

# PSYCHOLOGICAL REVIEW

Copyright © 1975 by the American Psychological Association, Inc.

VOL. 82, No. 6

NOVEMBER 1975

## The Endogenous-Exogenous Partition in Attribution Theory

Arie W. Kruglanski  
Tel-Aviv University  
Tel-Aviv, Israel

Within lay explanation of actions, several significant inferences are assumed to follow from the partition between endogenous and exogenous attributions. An action is said to be endogenously attributed when it is judged to constitute an end in itself and exogenously attributed when it is judged to serve as a means to some further end. A theoretical framework is developed whereby the action's endogenous attribution is linked with the inferences of intrinsic motivation, subjective freedom, and the action's underlying intention. The endogenous-exogenous distinction is proposed to replace the frequently invoked partition between the action's internal and external causes. Both conceptual and empirical considerations are put forth in favor of such a replacement. Classical attribution topics to which the internal-external partition has been applied are reinterpreted in terms of the endogenous-exogenous distinction, and novel data are reported that support the latter framework. Finally, several categories of conditions for endogenous (or exogenous) attributions are identified, and possible directions of further research within the endogenous-exogenous framework are suggested.

Attribution theory (Jones & Davis, 1965; Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1972; Kelley, 1967, 1971a, 1971b, 1973) deals with the explanation of effects via the identification of their causes. Frequently the causes of behaviors have been partitioned into those *internal* to the person and those *external* to him (internal causes have been alternatively labeled as personal and external as environmental). The internal-external division has been regarded

as basic to attribution processes (Kelley, 1967, p. 194) in the sense that the designation of a cause as internal has been assumed to identify it meaningfully so that explanation of the effect would readily follow. In particular the internal-external framework was assumed to yield inferences as diverse as those of (a) intrinsic motivation (see, e.g., deCharms, 1968; Deci, 1971), (b) subjective freedom (Kelley, 1967; Kruglanski & Cohen, 1973), (c) perceived pain (Nisbett & Valins, 1971), (d) positive attitudes (Bem, 1972), and (e) sincere reporting (Bem, 1972; Jones & Davis, 1965).

I am indebted to Bonnie Erickson, Chet Insko, Ned Jones, Hal Kelley, Moshe Kroy, Andrea Sedlak, and John Thibaut for comments on an earlier draft. This article was prepared while the author was on a sabbatical leave from Tel-Aviv University and at the University of North Carolina, Chapel Hill.

Requests for reprints should be sent to Arie W. Kruglanski, who (until August 1976) will be at the Department of Psychology, Vanderbilt University, Nashville, Tennessee 37240.

The present paper introduces the distinction between *endogenous* and *exogenous* attribution (analogous to the distinction between means and ends) to replace the internal-external partition in the lay explanation of actions. It is argued that the

endogenous-exogenous distinction affords all of the inferences accredited unjustifiably to the internal-external partition between the action's causes. To that end classical attribution experiments that have relied on the internal-external framework are reviewed and reinterpreted, and in some cases novel data are reported that support the endogenous-exogenous distinction. But before a discussion is undertaken of the specific explanatory properties of the endogenous-exogenous framework, it is necessary to consider the more general problem of explanation through attribution. This is attempted in what follows.

### *Attributional Explanation*

The lay person's inference process is assumed to comprise two separate steps, *causal assignment* and *causal explanation*. The first step has been analyzed closely by the attribution theorists (in particular by Kelley, 1967, 1971a, 1971b, 1973). During this stage the attributor aims at identifying the cause of an effect via analysis of variance-like procedures of hypothesis testing (cf. Kelley, 1967). However, little attention has been paid to the second step identified above: the stage of causal explanation. This is the problem of drawing some conclusions about the effect once its cause had been identified. More specifically, attributional explanation is assumed to occur when the effect's determinant has been identified, such that certain inferences follow beyond those contained in the effect notion as such. The attributor begins with an effect, say *b*, and several possible determinants thereof, *X*, *Y*, and *Z*. The causal-assignment stage referred to earlier serves to determine which of these may be most plausibly viewed as *b*'s determinant. Once this has been established, explanation may take place, that is, certain novel inferences may be drawn.

Such inferences may be conveniently classified into two levels, called here the *functional* and the *derivative* levels. On the functional level of explanation (e.g., see Eaker, 1972) the effect (*b*) has been functionally related to some "causal antecedent" (*X*), characterized in empirical or observational (as opposed to theoretical) terms.

For example, in the explanatory statement, "John handed over his wallet because Paul had asked him to do so," Paul's asking would constitute a functional explainer, as it designates an empirical event devoid of conceptual content. The information gain that accrues from deciding that the effect has been functionally related to some empirically defined determinant is confined to the assertion of covariance between the two. Speaking more precisely, everything else being constant, *X* (the determinant) has been identified as the necessary as well as the sufficient condition of *b* (the effect). Thus, the elimination of *X* will do away with *b*, and the reintroduction of *X* will reproduce *b* as well. In terms of our example, all that may be said is that in the specific circumstances Paul's asking (for the wallet) would suffice and be necessary to ensure John's compliance.

A derivative-level explanation presupposes a functional relation, but the effect's determinant is now characterized theoretically (as opposed to empirically on the mere functional level). For instance, John's yielding of the wallet might be explained by reference to the appropriate request coming from an armed bandit. The difference between an empirical and a theoretical characterization of an explainer is that the latter affords derivations that transcend the assertion of covariance between the determinant and the effect, while the former's implications are exhausted with the covariance assertion. In our example, the lay-theoretic concept, *armed-bandit*, affords several informative derivations, for example, that John was experiencing fright while yielding the wallet, that harm might have befallen him had he refused, or that most people in his place would have also complied. To state this differently, on the derivative explanatory level *b*'s possible determinant *X* carries with it a set of implications of which *b* is but one element, say, *b*, *c*, *d*, and *e*, while the determinant *Y* might carry a different set of implications containing *b*, for example, *b*, *e*, *f*, *g*, and *h*. Thus, by identifying *b*'s antecedent as *X* one may derive *c*, *d*, and *e*, whereas by identifying *b*'s antecedent as *Y* the derivations *e*, *f*, *g*, and *h* will follow.

Generally, one may define the degree of explanation as the extent to which inferential gain has been made (or as the size of the implicational set) that accrues from characterizing the antecedent of an effect in a particular way. It follows that explanation at the functional level is weaker than one at the derivative level, and within the latter level the degree of explanation will vary with the number of derivations comprised in (i.e., the theoretical content of) the antecedent term of the explanatory proposition.

The notions above facilitate the analysis of the explanatory properties of the endogenous-exogenous partition. But first let us lay out the rationale for preferring (in some domains of explanation) the latter classification over the current alternative, the distinction between internal and external causes.

#### *Actions Versus Occurrences*

It is useful to classify the various effects to which attributional analyses may be applied into two major categories: *occurrences* and *actions*. The fundamental distinction between these two is that actions are voluntary while occurrences are not. In other words, an action is commonly assumed to be determined by the actor's will, while an occurrence is some significant degree independent of the will. For instance, effects such as "running," "stepping on a scale," or "uttering a sound" would qualify as actions, because persons may bring them about simply by deciding to do so. By contrast, "winning a race," "weighing 156 pounds," or "being heard" would represent occurrences, as would "running a fever," "feeling pleased," or "experiencing an acute anxiety." Note that with the former three occurrences some action was presupposed (e.g., winning a race presupposes running it), while none was presupposed with the latter three.

But a common feature of occurrences as a class is that one may not engender them by mere willing: The will to succeed may not guarantee success, nor, alas, may the will to weigh 105 pounds guarantee the appropriate scale reading. Now, it is the occurrences' (relative) independence of the

will that renders them explicable in terms of stable or transient attributes. For example, the occurrence, "P's success on a task," may be explained by this person's attributes of competence or diligence, while the occurrence, "O's experience of fright," may be explained in terms of the situational attribute of darkness. As the foregoing examples illustrate, both persons and environmental entities have attributes; therefore, in explaining occurrences it seems justifiable to distinguish between personal (internal) and environmental (external) causality. Indeed, Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum (1971) made extensive use of the internal-external distinction in their attributional analyses of success and failure occurrences. But for actions (as opposed to occurrences) the internal-external partition appears less justifiable: All actions are commonly assumed to be determined by the will, and the will is internal to the person; hence, all actions are determined internally. This conclusion serves as a departure point for an attributional theory of actions developed in the remainder of this paper.

#### ENDOGENOUS-EXOGENOUS DISTINCTION IN NAIVE EXPLANATION OF ACTIONS

In the present section a theory is developed about the inferences that may follow from causally attributing actions in two contrasting ways, designated here as *endogenous* and *exogenous*. The theory will subsequently be applied to diverse attributional findings and will be contrasted with alternative interpretations based on the internal-external framework.

**POSTULATE 1.** For the naive attributor, *actions are explicable in terms of reasons or purposes*. That is, the lay explanation of actions is teleological rather than causal.

**DERIVATION 1** (from Postulate 1). *Insofar as all actions are (assumed) purposive, any action is either its own end or is a means to attaining some further end*. Now it should be clear that the means-goal categories are conceptually distinct and mutually exclusive: The sense in which something is classified a means is one whereby it is a nongoal. This is not to say that for any ac-

tivity its means versus end status may be clearly ascertained. An activity may be means relative to Goal X and an end relative to Goal Y. For example, "riding a bicycle to school" may constitute a means of transportation, and at the same time an end of physical exercise. Of course, the above example does not imply that the concepts of means and end are nondistinct, any more than the concepts *large* and *small* are in the example of \$1,000 being considered at the same time as large relative to the price of an ice-cream cone and small relative to the price of a mansion.

**DEFINITION 1.** *Let the term endogenous attribution of an action denote the case wherein an action is attributed to itself as a reason. In other words, an endogenously attributed action is an end in itself.*

**DEFINITION 2.** *Let the term exogenous attribution of an action denote the case where the action is not an end in itself but rather is a means that mediates a further goal, one exogenous to it.*

**POSTULATE 2.** *All purposes or intentions are internal to the individual.* A goal or an intention is internal in that it presupposes the person. Some intentions may arise from man's biological nature (hunger, thirst), others (achievement, altruism) may arise from internalized social norms.

**DERIVATION 2** (from Postulate 2). *The different goals are not divisible into the internal and external categories.* The latter would simply be a null set. It is of interest to note that the use of the internal-external distinction in reference to attributional findings has typically lacked explicit rationale. Rather, it seems to have been grounded in an arbitrary semantic decision to characterize some purposes in a "motive" language (that has an "internal" feel to it), and other purposes in a "goal" or object language (that feels "external"). For instance, in the attributional analyses of findings on task motivation (e.g., Deci, 1971) the actor's interest in the task has been frequently referred to as the internal cause of task performance and the contingent monetary reward as the external cause. But one could readily reverse the labels and call the task

external and the desire for money internal. Obviously, to call a purpose "money" or "desire for money" hardly alters the fact that one is dealing with precisely the same purpose.

**Corollary to Derivation 2.** *The denial of the internal-external dimension in the case of actions simultaneously denies the possibility of any other variables being systematically related thereto.* Thus, the action's degree of uniqueness (the extent to which it was uniquely undertaken by the actor vs. commonly performed by most people), assumed by the attribution theorists to be a major basis for internal inferences, should not, in fact, relate to internality. Nor may the inferences of intrinsic motivation, subjective freedom, positive attitudes, or sincere reporting relate to internality. In turn, this implies that the uniqueness variable should not be expected to correlate with any of the inferences just listed. Experimental evidence pertinent to this assertion is reviewed in a subsequent section, but now let us turn to the explanatory properties of the endogenous-exogenous distinction.

#### *Functional Level of Explanation (Covariance Level)*

**DERIVATION 3** (from Definition 1). *An endogenously attributed action will covary with the person's goal but will not covary with the situations.* An action that constitutes an end in itself is completely explicated in terms of this end, provided that this action was situationally possible (e.g., endogenously motivated eating could not take place unless food was situationally present). More specifically, given both the existence of some goal and the situational possibility of its consumption, the endogenously motivated (consummatory) action will be performed regardless of other situational changes that affect neither the presence of the goal nor the possibility of its attainment.

**DERIVATION 4** (from Definition 2). *An exogenously attributed action will covary with a specific conjunction of the goal and the situation.* By contrast to an endogenously motivated action, an exogenously motivated one is not fully explicated in terms of its goal (and the situational possibility of

the action). An exogenous action assumes a greater degree of situational determination: The situational constraints implicate a given means (to some end) to be the best available. In Situation A, the means to "having breakfast" may consist of walking to the kitchen; in Situation B, of driving to the hamburger stand, etc.

Derivations 3 and 4 above imply a sense in which exogenously motivated actions are more externally (or situationally) determined than are endogenously motivated ones. This may explain, perhaps, why attribution theorists made the presently denied distinction between internal and external goals (such as "interest in a task" vs. the "contingent payment") where the endogenous-exogenous partition would seem applicable. In any event, while endogenously motivated actions may, in a sense, be also more purely internal than exogenously motivated actions, it is the endogenous-exogenous variable (rather than the internal-external one) that seems crucial to the several inferences from actions that have been demonstrated experimentally. We now turn to the explicit derivation of these inferences.

#### *Derivative Level of Explanation*

DERIVATION 5 (from Definition 1). *To the extent that an action is endogenously attributed, it implies the actor's positive affect (enjoyment, contentment, satisfaction, etc.).* This follows from the common definition of the *end* concept as a state of affairs that the actor desires. Its attainment (an endogenously attributed action) represents the fulfillment of one's desire, a situation creditable with positive feelings of enjoyment and satisfaction.

DERIVATION 6 (from Definition 2). *To the extent that an action is exogenously attributed, it implies the actor's negative affect, insofar as means is not something that the actor desires.* In the case of an exogenously motivated action, the actor is doing something that he does not want to do; hence he may not be assumed happy at the time.

Note that the endogenous-exogenous variable is not assumed to constitute the exclusive determinant of satisfaction or positive

affect. An action is endogenous or exogenous with respect to a single goal, while the degree of satisfaction-dissatisfaction is assumed contingent on the totality of the person's goals or needs: notably, on the degree to which they are fulfilled or frustrated. Thus, the present Derivations 5 and 6 need to be supplemented by a *ceteris paribus* proviso, whereby the inferences of satisfaction versus dissatisfaction are a monotonic function of the endogenous-exogenous variable only when the state of the person's remaining goals (needs) is held at a constant level.

POSTULATE 3. *Subjective freedom consists in the attainment of goals.* One does not freely choose to have needs. These are determined for the individual by his biological constitution, societal norms, ethical injunctions, etc. But granting the existence of needs, freedom consists in need fulfillment or goal attainment.

DERIVATION 7 (from Postulate 3 and Definition 1). *To the extent that an action is endogenously attributed, it affords the inference of subjective freedom.*

DERIVATION 8 (from Postulate 3 and Definition 2). *To the extent that an action is exogenously attributed, it affords the inference of compulsion.* In the case of means (vs. end) the actor is not engaging in an action that is inherently desirable: He does not want to, only he is compelled to do it by the existence of his need and by the situational constraints that pose barriers in the way of immediate need satisfaction.

The analysis of inferred freedom contained in Postulate 3 and Derivations 7 and 8 seems closely akin to Steiner's notion of "outcome freedom," which he defined as "high (subjective) probability of obtaining desired outcomes" (1970, p. 189). Obviously, maximal subjective probability of obtaining a desired outcome is experienced upon this outcome's actual attainment, that is, in the case of consummatory or endogenously attributed behaviors. Steiner's "decision freedom" is said to obtain when the individual may believe that "he rather than other people, fate or the press of circumstances" (1970, p. 189) may be credited with his decision. Steiner goes on to illustrate

high (vs. low) decision freedom by the existence of an attractive (vs. an unattractive) alternative to the person's actual action. This strongly suggests that "decision freedom" is also reducible to endogenous attribution. Thus, an unattractive alternative implies an exogenous attribution: The person did not choose the action for its own sake but rather to avoid the unpleasant alternative. Conversely, when the alternative is attractive, endogenous attribution seems indicated, there being no apparent exogenous reason for the action.

DERIVATION 9 (from Definition 1). *In the case of endogenously attributed actions, knowledge of the action's content immediately identifies the action's goal or intention.* For instance, the knowledge that a benefit bestowed on another person was endogenously motivated yields the immediate inference that the actor's underlying intention was benevolence.

DERIVATION 10 (from Definition 2). *In the case of exogenously attributed actions, knowledge of their content does not reveal their underlying intentions.* The specific means chosen (the content of which is known) could, in principle, mediate all possible goals, its choice being situationally determined and not uniquely determined by the underlying goal.

This concludes the present statement of the theory of endogenous attribution. The theory will now be applied to the several areas of empirical research pertinent to the lay explanation of actions.

#### *Evidence for Endogenous Attribution Theory*

Numerous experiments on lay inferences from actions have been interpreted in terms of the internal-external distinction mentioned earlier. Typically, the reasons for designating specific experimental events as the internal or the external causes of actions have not been explicitly given. However, one of possible two criteria seems implicit in all such classifications. The first is based on the idea that the lay attributor intuitively classifies certain reasons for action (e.g., monetary payment) as generically external to the actor and other reasons (e.g., interest

in a task) as generically internal. The second criterion assumes that the attributor systematically applies the uniqueness standard to arrive at internality designations: That cause is considered internal whose effect is unique to the actor versus being common to many persons (Kelley, 1967).

The present theory of endogenous attribution suggests that in explaining actions the layman draws the endogenous-exogenous distinction between the actions' causes (reasons) rather than the internal-external distinction. In the following review of attributional research on actions, the case for the present theoretical scheme will rest on both conceptual and empirical considerations that favor the former over the latter partition. On the conceptual level, two difficulties with current applications of the internal-external framework will be identified: the problems of (a) criterion and (b) inference. The problem of criterion is that the two ways of rendering internality-externality attributions implied earlier (the ideas of generically internal and external causes and of the uniqueness standard) do not appear to coincide, as might be hoped for, but rather seem to be mutually independent. Thus, any generically internal cause could be implicated as external on grounds of nonuniqueness, and any generically external cause as internal. By contrast, the conceptual criterion for the endogenous-exogenous distinction is relatively straightforward, as it rests on the common differentiation between means and ends.

The problem of inference is that in typical applications of the internal-external framework, it is neither explicitly elaborated nor is it otherwise plain how the attributions of internality (externality) may imply the various inferences with which they have been credited. By contrast, the present Derivations 3-10 specifically deduce the various inferences afforded by the endogenous-exogenous classification.

The main empirical considerations in support of the present theory include the arguments that (a) in all those experiments where the subjects' inferences were coordinated to the internal-external distinction a reinterpretation is possible congruent with

the theory of endogenous attribution; (b) specific experimental attempts to vary the internal-external factor (either by manipulating the uniqueness variable or the generically internal or external causes) failed to yield the inferences claimed to be implied by this partition; and (c) experiments that specifically varied the endogenous-exogenous factor yielded results that unexceptionally corroborated the present theory.

Let us now directly turn to attributional research on the lay explanation of actions. The specific topics to be reviewed include (a) intrinsic motivation, (b) subjective freedom, (c) benevolent and malevolent intentions, (d) inferred sincerity, and (e) escape behavior.

*Intrinsic motivation.* Several recent experiments have demonstrated a negative relation between the existence of contingent, frequently monetary, reward and the subject's degree of intrinsic motivation for the task (e.g., Deci, 1971, 1972a, 1972b; Greene & Lepper, 1974; Kruglanski, Alon, & Lewis, 1972; Kruglanski, Friedman, & Zeevi, 1971; Kruglanski, Riter, Amitai, Margolin, Shabtai, & Zaksh, 1975; Lepper, Green, & Nisbett, 1972). These findings have been sometimes interpreted to mean that the actor infers his own intrinsic motivation when he attributes his performance of the task internally (cf. Deci, 1974), for example, to his interest in the task. The inference of intrinsic motivation was assumed less likely in the reward versus the no-reward condition, because the former case but not the latter also contains plausible external reasons for task performance, that is, the contingent rewards. Such analyses as the above have usually failed to clarify the criterion for designating the contingent reward (e.g., the money) as the external cause of the action. Rather, in these cases the cause's generic nature was somehow intuited to belong in the external category. Alternatively, the widespread appeal of money could justify its alleged externality on grounds of its nonuniqueness as a motivator. It should be recognized, however, that the two criteria just implied are orthogonal and may not be expected to manifest unexceptional correspondence. For instance, a person could be

uniquely greedy and in return for money undertake a task rejected by everyone else. From the uniqueness perspective this would establish money as an internal cause of this person's action, that is, contravert the suggestion that money is generically external.

Furthermore, the various analyses of intrinsic motivation in terms of the internal attribution fail to cogently rationalize the implied relation between the two. Yet, counterexamples easily come to mind. For instance, our greedy individual above would seem to be internally motivated (on uniqueness grounds), yet would seem quite unlikely to be credited with a great deal of intrinsic motivation toward the task that he performed for money. The generic standard for internality-externality is similarly susceptible to counterexamples with respect to the inferences of intrinsic motivation. On this criterion money would represent a typically external cause, so that behaviors prompted thereby should lead to the inferences of extrinsic motivation expressed, for example, in disenjoyment or dissatisfaction. But acts to which the monetary rewards are inherent, such as playing poker, performing a business transaction, or receiving one's paycheck, are certainly attributable to monetary causes without implying disenjoyment.

The last examples naturally lead to the present conceptual framework, whereby the inference of intrinsic motivation follows from an endogenous attribution (Derivation 5). Whenever the actor's performance of his task appears endogenously motivated (i.e., task performance appears to be an end in itself) the implication of enjoyment, interest, etc. derives from the notion of goal attainment (consummatory behavior). By contrast, when there exists a plausible exogenous reason for task performance (the actor's reason is not inherent to the task but is made arbitrarily contingent on task performance), the attributor will partially discount task-endogenous reasons; hence the inference of enjoyment, interest, etc. will be less likely to follow. Thus, the present analysis suggests that the inference of extrinsic motivation in the reward condition does not follow from (a) the fact that money was the goal of one's activity nor (b) the fact that

TABLE 1  
AVERAGE DEGREES OF INTRINSIC MOTIVATION  
(EXPERIMENT 1)

Condition	Money endogenous	Money exogenous
Payment present	5.44	4.66
Payment absent	2.25	5.60

*Note.* Higher figures denote a greater degree of intrinsic motivation on a 7-point scale. From "Can Money Enhance Intrinsic Motivation? A Test of the Content-Consequence Hypothesis" by A. W. Kruglanski, A. Riter, A. Amitai, B. Margolin, L. Shabtai, and D. Zaksh, *Journal of Personality and Social Psychology*, 1975, 31, 744-750. Copyright 1975 by the American Psychological Association. Reprinted by permission.

the goal was nonunique; but rather that the activity was exogenously attributed, that is, was a means, rather than an end in itself.

Recently, this author has completed two experimental sequences of direct relevance to the discussion above. The results of this research suggest that (a) money, a cause frequently viewed as external to the person, might be endogenous to an activity, in which case its presence would enhance rather than suppress intrinsic motivation; and (b) the degree of intrinsic motivation does not seem to be a function of the uniqueness variable. Regardless of the degree of uniqueness, that of intrinsic motivation is greater when the effect (action) is attributable endogenously rather than exogenously. Let us now consider at some length the experimental evidence for these propositions.

In the first experimental paradigm (Kruglanski et al., 1975) monetary rewards were in the one case inherent to the task content (money-endogenous condition), while in the second case they were unrelated to the task (money-exogenous condition). Within each of these conditions half of the subjects performed the task in return for monetary rewards and the remaining half for no rewards. Specifically, in the money-endogenous condition of Experiment 1 the subjects played with the experimenter a coin-toss guessing game (heads or tails). As this game is usually played for actual money, it had been assumed (and confirmed on subsequent checks) that money would be apprehended as a game-endogenous feature. In the money-exogenous condition the subjects played with the experimenter a game of

model construction, an activity hardly ever associated with money. In each of the task conditions half of the subjects received monetary rewards for correct performance (the payment-present conditions), and the remaining half received points (payment-absent conditions). The degree of intrinsic motivation was inferred from the appropriate index based on the subjects' reported interest in the game and preference for it over possible alternatives. The pertinent data are displayed in Table 1. As shown, when money is endogenous to the task its presence enhances intrinsic motivation ( $p < .001$ ), whereas when it is exogenous to the task its presence depresses intrinsic motivation ( $p < .05$ )—this in contrast to the implication that intrinsic motivation is always lowered when an external cause of actions (such as money) appears in evidence.

The confidence in the above results is augmented by the findings of Experiment 2, where the money-endogenous and money-exogenous tasks were less dissimilar than their counterparts in Experiment 1. Specifically, in both game conditions of Experiment 2 the subjects' actual activities were identical, only they were interpreted differently: as stock market operations in the money-endogenous conditions and as athletics management in the money-exogenous condition. As in Experiment 1, the sub-

TABLE 2  
GAME PREFERENCES AND RATED INTEREST  
(EXPERIMENT 2)

Measure	Money endogenous	Money exogenous
Proportions of subjects preferring the same (vs. another) game		
Payment present	.65	.35
Payment absent	.25	.70
Average rated interest		
Payment present	5.75	4.43
Payment absent	4.31	5.30

*Note.* Higher figures denote a higher rated interest on a 7-point scale. From "Can Money Enhance Intrinsic Motivation? A Test of the Content-Consequence Hypothesis" by A. W. Kruglanski, A. Riter, A. Amitai, B. Margolin, L. Shabtai, and D. Zaksh, *Journal of Personality and Social Psychology*, 1975, 31, 744-750. Copyright 1975 by the American Psychological Association. Reprinted by permission.

jects' successful performance (accumulation of stock or athletic credits) was rewarded by money in the payment-present conditions and by points in the payment-absent conditions. Intrinsic motivation was inferred from (a) the proportions of subjects who preferred to continue with the same game versus trying an unknown alternative, and (b) interest and enjoyment ratings. The relevant data are shown in Table 2. As expected, a significantly greater proportion of the subjects preferred the money-endogenous game in the payment-present condition ( $p < .01$ ) and preferred the money-exogenous game in the payment-absent condition ( $p < .02$ ). Similarly, the money-endogenous game was rated as significantly more interesting in the payment-present condition ( $p < .01$ ), whereas the money-exogenous game was rated as more interesting in the money-absent condition ( $p < .05$ ). In sum then, the findings of both experiments are consistent with the present theory of endogenous attribution (specifically with Derivation 5) and inconsistent with the idea that intrinsic motivation follows from internal attribution and is lowered by the presence of a generically external cause such as money.

The second series of studies (Kruglanski, Note 1) examined the uniqueness standard for internality and the endogenous-exogenous variable as they may affect the inferences of intrinsic motivation and freedom. In the first experiment the subjects were furnished with information regarding the target person's uniqueness on some characteristic. In one half of the cases the target person was presented as unique on that characteristic and in the remaining half of the cases as nonunique. The target person was then portrayed to have acted in some manner, such that in one half of the cases the individual's unique or nonunique characteristic suggested an endogenous attribution, while in the remaining half of the cases it suggested an exogenous attribution.

Thus, in one of the four hypothetical situations presented to the subjects, the actor, a high school student, decides to attend a Sunday concert performed by an out-of-town classical ensemble. In the endogenous condition the actor is known for his delight in

TABLE 3  
ENJOYMENT AND FREEDOM RATINGS  
(EXPERIMENT 1)

Measure	Condition	
	Endogenous	Exogenous
Inferred enjoyment		
Internal condition	6.38	4.00
External condition	6.31	3.87
Inferred freedom		
Internal condition	6.57	3.88
External condition	6.15	3.88

Note. The higher the figures, the greater the inferred enjoyment or freedom. From Kruglanski (Note 1).

classical music, which is either unique to him or is common among his fellow students. In the exogenous conditions, Ann, an attractive new girl, is also known to attend the concert, and the protagonist has an interest in Ann that is either unique to him or is commonly shared among the boys at his school. The subjects responded to four hypothetical situations in accordance with a balanced Latin square design, where each situation represented one of the four possible combinations of the endogeneity and the uniqueness variables. After reading each text, the subjects answered a brief questionnaire that included checks on the uniqueness manipulation and questions about the actor's perceived enjoyment of the action (e.g., listening to the concert) and his subjective freedom while pursuing it. It will be noted that the uniqueness manipulation was highly effective: The subjects rated the protagonist's actions as more distinctive of his person in the unique (vs. the nonunique) condition ( $p < .001$ ). The enjoyment data (collapsed across the four situations) are displayed in the upper row of Table 3. As shown, greater enjoyment of the activities was reported in the endogenous (vs. the exogenous) conditions ( $p < .001$ ), while the uniqueness manipulation yielded no effects with respect to task enjoyment.

The possible argument could be raised that the uniqueness variable did not affect the results of Experiment 1 because the actor's reason for his behavior was clearly identified. Perhaps uniqueness may signify

TABLE 4  
ENJOYMENT AND FREEDOM RATINGS  
(EXPERIMENT 2)

Measure	Condition			
	Internal	External	Endo- genous	Exogen- ous
Inferred enjoyment	5.37	5.00	6.45	3.87
Inferred freedom	5.54	5.50	6.36	4.29

*Note.* The higher the ratings, the greater the inferred enjoyment or freedom. From Kruglanski (Note 1).

internality only when the person's specific reason for his action is not otherwise implied. The foregoing possibility was explored in Experiment 2 of the sequence. Subjects responded to hypothetical situations in which the actor had two possible reasons for a given behavior, one endogenous to this behavior and the other exogenous. Additional information was provided that suggested the actor's reason to be either (a) the endogenous one, (b) the exogenous one, (c) unique to the actor, or (d) nonunique to him. (Note that in the latter two cases the sole information provided was about the uniqueness of the action without the specific reason being identified in any way.)

Thus, in one of the hypothetical situations an employee is having a dinner with his boss and decides to order a delicious pie for dessert (endogenous reason for the order), exactly as ordered by the boss a moment ago (exogenous reason for the order). Additional information furnished by a professional psychologist suggests this person's action to be (a) highly unique to his personality, (b) nonunique, as most people in this situation would have done the same, (c) prompted endogenously (i.e., solely by the pie's apparent properties), (d) prompted exogenously (i.e., solely by the boss's preferences). Based on a balanced, Latin square design, subjects responded to four situations, each representing one of four experimental conditions (e.g., the unique, nonunique, endogenous, and exogenous conditions). The dependent variables were, again, the ratings of the actor's enjoyment and of his subjective freedom with respect to the action. The enjoyment data are

summarized in the first row of Table 4. Again, the endogenous-exogenous variable strongly affected the results but not the uniqueness variable. In particular, the actor's inferred enjoyment was (a) higher in the endogenous case than in either the internal or the external cases ( $p < .01$ ), (b) lower in the exogenous case than in either the internal or the external cases ( $p < .05$ ), and (c) no different in the unique and the nonunique conditions.

In Experiment 3 of this series subjects assessed the information value for enjoyment and freedom inferences of questions posing the choice between (a) endogenous versus exogenous, and (b) uniquely personal versus uniquely environmental origin of the actor's reason for his behavior. The latter choice was modelled after the example of the internal-external dilemma given sometimes by the attribution theorists. For instance, Kelley (1967, p. 194) describes the movie viewer who wonders whether his enjoyment has been produced by his own distinctive property ("a specific kind of desire relevant to movies") or by the movie's property ("that it is intrinsically enjoyable"). In the present case, one of the four hypothetical situations used in Experiment 3 portrayed a protagonist, X, who decided to attend movie Y. In the personal versus environmental version the question whose information value the subjects were to assess was whether X's reason had to do with his uniquely personal preferences or with the movie's properties. In the endogenous-

TABLE 5  
RATED INFORMATION VALUE OF INTERNAL-EXTERNAL VERSUS ENDOGENOUS-EXOGENOUS CHOICES FOR ENJOYMENT AND FREEDOM INFERENCES  
(EXPERIMENT 3)

Measure	Condition	
	Internal- external	Endogenous- exogenous
Enjoyment inference	3.62	5.12
Freedom inference	3.54	5.41

*Note.* The higher the figures, the greater the perceived information value. From Kruglanski (Note 1).

exogenous version the question to be assessed was of whether X's reason for attendance had to do with the movie's properties or with the fact that his boss had invited him to come along for this movie. Each of the three hypothetical situations was presented to the subjects twice in a counterbalanced order: once with the personal-environmental question and once with the endogenous-exogenous one. The pertinent results (collapsed across the three situations) are displayed in the upper row of Table 5. As shown, the subjects rated the endogenous-exogenous question as significantly more informative for enjoyment inferences ( $p < .01$ ) than they did the personal-environmental question.

Finally, relevant to the present concern is the "forced-compliance" study by Cooper, Jones, and Tuller (1972), where uniqueness versus nonuniqueness of a person's compliance to deliver a counterattitudinal essay on some issue was orthogonally crossed with the magnitude of exogenous reward promised him for doing so. It turned out that a more positive attitude on this issue was expressed by subjects in the case of a small exogenous reward (versus a large one), that is, where endogenous attributions would seem more likely. By contrast, the act's degree of uniqueness had no appreciable effects on attitudes.

*Subjective freedom.* It has been argued that freedom or volition of the actor may be inferred from an internal attribution, that is, to the extent that the act may be attributed to the person uniquely. For example, Kelley (1967, p. 218), suggested that "you can be said to exercise choice only if you do something *different* from what everyone else would do in the same situation." But it would seem that some nonunique choices may appear (and be experienced) as quite free, and some unique ones as unfree. For instance, suppose that a millionaire, notorious for his eccentricity (say Howard Hughes) approached you one day with the free gift offer of \$1,000,000. Most of us would probably hasten to accept the gift without feeling unfree in the least. On the other hand, a person's unique fear of authority might prompt him to uniquely abide

by unreasonable regulations, unheeded by anyone else, and experience a strong sense of compulsion while doing so.

On the level of empirical evidence, Kruglanski and Cohen (1973) claimed specific support for the uniquely personal rendition of perceived freedom. But a closer scrutiny of these authors' procedures suggests that their findings may better be explained by reference to the endogenous-exogenous distinction. Kruglanski and Cohen (1973) operationalized person causation by the experimental condition where the target person's act (choice of an essay topic) was consistent with his unique character versus being inconsistent with his character in the external-causation case. Subjects attributed significantly greater freedom to the target person in the in-character versus the out-of-character condition.

But rather than viewing the in-character condition as one that operationally defines uniquely-personal causation, and the out-of-character condition as one that defines the absence of unique causation, it is possible to interpret the former as implying an endogenous attribution and the latter an exogenous one. Thus, in the in-character condition, knowledge of the protagonist's preferences suggests that the act produced (choice of an essay) was endogenously motivated, whereas in the out-of-character condition the same prior knowledge suggests that the act may not have been its own end; hence some aspect exogenous to this act must have been the reason for its performance. Thus, in the Kruglanski and Cohen experiment, uniquely-personal causation was confounded with endogenous attribution, and either conceptualization could explain the findings. But in the experimental series by Kruglanski (Note 1) described above, freedom inferences (as well as those of task enjoyment) were significantly ( $p < .01$ ) affected by the endogenous-exogenous distinction but not at all affected by the uniqueness variable (Experiments 1 and 2). Furthermore, questions posing the endogenous-exogenous choice were rated as significantly ( $p < .01$ ) more informative for freedom inferences than questions posing the internal-external choice. The data relevant to the above assertions

are displayed in the lower rows of Tables 3, 4, and 5. Finally, it is of interest to note that within Experiments 1 and 2, the ratings of freedom and enjoyment exhibited a high degree of positive correlation, as did the informativeness ratings for freedom and enjoyment inferences in Experiment 3 ( $p < .01$  in all cases), a finding consistent with the idea that freedom and enjoyment inferences follow from the same (presumably) endogenous attribution.

To conclude, then, both previous results and novel experimental findings support Derivations 4 and 5 of the present theory, whereby the inferences of intrinsic motivation and of freedom follow from the endogenous attribution of actions. Similarly consistent with the present theory are the recurrent failures to corroborate the contention that internal attribution (e.g., as operationalized in terms of the uniqueness criterion) mediates the freedom or the intrinsic motivation inferences.

*Benevolent and malevolent intentions.* The rendition of intentions as benevolent or malevolent has been analyzed by reference to the internal-external distinction. In a typical experiment, the actor commits a helpful or a harmful deed (a) under a condition where an external reason is apparent or (b) in the absence of an external reason. External reasons have included the status of the act's recipient (Thibaut & Riecken, 1955), the experimenter's instruction to perform the act (cf. Goranson & Berkowitz, 1966), "a widely recognized physical cause; a compelling institutional arrangement or rule; a factor in the frustrator's psychological makeup, such as the mental illness of a person who attacks you . . . a lack of ability on the part of a person upon whose success one is dependent . . . an inadequacy in the prior behavior of the person subjected to the frustration" (Kelley, 1971a, p. 15). It turns out (see Kelley, 1971a, for a review) that in the absence of such external reasons, a helpful or harmful act elicits a greater degree of reciprocation from the target person. This finding has been interpreted to mean that internally attributed benevolent or malevolent acts implicate be-

nevolence or malevolence as their underlying intention.

The diversity of external reasons illustrated above raises again the question of criterion: What common aspect of these different justifications may account for their externality (or the internality of others). Little specific discussion of this problem exists in the literature, but it is possible to apply here our two earlier interpretations, whereby the attributor may apply either the intuitive criterion of generic internality (externality) or the more systematic standard of uniqueness. It is worthwhile to reiterate that the two interpretations need not coincide. For instance, a person could be particularly sensitive to social status, and hence go to unique pains to please a high-status figure. This would suggest internal causation on grounds of uniqueness, even though the cause in question (status) has been customarily referred to as external (cf. Thibaut & Riecken, 1955).

The above example also highlights the problem of inference with respect to the internal-external partition: Internal attribution has been assumed to mediate the reciprocation of one's helpful or harmful acts, yet it seems unlikely that an actor's unique enactment of a benevolent deed should result in much reciprocation, for example, when that deed is assignable to the person's unusual craving for status.

In the empirical domain, inexplicable in terms of the uniqueness principle is the persistent finding that less reciprocation follows when the actor's helping behavior seems inappropriate, hence suggesting "that the actor may be peculiar, stupid, or not completely rational" (Kelley, 1971a, p. 16). Clearly, inappropriate or irrational behaviors (whether benevolent or malevolent) are ipso facto unique, and hence should increase the probability of internal attribution, yet low reciprocation resulted. Kelley viewed such findings as "exception[s] to the rule that helpful or affiliative behavior attributed to the person will elicit more liking than if attributed to the situation" (1971a, p. 15). However, within the present endogenous-exogenous interpretation such results need not be

viewed as exceptional. Let us, therefore, consider the findings on reciprocated harm or benefit in light of the latter distinction.

It is presently proposed that the presence of justifying reasons represents the case wherein the act (the benefit or the harm) may not be readily assigned endogenously, but rather may be perceived as a means toward the attainment of an exogenous goal (the justifying reason). Now, when the act's content is known to be benevolent or malevolent, an endogenous attribution implicates the actor's intention as benevolence or malevolence (Derivations 9 and 10). It is the latter inference of intention that may elicit reciprocation from the act's target. The above analysis suggests, for example, that the benevolence inferences and reciprocated benevolence (assumed to follow from an endogenous attribution of a benevolent action) ought to be correlated with the inferences of the actor's freedom (assumed to follow from an endogenous attribution of any action). Indeed, in at least one experiment such correspondence was reported. Specifically, Thibaut and Riecken (1955) found that when a helpful act was performed in the absence (vs. the presence) of an exogenous reason (approval by a high status figure) the actor was (a) credited with greater freedom (was perceived as wanting to rather than being coerced to help) and also was (b) liked more (reciprocated benevolence).

As noted earlier, the uniqueness criterion for internality confronts a special difficulty in the case of irrational behaviors (or those associated with a psychological defect in the actor). Such behaviors are highly unique (which implies internality) yet have typically resulted in low reciprocation—reserved for externality. Therefore, of particular interest is the possibility that the theory of endogenous attribution may handle the case of irrational or pathological acts. Specifically, the irrational actor could misperceive the situation and include in his evaluation a variety of exogenous justifications evidently absent for a more rational perceiver (e.g., the paranoiac may inappropriately perceive the other person as boding him ill; such an

evaluation could then provide a possible exogenous reason to which his aggressive acts could be attributed). Similarly, when performance of a given act seems clearly inappropriate, the actor could be suspected of misperceiving the meaning of this act. This would render inapplicable Derivations 9 and 10 of the present theory, thus delimiting the implications of endogenous attribution to the inferences of freedom and motivation to perform the act as such. But in the absence of clarity that the actor understood the act as benevolent or malevolent, an inference that the actor's intention was to bestow benefit or harm is not unambiguously indicated.

To sum up, then, it has been argued that the data on reciprocated harm and benefit are accountable for within the endogenous-exogenous framework and not readily explicable in terms of the uniqueness variable or the internal-external partition as such. An endogenously motivated favor or harm implicates not only the actor's volition (as in the Thibaut & Riecken, 1955, study) but also his intention as benevolence or malevolence, inferences which, in turn, may mediate reciprocal behavior from the act's target.

*Inferred sincerity.* In a widely known argument, Daryl Bem (1965, 1967) accounted in attributional terms for the negative relation between the magnitude of inducement for making a counterattitudinal statement and subsequent attitude change toward the statement's content (cf. Festinger & Carlsmith, 1959). To that end Bem employed Skinner's (1957) distinction between *tact* and *mand*, where *tact* has been defined as "a verbal response . . . under the discriminative control of some portion of the environment" and *mand* "as a verbal response under the control of a specific reinforcing contingency" (Bem, 1965, p. 200). When the magnitude of inducement is high, the reward contingency is clear, hence a *mand* inference should be made, which implies that the statement may not have reflected the (subjectively) true properties of the entity about which it has spoken. By contrast, with a low inducement a *tact* in-

ference is more likely, and it should afford the inference of a sincere report.

Note that the tact-mand distinction differentiates between portions of the (external) environment and assumes a causal explanatory scheme. In other words, a person's utterances are assumed to be caused by various parts of the environment or to constitute responses to environmental stimuli. This contrasts with the teleological account of actions (including utterances) proposed herein. But from a different vantage, there exists an important similarity between the tact-mand and the endogenous-exogenous distinctions. Tacting refers to utterances prompted by endogenous aspects of the statement's object, while manding implies utterances prompted by goals (e.g., reward contingencies) exogenous to the statement's object. Now in the same way that endogenously motivated benefit or harm implies the actor's end to be benevolence or malevolence, so endogenously motivated reports may implicate sincerity ("telling it like it is") as their underlying goal (Derivations 9 and 10). In other words, a report is a description of some reality, and an endogenously motivated report implies that the actor's sole objective is to describe a reality, that is, report on what to him appears to be the case.

Note that a quite different theme looms prominent in Kelley's (1967) interpretation of the relation between inducement and attitude change. Kelley viewed as particularly significant the fact that "strong reinforcement contingencies suggest the notion that most or all persons in the same situation would make a response" (1967, p. 217). He also emphasized the idea that

the judgment that the attitude of a [low inducement] complier is more favorable than that of a [high inducement] complier is probably associated with assumptions that there is a distribution of opinion toward the task, and only the more favorable subjects complied in the [low inducement] case and almost all, favorable or not, complied in the [high inducement] case. (p. 226)

The foregoing analysis has two implications:

1. The distinction proposed therein is not between entity versus extrinsic reward (tact

vs. mand), but rather between internally versus externally assigned causality as defined from the uniqueness perspective. The low-inducement case is assumed to suggest an internal attribution, whereas the high-inducement case is assumed to suggest an external attribution (as everyone in the same situation is assumed to comply).

2. Within the above analysis, internal or unique attribution of an utterance is assumed to reflect the speaker's sincerity or favorability to his pronouncement.

But the proposed linkage between internal attribution and the inferences of sincerity of favorability has not been furnished with an explicit rationale, nor does it appear to be intuitively evident. On the contrary, the consensus criterion of attribution validity (Kelley, 1967) suggests that unique pronouncements (those that deviate from the consensus) would be considered false, thus (possibly) insincere. Similarly, unique (hence, internally based) compliance need not reflect the actor's favorability toward his deed but could, alternatively, signify his special craving for the contingent reward, or his unique fear of the contingent punishment. Indeed, the above-mentioned research by Cooper et al. (1972), and by Kruglanski (Note 1) has failed to detect a relation between the uniqueness of an act and the actor's inferred favorability thereto.

As another example of the subjects' alleged reliance on the internal-external scheme in arriving at sincerity judgments, consider the experiment by Jones, Davis, and Gergen (1961). In this study, a fictitious interviewee for a job described himself in a manner that was either consistent or inconsistent with the job requirements. It turned out that subjects were more prone to believe the interviewee's statements in the latter versus the former case. In interpreting this finding, Kelley suggested that the attributor's behavior was prompted by an internal cause or by an external one—the demand characteristics of the job interview situation. Kelley further argued that in those conditions where the job applicant had portrayed himself inconsistently with the job requirements "the behavior should be attrib-

uted to the person himself and from it his properties should be inferred" (1971a, p. 9). But such an interpretation suffers from the by now familiar difficulties of the internal-external partition. First, the classification of role demands as external to the person lacks explicit rationale. For instance, compliance with role demands could be unique (hence, internally based) because of some actor's unique craving for role-associated rewards. Second, the suggestion that internal (or unique) attribution leads to the inferences of sincerity is similarly unexplained. As noted earlier, the uniqueness of an actor's statements (i.e., his deviation from consensus) could well intimate a deceptive intent on his part, rather than sincerity.

A quite simple account of the Jones et al. (1961) results is possible in terms of the present theory of endogenous attribution: Behaviors inconsistent with the job requirements are more readily attributable endogenously than behaviors consistent with the job requirements, which suggest the additional possibility of an ulterior (exogenous) purpose. Furthermore, characterization of the behavior in question as a self-report (i.e., a description of some reality about oneself) allows, in the case of endogenous attribution, identification of the speaker's specific intentions as that of describing oneself sincerely (Derivations 10 and 11).

It is of more than curious interest that the situation concocted by Jones et al. (1961) easily lends itself to the mistaken uniqueness interpretation for two incidental reasons: (a) The interviewee is making a statement about himself; in other words, endogenous aspects of the statement's content concern his unique person; and (b) the exogenous reward (getting the job) is something that appears to be of high general desirability (i.e., suggesting a nonunique and hence external attribution). Thus, within this situation endogenous attribution could be also characterized as attribution to the unique person, as "person" constitutes here an endogenous aspect of the statement's object (simply, the statement is about the person). But it is important to realize that the sin-

cerity inference follows from attribution to the person as endogenous aspect of the statement's object, not to the person of the speaker as such. Similarly, in this instance the exogenous reward (lowering the confidence in sincerity) is confounded with an implied external attribution. However, the crucial factor is that the attribution is exogenous not that it is external (or non-unique).

To recapitulate, the theoretical implication suggested by the preceding discussion is that verbal descriptive statements attributed endogenously are interpreted as sincere or truthful. To the extent that an exogenous element of the situation (e.g., a contingent reward or threat) appears to constitute the statement's end, the statement will be interpreted as less sincere. As in our discussion of acts classified as beneficial or harmful for the recipient, so in the case of reports; endogenous attribution implies more than the actor's freedom and satisfaction with the behavior (see Derivations 9 and 10). In this instance, characterization of the behavior as a report (or a description of a reality) allows one to infer the endogenous reason for such behavior, namely, one of reporting what, to the speaker, appears to be the case. It is precisely this latter assumption that may allow the interpretation of endogenously prompted statements as sincere.

*Escape behavior.* In an experiment by Bandler, Madaras, and Bem (1968), subjects in one condition were led to believe that their escape of electric shock occurred under free choice, while subjects in another condition were induced to think that their escape was mandatory. Subsequently, individuals in the first category (free choice) rated the shock as more painful than did their counterparts in the second category. Nisbett and Valins (1971) accounted for these data in terms of the internal-external division, arguing that in the choice condition, "it was expected that the subjects would interpret their escape behavior as self-produced: subjects should infer from this behavior that the shocks were indeed rather painful" (p. 2). By contrast, in the no-choice condition, escape behavior is pre-

sumed to be under external (or environmental) control (p. 3). But again the conceptual difficulties with the internal-external distinction are vivid: (a) The unclarity of the criterion for classifying the experimenter's demands (rather than, say, the shock) as external; (b) the possibility of the experimental demands providing a unique (hence, internal) motivation for a uniquely demand-sensitive actor; and (c) the lack of apparent rationale for deducing the inference of painfulness from the attribution of internality. Thus, our demand-sensitive individual could uniquely (hence, internally) escape a shock because of someone's request (unheeded by anyone else), yet no inference of pain is likely to be made in such an event.

Within the present conceptual framework, escape in the choice condition can be coordinated with the notion of endogenously motivated activity: Cessation of the shock is an end in itself. By contrast, in the no-choice condition escape is less clearly its own *raison d'être*, as there also exists the (exogenous) experimental instruction to escape. Furthermore (as Derivations 9 and 10 suggest), knowledge that the act's content was cessation of shock, allows, in the case of endogenous attribution, the inference that the underlying intention was to terminate the pain. Hence greater painfulness of shock is inferred in the choice than in the no-choice condition, where the act's intention is more difficult to identify.

#### *Conditions of Endogenous Attribution*

The foregoing discussion suggests that the endogenous-exogenous partition may mediate such significant phenomena as intrinsic motivation, subjective freedom, and the perception of intention. Thus, it is particularly important to identify the conditions in which the endogenous (or exogenous) attributions will be made. The purpose of the following sections is to adumbrate possible classes of such conditions. This analysis is anchored in Definitions 1 and 2 given earlier, whereby an endogenous attribution is made when the action is considered to be its own reason, and an exogenous attribution is made when

the reason is foreign (exogenous) to the action. The above definitions contain three distinct components: the action, its cause (or reason), and the relation (of endogeneity or exogeneity) assumed to connect the two. Correspondingly, the conditions of endogenous (exogenous) attribution are naturally classifiable into those affecting the action's perceived identity, the action's perceived causality, and the reason's perceived endogeneity to the action. In what follows, the causality category is considered first. This class of conditions may already claim some empirical support, whereas the remaining two categories (identity and endogeneity) constitute at present novel theoretical proposals intended as heuristics to further inquiry.

*The causality question.* The problem of causal assignment is a general one within the attribution process and is not unique to the endogenous-exogenous distinction. This is the problem of choosing among several causal hypotheses advanced to explain some effect. The attributor's selection of a given hypothesis may be regulated by several principles identified by Kelley (1967, 1971a), in particular the discounting principle and that of corroboration via attributional criteria. According to the discounting principle, the attributor's confidence in any causal hypothesis is inversely related to the number of hypotheses entertained. Thus, confidence in an endogenous explanation will be higher in the absence (vs. the presence) of additional, exogenous explanations of an action. Indeed, all of the findings reviewed earlier may be interpreted to illustrate the workings of the discounting principle. In the basic experimental paradigm the actor in one condition appears to have only an endogenous reason for his behavior, while in another condition he seems to have an exogenous reason as well. The recurrent finding that inferences deducible from the notion of endogenous attribution are stronger in the former (vs. the latter) case support, therefore, the discounting principle of causal assignment.

The discussion thus far pertains to variation in the number of plausible hypotheses.

By contrast, given a constant number of hypotheses, their relative validity may be assessed by reference to attributional criteria of corroborating evidence. More specifically, corroborating evidence for a given causal hypothesis could assume, for example, the forms of consensus information, consistency over occasions or consistency over modality (Kelley, 1967). Alternatively, corroboration of a given hypothesis could be achieved via the convergence of several independent indicators (see, e.g., Ajzen & Fishbein, 1975; Campbell, 1963). For example, consensus information was manipulated by Kiesler, Nisbett, and Zanna (1969) in such a way that pronouncements by a confederate regarding the reason for his behavior resulted in similar attributions by the subject. Consistency (over occasions) figured in the experiment by Kruglanski and Cohen (1973) reviewed earlier, where knowledge of the actor's past preferences implicated a given reason as a plausible explanation of his current action. Finally, the convergence of information could have been involved in the study by Nisbett and Schachter (1966). These investigators found that the judged intensity of shock-produced pain can be manipulated by providing the individual with an alternative explanation for the effect (physiological arousal) he was experiencing. As it turned out, this effect obtained only in the low-fear condition of the Nisbett and Schachter experiment and not in the high-fear condition. According to the present interpretation, the high-fear condition may represent the case where several bodily components of fear (e.g., the sinking feeling in one's stomach, the sweating of one's palms) may converge on the hypothesis that shock was responsible for the arousal; hence, attribution to shock might override possible alternative explanations manipulated by the experimenters.

To summarize, then, the present discussion of the causality problem suggests that endogenous attribution is likely to be rendered when (a) no exogenous reasons are likely to be entertained by the attributor, and (b) when there is evidence (e.g., of the consensus, consistency, or convergence kind)

that corroborates the endogenous explanation and/or falsifies exogenous explanations of the action.

*The identity question.* The problem of causality, above, has received ample attention within attribution theory. By contrast, little explicit discussion has been devoted to the problem of identity, that is, to the way an effect (to be causally explained) is conceptualized. It is presently suggested that the lay person's knowledge of the effect's identity is hypothetical in the same sense that his knowledge of causality is. In other words, an individual confronted with an event or a sequence of events is assumed to formulate hypotheses about the conceptual identity (meaning) of these phenomena. The foregoing implies that the same physical events are amenable to several disparate identifications. Pertinent to the present concern, the same action may be conceptualized in a variety of different ways, and the specific conceptualization that the attributor decides to adopt will influence the likelihood of the action being assigned endogenously or exogenously.

For example, the same sequence of behaviors might be variously interpreted to mean that the actor is (a) sweeping the floor, (b) practicing his shuffleboard game, (c) helping his mother, or (d) earning money. Obviously, when the action is conceptualized in one way an endogenous attribution thereof needs to assume a quite different purpose on the part of the actor. Thus, if the actor's behavior is conceptualized as helping his mother and its purpose as earning money, an exogenous attribution would be implied, whereas if the purpose had been also identified as helping his mother, the attribution would be endogenous. Conversely, conceptualizing the action as earning money would lead to an endogenous attribution, if the actor's end has been similarly identified, whereas if the end had been identified as helping his mother, the action would appear to be exogenously motivated.

But what may be the conditions for assigning a given identity to an action? The assumption that identity attributions are hy-

pothetical suggests the applicability of the discounting principle and of the attributional criteria discussed already in reference to the problem of causality. For instance, according to the discounting rule, the greater the number of hypotheses about an effect's (e.g., an action's) identity the lower will be the attributor's confidence in each such identity. Furthermore, a given identity hypothesis would be rendered more plausible the greater the amount of corroborative evidence in its favor. As in the case of causality, the evidence regarding identity could be assessed by reference to the criteria of consensus, consistency, or the convergence of information. In our earlier example, such criteria might more readily suggest the action's identity to be, say, sweeping the floor, than helping the actor's mother.

Earlier it has been implied that with an action's constant identity, endogeneity of attribution will vary with its perceived causality. The present discussion reverses this reasoning to suggest that with a constant causality (i.e., the action's purpose) the endogeneity of attribution will vary with this action's perceived identity. Thus, endogenous attribution will be rendered when the action is conceptualized in terms of its goal (i.e., as the attainment thereof) and exogenous attribution when it is conceptualized in terms that are foreign to its goal. Accordingly, endogenous attribution will be more likely when (a) no such foreign identity hypotheses will be entertainable and (b) corroborating evidence will imply the action's identity to be endogenous to the assumed goal.

*The endogeneity question.* The conditions of endogenous-exogenous attributions identified thus far involved modifying the attributor's conception of the action and its cause so as to vary the perceived similarity between the two. But how may one affect the likelihood of an endogenous attribution when the identities of both the action and the cause are relatively constant and refractory to change? In such a case a category of relevant conditions seems implied in the relation of endogeneity or exogeneity that may link action and goal. Specifically, the

endogeneity concept connotes the action's inherence to or inseparability from its goal. Thus, given a dissimilarly conceptualized action and goal, one could promote endogenous attribution by suggesting that the former is an integral part of the latter. For example, the young man who believes that only by dint of superior performance will he achieve the goal of rising in the company's ranks may become more endogenously motivated to his work than his counterpart who also contemplates alternative ways of attaining this objective (e.g., having good connections, marrying the boss's daughter).

#### RECAPITULATION AND CONCLUSIONS

The central thesis of this paper has been that the partition between endogenous and exogenous reasons is of considerable importance in the lay explanation of actions. A theoretical framework has been developed whereby the action's endogenous attribution implies the actor's intrinsic motivation and subjective freedom. In addition, with knowledge of the action's content, endogenous attribution has been shown to imply the action's specific intention. The present endogenous-exogenous distinction has been proposed to replace the frequent alternative partition of the actions' causes into the internal and external categories. It has been suggested that in lay assumption, actions are determined by the will, which is internal. In contrast, occurrences, which are (at least in part) independent of the will, are therefore explicable by attributes that may be internal or external.

The endogenous-exogenous and the internal-external frameworks have been compared on their degrees of conceptual coherence and empirical support in the domain of action explanation. It has been noted that the current applications of the internal-external distinction may suffer from two conceptual difficulties: (a) the problem of criterion and (b) the problem of inference. The first of these problems is that the classification of specific causes into the internal and external categories has typically lacked explicit justification, and the two criteria

that seem to underlie such categorizations (the notions of generically internal or external causes and of the uniqueness standard) need not coincide. The second problem is that the existing treatments of the internal-external distinction furnish little rationale for linking it with the various inferences with which it has been credited. Yet numerous examples may be imagined where the alleged inferences from internal versus external attributions (e.g., as interpreted in terms of the uniqueness standard) would seem a priori unlikely. By contrast, the endogenous-exogenous partition seems clear of the problems just outlined. The conceptual criterion for this distinction derives from the common differentiation between ends and means, and the inferences implied by the endogenous-exogenous partition are explicitly deducible therefrom, as shown in an earlier section of this paper.

On the empirical level, it has been noted that whenever research findings on actions have been explained by reference to the internal-external distinction, a reinterpretation was possible in terms of the endogenous-exogenous distinction. Furthermore, specific experimental comparisons yielded consistent support for the endogenous-exogenous distinction and failed to support the internal-external one.

The present article suggests several possible avenues for further research. To sample just a few:

1. Additional data seem necessary to demonstrate that internal attributions (uniqueness, self-selection, etc.) may not provide the explanatory implications with which they have been credited in the numerous areas of attributional research.

2. The broad claims connected with the endogenous-exogenous partition (of action's reasons) merit a careful empirical study. For instance, the contention that endogenous attribution is the necessary and sufficient condition of perceived freedom needs to be examined against the recently growing literature on the freedom notion. Similarly, the suggestion that inferences about irrational behaviors may be explicable by reference to the endogenous-exogenous distinction needs empirical substantiation.

3. Finally, the presently proposed conditions of endogenous versus exogenous attribution require a close investigation. It is by thorough understanding of such conditions that the theory of endogenous attribution may find its application in concrete situations of practical significance.

#### REFERENCE NOTE

1. Kruglanski, A. W. *Inferring enjoyment and freedom from an endogenous attribution of actions: A critique of the internal-external distinction*. Unpublished manuscript, University of North Carolina, Chapel Hill, 1974.

#### REFERENCES

- Ajzen, I., & Fishbein, M. A Bayesian analysis of attribution processes. *Psychological Bulletin*, 1975, 82, 261-277.
- Bandler, R. J., Madaras, G. R., & Bem, D. J. Self-observation as a source of pain perception. *Journal of Personality and Social Psychology*, 1968, 9, 205-209.
- Bem, D. J. An experimental analysis of self-persuasion. *Journal of Experimental Social Psychology*, 1965, 1, 199-218.
- Bem, D. J. Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 1967, 74, 183-200.
- Bem, D. J. Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6). New York: Academic Press, 1972.
- Campbell, D. T. Social attitudes and other acquired behavioral dispositions. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 6). New York: McGraw-Hill, 1963.
- Cooper, J., Jones, E. E., & Tuller, S. M. Attribution, dissonance and the illusion of uniqueness. *Journal of Experimental Psychology*, 1972, 8, 45-57.
- deCharms, R. *Personal causation*. New York: Academic Press, 1968.
- Deci, E. L. Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 1971, 18, 105-115.
- Deci, E. L. The effects of contingent and non-contingent rewards and controls on intrinsic motivation. *Organizational Behavior and Human Performance*, 1972, 8, 217-229. (a)
- Deci, E. L. Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology*, 1972, 22, 113-120. (b)
- Deci, E. L. *Intrinsic motivation*. New York: Plenum Press, 1974.
- Eacker, J. N. On some elementary philosophical problems of psychology. *American Psychologist*, 1972, 27, 553-566.
- Festinger, L., & Carlsmith, J. M. Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, 1959, 58, 203-210.

- Goranson, R. E., & Berkowitz, L. Reciprocity and responsibility reactions to prior help. *Journal of Personality and Social Psychology*, 1966, 3, 227-232.
- Greene, D., & Lepper, M. R. How to turn play into work. *Psychology Today*, September 1974, pp. 49-54.
- Jones, E. E., & Davis, K. E. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2). New York: Academic Press, 1965.
- Jones, E. E., Davis, K. E., & Gergen, K. J. Role playing variations and their informational value for person perception. *Journal of Abnormal and Social Psychology*, 1961, 63, 302-310.
- Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., & Weiner, B. (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, N.J.: General Learning Press, 1972.
- Kelley, H. H. Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation*. Lincoln: University of Nebraska Press, 1967.
- Kelley, H. H. *Attribution in social interaction*. Morristown, N. J.: General Learning Press, 1971. (a)
- Kelley, H. H. *Causal schemata and the attribution process*. Morristown, N.J.: General Learning Press, 1971. (b)
- Kelley, H. H. The processes of causal attribution. *American Psychologist*, 1973, 28, 107-128.
- Kiesler, C. A., Nisbett, R. E., & Zanna, M. P. On inferring one's beliefs from one's behavior. *Journal of Personality and Social Psychology*, 1969, 11, 321-327.
- Kruglanski, A. W., Alon, S., & Lewis, T. Retrospective misattribution and task enjoyment. *Journal of Experimental Social Psychology*, 1972, 8, 493-501.
- Kruglanski, A. W., & Cohen, M. Attributed freedom and personal causation. *Journal of Personality and Social Psychology*, 1973, 26, 245-250.
- Kruglanski, A. W., Friedman, I., & Zeevi, G. The effects of extrinsic incentive on some qualitative aspects of task performance. *Journal of Personality*, 1971, 39, 606-617.
- Kruglanski, A. W., Riter, A., Amitai, A., Margolin, B., Shabtai, L., & Zaksh, D. Can money enhance intrinsic motivation? A test of the content-consequence hypothesis. *Journal of Personality and Social Psychology*, 1975, 31, 744-750.
- Lepper, M. R., Greene, D., & Nisbett, R. E. Undermining children's intrinsic interest in the extrinsic rewards: A test of the overjustification hypothesis. *Journal of Personality and Social Psychology*, 1973, 28, 129-137.
- Nisbett, R. E., & Schachter, S. Cognitive manipulation of pain. *Journal of Experimental Social Psychology*, 1966, 2, 227-236.
- Nisbett, R. E., & Valins, S. *Perceiving the causes of one's own behavior*. Morristown, N.J.: General Learning Press, 1971.
- Skinner, B. F. *Verbal behavior*. New York: Appleton-Century-Crofts, 1957.
- Steiner, I. D. Perceived freedom. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 5). New York: Academic Press, 1970.
- Thibaut, J. W., & Riecken, H. W. Some determinants and consequences of the perception of social causality. *Journal of Personality*, 1955, 24, 113-133.
- Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. *Perceiving the causes of success and failure*. Morristown, N.J.: General Learning Press, 1971.

(Received April 11, 1975)

---

## Announcement

The Publications and Communications Board of the American Psychological Association announces the appointment of William K. Estes as editor of *Psychological Review* for the years 1977 to 1982.