3	4	5	6	7	8
Conditions	ASP	CSP	AMP	CMN	AMN	CMN	AGN	CSH
Effort	4.37	4.06	4.97	5.35	4.72	4.72	5.48	5.56
Expectancy	4.00	3.85	4.54	3.82	5.03	4.29	3.84	3.61
A.O.R.	4.43	4.53	5.21	5.41	4.51	4.17	5.41	5.58

Question 4, regarding the attribution of responsibility, was expected to produce results which would support, or lead to a rejection of the hypothesized order of attributions of responsibility to the person or situation. Table V indicates that no single variable main effects were present at a statistically significant level.

TABLE V

Means and standard deviations
for main effects

Conditions	means	stand. devs.	t-scores	df
Clear	$\bar{x}=4.92$	sd=1.99		
Ambiguous	$\bar{x}=4.89$	sd=2.45	t=.109	df=264
Mild	$\bar{x}=4.82$	sd=2.47		
Severe	$\bar{x}=4.99$	sd=1.91	t=.519	df=264
Positive	$\bar{x}=4.89$	sd=1.93		
Negative	$\bar{x}=4.92$	sd=2.52	t=.108	df=262

The introduction of polyvariates into the analysis procedure does result in some statistically significant scores. Table VI shows the means and standard deviations, along with t-scores, for the polyvariate analysis combining two variables:

TABLE VI
Means and standard deviations with t-scores
for two variable analyses

Variables	\bar{x}	sd	
Clear/Mild	4.79	1.35	t=2.20 (p<.05)
Clear/Severe	5.06	1.07	
Ambiguous/Mild	4.36	2.90	t=.115
Ambiguous/Severe	4.92	1.95	
Clear/Positive	4.98	1.82	t=.03
Clear/Negative	4.97	1.89	
Ambiguous/Positive	4.81	2.05	t=.372
Ambiguous/Negative	4.97	2.04	
Mild/Positive	5.31	3.00	t=2.10 (p<.05)
Mild/Negative	4.35	1.70	
Severe/Positive	4.40	2.05	t=3.29 (p<.01)
Severe/Negative	5.50	1.50	

Here, three comparisons provide statistically significant results. Between the clear and mild and the clear and severe conditions there is a significant difference. Again when we compare the mild conditions across the positive and negative outcome variable there is a significant t-score. Finally, when comparing the severe consequence condition across outcomes, a strong significant difference is obtained.

Interestingly, when all three variables are included in the test for significance a greater number than that above emerge as significant. Table VII shows the between group t-scores while Table VIII contains the levels of significance for the t-scores in Table VII.

TABLE VII

Between group variance of means
(t-scores)

Variables	1	2	3	4	5	6	7	N
Story 1	1							266
2	0.20							34
3	1.58	1.57						33
4	2.01	1.91	0.46					34
5	0.15	0.04	0.15	0.10				32
6	0.46	0.67	2.00	2.40	0.61			28
7	2.09	2.07	0.40	0.00	2.01	2.48		34
8	2.39	2.40	0.30	0.41	2.33	2.75	0.43	36

TABLE VIII

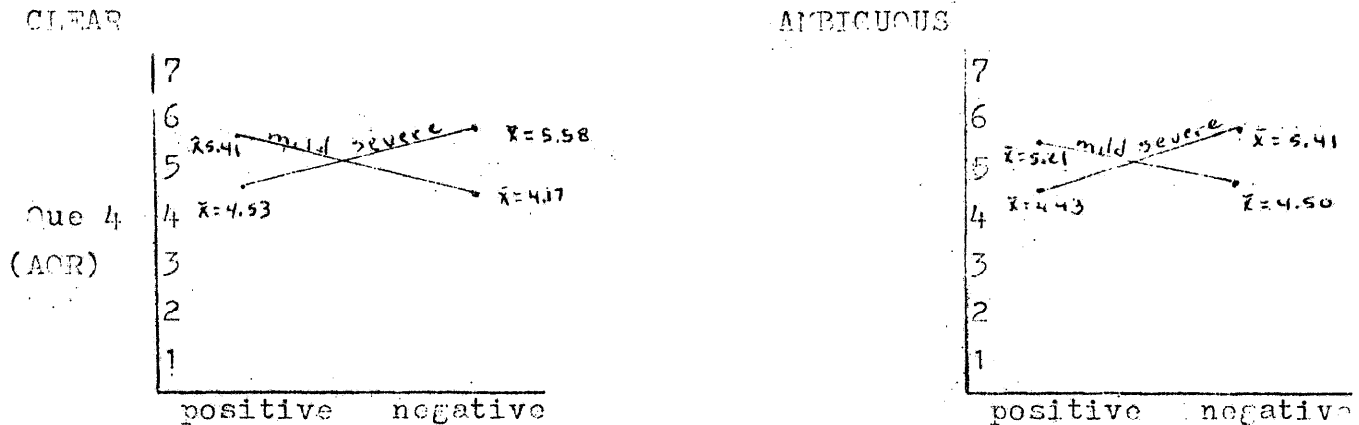
Significance levels of between
group variance from Table VII

Story 1	2	3	4	5	6	7	N
1							35
2	-						34
3	-	-					33
4	.05	-	-				34
5	-	-	-	-			32
6	-	-	.05	.05	-		28
7	.05	.05	-	-	-	.05	34
8	-	.05	-	-	.05	.01	36

As can be seen in Graph I (below), it appears that an interaction has occurred between outcome and consequences.

Graph I

Interaction between outcome and consequences as indicated by the attribution of responsibility



Here the greatest mean attribution of responsibility was for the clear, negative, and severe condition. This is in line with the order of the hypotheses. Ambiguous, negative, and severe conditions were also consistent with the order of the hypotheses as this condition received the second highest attribution of responsibility. The condition which included mild and positive variables under a clear situation was not in line with the hypotheses. It received the same amount of responsibility assignment as did the ambiguous, severe, negative condition. The ambiguous, mild, positive condition received the next greatest amount of responsibility assignment to the person with a mean of 5.21. Unexpectedly, the positive and severe condition in the clear situation received the next highest attribution of responsibility, placing it fifth on the rank order list as opposed to last as hypothesized. The ambiguous, mild, and negative condition, with a mean of 4.51, received less attribution of responsibility than had been expected. In the ambiguous, severe, positive condition the assignment of responsibility

was closer to the expectation as the mean of 4.43 ranked second lowest, preceded in least attribution of responsibility only by story number six (6), the clear, mild, and negative condition. This seems quite unusual, however. From the preceding, the order, by story, of the attribution of responsibility was:

TABLE IV

Comparative rank-order of stories by hypothesis and attribution of responsibility

H. Order*	Story	Conditions	Rank-order
1	1	ASP	2
2	2	OSP	4
3	3	APN	5
4	4	OPN	7
5	5	ANP	3
6	6	ONP	1
7	7	ASN	7
8	8	OSN	6

* Ranked from one (least) to eight (most) attribution of responsibility directed toward the actor.

Question 1, concerning how the subjects perceived the stories in terms of positive or negative outcomes, was used primarily as a validity check for the stories. It was expected that the scores for outcome would be negatively correlated with the attribution of responsibility. That is, as the attribution of responsibility is observed to increase, the perception of the outcome as negative would be expected to increase (or, the rating on the one to seven scale should reflect lower scores as the rating on Question 4 becomes greater on the seven point scale).

TABLE X

Means and standard deviations for
outcome and A.C.R.

Variables	AST	CSF	ANT	GNF	APN	GNH	ASV	CON	N
Story #	1	2	3	4	5	6	7	8	266
\bar{Y}	5.54	5.97	4.61	3.50	4.31	4.89	3.82	3.52	
S.D.	2.12	1.42	1.66	1.51	1.67	2.05	2.09	2.00	
A.C.R. (\bar{X})	4.43	4.53	5.21	5.41	4.51	4.17	5.41	5.58	

A brief look at the means and standard deviations in comparison to the responses for the attribution of responsibility does not readily indicate whether or not there is a relationship between the perceived outcome and the attribution of responsibility. However, a statistical test of significance indicates that there was a very strong difference between groups in which the outcome of the stories were positive and stories in which the outcomes were negative ($t=3.20$, $df=264$, $p .001$). These findings suggest that the outcome manipulation was effective and that subjects did discriminate between stories with "positive outcomes" and stories with "negative outcomes".

Discussion

Walster (1966) found that the attribution of responsibility to an actor increased as the severity of the consequences for a negative outcome increased. She concluded that an observer may feel sympathetic for an actor when an accident results in a mild consequence, but will not when the consequences are severe. When the consequences are severe, Walster suggests that the observer will attempt to attribute the consequences to the person. Not to do so would be to admit that an equally negative consequence could happen to the observer. By attributing the responsibility to the actor, however, it reassures the observer that similar undesirable consequences will not happen to her or him, and that the actor must be a "different sort of person".

Medway and Lowe (1975) also conducted experimental research examining the interaction of the severity of the consequences along with the nature of the outcome (positive or negative). Their findings support Walster's (1966) research and they conclude that increased severity will increase the attribution of responsibility, in either positive or negative situations, and furthermore, the self-defensive hypothesis that states that people tend to blame others for negative outcomes was given support.

Other researchers (e.g., Thores and Wilson) have found that the clarity or ambiguity of the situation have an effect on the attribution of responsibility. Their findings support the hypotheses that clear conditions will be met with greater attribution of responsibility than unclear conditions, and that severe outcomes will obtain an increasing amount of responsibility attribution as the severity in-

creases. Phares and Wilson also found that there was a significant interaction between these two variables. Their results indicated that under ambiguous conditions there was no relationship between the attribution of responsibility and the severity of the outcome, but under structured (clear) conditions the attribution of responsibility increases with the severity of the consequences.

In the present research no main effects were found to operate (see Table V). Although the attribution of responsibility for negative outcomes had a higher mean than that for positive outcomes, and the attribution of responsibility for severe consequences had a greater mean than that for mild consequences, as well as the mean for clear conditions exceeding the ambiguous conditions, the fact remains that none of these were statistically significant. The differences were so slight as to cast doubt on earlier findings that these variables determine the assignment of responsibility.

The Phares and Wilson findings that clear conditions for a negative outcome will be assigned increasing amounts of responsibility to the person as the consequences become more severe are not directly supported. It is true that the present study has findings that support the notion that severe/negative conditions receive the greatest amount of responsibility assignment to the person, but how do we account for the mild/negative condition receiving the least attribution of responsibility? The standard deviations (Table IV) for the two-variable analyses do support the Hedway and Lowe conclusion that "variation in the severe negative condition was somewhat less than for each of the remaining conditions" (Hedway and Lowe, 1975:243). Hedway and Lowe conclude support for the Jones and Davis (1965) contention that extreme negative behavior contains high information value about the actor, and the findings herein seem to bear this point also.

Perhaps the order effect was not controlled for as well as had been assumed and after reading one story about the actor the subject began to develop some target based information. If this were so the limited amount of attribution of responsibility to the actor under the clear/negative/mild condition and the increased amount under the clear/mild/positive condition may be accounted for. This being the case would support Walster (1966) in her conclusion that an observer may feel sympathetic for an actor when an accident results in mild consequences, but in line with the present results, will not when the consequences are severe. In addition, it might be suggest that the logical extension of this may have been provided support in the present research (i.e. that an actor will be given credit for a mild/positive outcome because of "sympathetic" or empathic feelings toward her).

A criticism of the present study is that subjects were asked if they "had ever experienced a similar situation" in an attempt to derive information concerning "ego-involvement". It was previously mentioned that this aspect of the research was aborted due to the lack of positive response to this item. Perhaps the question would have been better phrased "can you relate to the person in the story?" To speculate, it might be that the actual sample was highly ego-involved (as all were students), but they identified with the person and not the situation. This would affect their reactions to the story conditions. As the results show, more credit would be given the person for mild/positive outcomes, and less responsibility would be attributed to the actor for mild/negative outcomes. The basic tenet of Walster's attributional analysis would still hold true, however, that severe/negative

conditions will receive the greatest attribution of responsibility to the person as an ego-defensive maneuver. That severe/positive outcomes result in greater attribution of responsibility to the actor also, contrary to the Medway and Lowe (1975) suggestion, is not supported by the results. Not consistent with Halster is the notion that severe/positive outcomes will receive situational attributions. This suggests that people may be willing to assign responsibility, or give credit, for positive outcomes, but when they are severely positive the attribution to environmental circumstances provides the observer with the reassurance that similar "good fortune" could happen to her. Likewise, the observer may be willing to grant that mildly negative outcomes could befall anyone, but severe/negative outcomes are better assigned to a person to distinguish the outcome as the result of "some other kind of person".

Figure I (page 49) clearly supports the conclusions drawn here, however further exploratory research is in order to obtain evidence that supports the contentions that are being made. These findings are unique in the literature, at the same time in line with Halster (1966) and partially with Medway and Lowe (1975). The present study does not find support for any difference based on the clarity of the situation and is consequently in disagreement with Phares and Wilson (1972) who wish to support clarity as an important factor in dispositional attributions.

Table VII (page 48) further indicates that the difference between the clear/mild/negative condition and the severe/negative conditions was significant and that these did not occur merely by chance. Neither did extreme scores seem to affect the results ($\bar{M}=4.17$, $sd=1.89$).

Furthermore, the results indicate that the clear/mild/positive condition was seen as significantly more the responsibility of the person than the severe/positive condition (story number one) as well as significantly different from the condition attributed the most responsibility (story six).

Although the results support the contention of an "ego-defensive" motivation on the part of the attributor, it is suggested here that an analysis of variance be run to adequately analyze the data in terms of what is actually going on in the interactions that so obviously operate (Graph I). Along with the increased sophistication of the analysis procedure, it is suggested that whether the person is ego-involved or not with the person in the story be more reliably checked.

A final criticism of the present study is that, as Hedway and Lowe conclude in their study also (1975:244), "since judgement of responsibility involves a number of causal ascriptions, global measures of responsibility tend to be highly ambiguous and open to the interpretive caprice of subjects". When examining achievement related situations such as the ones in the present study, the stimulus situation may be ambiguous by nature, which is supported in that there was no main effect for the ambiguous vs. clear conditions. Further research might include a scale to check on the validity of the ambiguous versus clear manipulation as the results up to now seem rather inconclusive. On a more general level, the language of the attributional test instruments may require research and development of their own. Perhaps the wording of stories has as much to do with the attributions elicited as do the mind sets of the subjects. If so, this would lend support to the movement toward videotape test instruments.

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