This is to certify that the

thesis entitled

AN INCENTIVE-AROUSED SUSPICION ANALYSIS OF THE OVERJUSTIFICATION EFFECT

presented by

John Michael Sivacek

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Psychology

William D. Crano

Major professor

Date July 15, 1980

AN INCENTIVE-AROUSED SUSPICION ANALYSIS OF THE OVERJUSTIFICATION EFFECT

By

John Michael Sivacek

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

1980

G116342

ABSTRACT

AN INCENTIVE-AROUSED SUSPICION ANALYSIS OF
THE OVERJUSTIFICATION EFFECT

By

John Michael Sivacek

Rewarding people for advocating a position consistent with their attitudes can attenuate or undermine the positivity of their position (Benware & Deci, 1975). Self-perception theory (Bem, 1972) provides the popular explanation of this regularity, known as the overjustification (OSJ) effect. The theory argues that individuals infer their attitudes (and other internal states) by observing their own behavior, and its controlling variables. Thus, a person who "freely" engages in an activity concludes that he or she must find that activity rewarding, and becomes more favorable. The person paid to engage in the act, however, tends to discount internal motivations, and instead attributes the behavior to the reward.

The present research explored an alternative to the self-perception account of the OSJ effect. Whereas self-perception theory explains the effect in terms of individuals' attributions about their own behaviors, the alternative incentive-aroused suspicion (IAS) analysis emphasizes the person's attributions or expectations about the

requested behavior given that a reward has been tendered. That is, individuals may view unnecessary incentives as a cue to the possible reprehensibility (or unpopularity) of the requested behavior or attitude position. Such suspicion would motivate the actor to search for, and often find, negative aspects to the requested task.

This research tested these explanations by varying the conditions under which extrinsic rewards were provided. The incentive-aroused suspicion analysis predicted that negating the information value of the incentive would eliminate the OSJ effect. Self-perception theory did not predict such an attenuation because subjects should discount their internal motivations under large payment conditions regardless of the manner in which the money is awarded. Thus, subjects in this experiment were given either no payment, $5, or $5 from an independent source in return for recording a message calling for the decriminalization of marijuana.

As expected, the OSJ effect was replicated among subjects exposed to cogent arguments against the advocated position, i.e., paid subjects were less in favor of decriminalization than those not paid. However, when the money could not be viewed as an indication that their advocacy was unpopular or unscrupulous, no such change in attitude was observed. This pattern of outcomes is completely consistent with the IAS analysis described above. Subjects

became suspicious of the requested behavior when it was overinduced, and were thus more easily persuaded by the counterarguments. Self-perception theory, on the other hand, has difficulty explaining the absence of the OSJ effect in the incidental payment condition.

The results of this experiment provided a second basis for rejecting the self-perception model. Self-perception theory states that the OSJ effect occurs because unpaid subjects become more favorable as a function of their advocacy, whereas paid subjects remain unchanged. Consistent with the IAS analysis, however, unpaid subjects remained unchanged, while the paid subjects became less favorable toward decriminalization. Thus, the pattern of attitude change, as well as the lack of change in the "incidental" payment condition, supports the incentive-aroused suspicion analysis over the self-perception account of the OSJ effect.

To my parents, Virginia and Elmer,
for having indulged my interests in science
as a child, and for having wholeheartedly
supported my professional choice as an adult.

ACKNOWLEDGMENTS

Though for some the graduate years can be an anxiety ridden and arduous experience (and, there have been times, I must admit to those feelings myself), I have been fortunate to have the support, the good advice and the willing ears of my fellow students and teachers to translate my training into an exciting and challenging time of my life. In particular I wish to thank Bill Crano and Larry Messe' for their friendship. It was over many a "happy-hour" discussion with them that some of my best ideas evolved and I thank them for their creative and absorbing sense of the science as well as their kindness. As my major professor, I am especially grateful to you Bill. Thanks are also due to Neal Schmitt, to his class on test construction, and to his savvy psychometric advice which has helped me in the past with research concerns and will, no doubt, continue to prove invaluable in my professional years ahead. As for Eileen Thompson, her enthusiasm for the field was of major assistance during those times when the mundane aspects of the research process had definitely challenged my interest. All the above persons, named and unnamed, have contributed more to my education than they perhaps realize, and you all have my sincere gratitude.

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

Overview of the Problem

It is frequently observed that extrinsic rewards undermine one's intrinsic interest in an activity (e.g., Lepper et al., 1973; Calder & Staw, 1975; Ross, 1976). This regularity, known as the oversufficient justification (OSJ) effect, has generated a considerable amount of research given its obvious implications for the practice of rewarding desirable behaviors. The most popular explanation of this phenomenon is derived from Bem's (1965, 1972) self-perception theory. Proponents of the theory argue that individuals engaging in enjoyable behaviors discount their internal motivations if plausible external causes (e.g., rewards, coercion) are present.

While this account of the OSJ effect is well supported, a strong case can be made against self-perception theory's account of the phenomenon. For example, the theory assumes that individuals cannot discriminate between their internal states much better than outside observers; that is, in determining their degree of hunger, pain, attitude, and other internal states they are thought to view their own behavior in the same manner as would dispassionate observers. The position taken here is that both parts of

this proposition are contrary to everyday experience, as well as to much of psychology's empirical findings. Yet, self-perception theory currently is applied to a wide range of phenomena. The present research therefore examined an alternative account of the theory's strongest evidence, the OSJ effect, and in so doing attempted to illuminate the theory's inefficiency.

The oversufficient justification effect provides an excellent vehicle to determine the tenability of self-perception theory for several reasons. First, the theory makes clear predictions regarding the impact of various inducements and reward contingencies on individuals' attitudes. Indeed, the theory and the effect are almost synonymous; i.e., a description of the OSJ effect is implied in Bem's statement of the theory. Secondly, the OSJ phenomenon provides the most unambiguous evidence for self-perception theory, since the usual rival explanation of its effects, i.e., dissonance theory, do not apply (Nisbett & Valins, 1971).

Both dissonance and self-perception theories can be applied to the <u>insufficient</u> justification (ISJ) effect. Persons who engage in counterattitudinal behaviors without sufficient external justification generally become more favorable toward the position implied by their behavior than do those whose behavior is justified by external constraints. Whereas self-perception theory explains this

regularity by applying Kelley's (1971) principle of discounting to one's own behavior, dissonance theory argues that individuals become uncomfortable when they "freely" engage in counterattitudinal behaviors. These individuals presumably reduce this tension by changing their attitudes so that they are more consistent with their actions. Since the OSJ effect occurs under conditions of proattitudinal rather than counterattitudinal behavior, dissonance theory cannot account for this phenomenon. The OSJ effect thus provides the soundest empirical evidence for self-perception theory. (It should be noted, however, that the self-perception interpretations of the OSJ and ISJ effects are exactly the same--the theory fails to distinguish between pro- and counterattitudinal behavior because attitudes are said to follow from behavior.)

The OSJ effect has also drawn attention to self-perception theory because of the high level of interest in the OSJ effect, the wide range of situations in which the effect can, at least in principle, occur, and the relative superiority of self-perception theory as an explanation of the effect. Thus, a persuasive alternative to the self-perception account of the effect would restrict the range of situations to which the theory could be applied, and thereby call into question the utility of Bem's model.

The position developed here argues that large inducements for proattitudinal behavior can prompt an

individual to reevaluate, and generally to moderate, his or her position. That is, unnecessary incentives may be viewed as a cue to the reprehensibility (or unpopularity) of the requested behavior or attitude position. This suspicion could motivate the individual to search for, and often find, negative aspects of the requested task or attitude position. If this reasoning is correct, then removing the cue value of extrinsic rewards (e.g., by having them emanate from an independent source) should eliminate the OSJ effect. Self-perception theory would not make such a prediction, because the individual who has agreed to perform the requested behavior in order to obtain the reward should discount his intrinsic motivation no matter what the medium through which the payment is delivered.

A Brief Critique of Self-Perception Theory

Self-perception theory is concerned with the manner in which we come to know our inner states. Bem (1965, 1972) proposed that individuals do not have direct knowledge of their internal states and must therefore infer them from their overt behaviors and the conditions under which these behaviors occur. Thus, one's behavior is said to determine his or her attitude, rather than vice versa.

Self-perception theory has been well received by cognitive social psychologists. Its wide acceptance is due, in part, to the ease with which it can be applied to some of the field's major phenomena, e.g., the forced

compliance, OSJ, and foot-in-the-door paradigms. While the theory's simplicity and apparent utility are appealing (self-perception is merely applying Kelley's (1971) attributional principle of discounting to oneself), its underlying principles are highly questionable. For example, Bem argues that we greatly overestimate our ability to monitor our internal states directly, and thus we gain self-knowledge almost solely from studying our own behavior as dispassionate observers. However, neither of these propositions are well supported by studies designed to test them. The postulated isomorphism between self- and interpersonal perception is refuted by a plethora of experimental evidence--see Jones and Nisbett's (1971) thesis on the divergent perspectives of the actor and observer for an excellent review. Similarly, the tenet that individuals are objective observers of their behavior seems unlikely, and is unsubstantiated by several research paradigms (e.g., Bramel, 1962; Glass, 1964; Regan, Straus, & Fazio, 1974). Bradley's (1978) review of the empirical evidence related to the notion of self-serving biases in causal attributions also presents a large body of evidence that seems to refute the objective self-observer thesis.

The studies that Bradley summarizes indicate that individuals frequently make self-serving, or defensive, attributions. For example, there is a strong tendency for individuals to attribute their successes internally, i.e.,

to themselves, and to view their failures as due to external circumstances. Thus, there is a reason to believe that people do not view their own behavior as dispassionate observers as frequently as self-perception theory could suggest.

The general utility of self-perception theory is questionable given its vague position on individuals' experience of their internal states. Although Bem (1972) concedes that private stimuli play a role in self-awareness, the theory fails to specify how much a role such stimuli play, thus making the theory difficult to falsify. Bem (1965, 1967) initially posited a strict isomorphism between self- and interpersonal perception (suggesting that private stimuli exert little or no influence on self-awareness). As such, the theory was testable: any evidence that the processes of self-attribution and interpersonal attribution differed called the theory into question. In contrast, Bem's (1972) most current position is that individuals infer their inner states from observations of their own behavior to the extent that their internal cues are weak, ambiguous, or uninterpretable. This qualification appears to be a reasonable limitation of the theory's domain. For example, if one knows what his attitude is, then there is no reason to estimate it via self-perception. The problem, however, is that any failure to obtain a predicted self-perception effect can be attributed to unexpectedly strong internal

cues. Bem is also inconsistent in applying this limitation. Bem and McConnell (1971) argue that the self-perception process occurs even when one's attitude is clearly held. They claim this is true because each new behavior "updates" the individual's attitude in such a manner that he neither perceives the attitude change, nor recalls his initial position. In summary, it is left to the individual reader to decide the theory's position on the role internal stimuli play in self-awareness.

Shelley Taylor (1975) has questioned the utility of self-perception theory from a different perspective. She argues that "people form attitudes and make decisions via more sophisticated processes than those outlined by Bem (1972) in all but the most unimportant and inconsequential circumstances." Subjects in Taylor's experiment were provided with false physiological feedback (cf. Valins, 1966) regarding their attitudes. Half of the subjects were led to believe they would have to act upon their attitudes, and the other half were not. Only those subjects who did not expect to act upon their attitudes allowed themselves to be influenced by their "autonomic" behavior. These results suggest that individuals carefully evaluate their alternatives when they must act upon their opinions. Thus, people may base their opinions on behavior only when (1) the issue is not important enough to warrant

careful evaluation, and (2) the opinion has little or no implication for subsequent behavior.

Perhaps the most general empirical argument against self-perception theory can be based upon studies examining the causal relationship between attitudes and behavior. Whereas most investigators assume that attitudes influence behavior, self-perception asserts that the preponderant relationship is one in which behaviors tend to cause attitudes. Kahle and Berman (1979) recently explored this controversy by computing cross-lagged panel correlations between attitudes and behavior for four issues. For all four issues, attitudes showed causal prominance over behaviors. Kahle and Berman interpret these results as being consistent with McGuire's (1979) position (that attitudes generally lead to behavior), but contrary to self-perception theory. This finding has also been replicated by Kahle, Klingel, and Kulka (1980). These investigators observed cross-lagged panel correlation differences indicating that interpersonally outgoing attitudes of high school students tend to predominate over validated self-report behavior. These studies thus cast doubt on the self-perception postulate that behaviors generally determine attitudes.

Probably the most compelling feature of self-perception theory is its ability to account for a wide range of phenomena in a parsimonious manner. Since attitudes are said to result from behavior, the theory offers

identical explanations for research in which subjects are provided with insufficient, sufficient, and oversufficient justification for their actions. Although the research to be proposed is focused principally on an examination of the oversufficient justification (OSJ) effect, a brief discussion of the other two cases is desirable for two reasons. First, our incentive-cue analysis of Bem's (1965, 1967) research on the insufficient justification (ISJ) effect is similar to the one to be developed for the OSJ effect. Secondly, our analyses of Bem's interpersonal simulations of ISJ experiments and the foot-in-the-door phenomenon further illustrate the logical frailty of the self-perception model.

Self-perception theory (Bem, 1965, 1967) was introduced as an alternative explanation of the ISJ effect made popular by cognitive dissonance theorists. Regularly, dissonance researchers found individuals became more favorable toward an originally counterattitudinal position the less they were paid to endorse that position. For example, Festinger and Carlsmith (1959) offered subjects either $1 or $20 to advocate another's participation in a series of dull laboratory tasks. Subjects paid only $1 to lie to the ostensive next subject later rated the tasks more favorably than those paid $20. The dissonance interpretation holds that attitudinally inconsistent behavior creates a state of tension in the actor unless the behavior can be

justified on the basis of external conditions. To offset this discomfort in the absence of external contingencies, attitude change occurs.

Self-perception theory, on the other hand, proposes no aversive motivational state to account for ISJ effects. This theory argues that subjects in dissonance experiments view themselves as communicators who are either credible or not credible depending on the variables controlling their advocacy. Thus, subjects who were paid $1 to endorse a counterattitudinal position believed their statements, whereas subjects paid $20 could not determine whether they should believe what they said: they may have endorsed the tasks, that is, to obtain the $20.

Bem (1965, 1967) has supported the self-perception interpretation of ISJ effects by demonstrating that observers who are provided with descriptions of dissonance experiments attribute a more favorable attitude to the hypothetical subject who is paid less. Dissonance theory would not predict this outcome because observers do not, presumably, experience dissonance.

Sivacek and Crano (1977) postulated that observer-subjects in these demonstrations viewed the size of the incentive as an indication of the relative degree of unpleasantness or reprehensibility associated with the requested behavior. For example, observer-subjects might believe that the subject offered $20 in Festinger and

Carlsmith's (1959) experiment is being asked to perform a questionable behavior; an offer of $1, on the other hand, could carry with it the implication that the request made of the subject was reasonable. This "incentive-aroused suspicion" analysis suggests that negating the information value of the incentive will attenuate the ISJ effect. Sivacek and Crano (1977) accomplished this negation by having the actor's payment determined by chance (i.e., a random drawing), prior to his agreeing to cooperate. As predicted, observer-subjects attributed a more favorable attitude to the subject paid $1 in the simulated Festinger-Carlsmith experiment, thus replicating Bem's (1967) study. However, observers did not perceive any difference in attitude between the $1 and $20 subjects when the money awarded was determined by chance. Self-perception theory would not predict such an attenuation of the effect in the chance payment conditions because the amount of money one accepts to perform a behavior is said to determine that behavior's credibility regardless of how that amount is determined. It is critical to note that in Sivacek and Crano's study, the hypothetical actor agreed to the request <u>after</u> learning the payment magnitude.

The results of two additional experiments supported Sivacek and Crano's analysis over the self-perception interpretation of these observer-subject studies. Given that such demonstrations constitute the primary support for the

self-perception interpretation of ISJ effects, our analyses casts doubt on the plausibility of the self-perception position.

Self-perception theory also provides the most popular account of the well known foot-in-the-door (FITD) effect. Bem (1972) cites this phenomenon as evidence that the self-perception process is not limited to an individual's attributions of his transitory states or attitudes, but rather that his long-standing attributions about himself may be changed by manipulating his behavior and its controlling variables. The (FITD) technique is both simple to apply and effective in a wide range of situations. All that one need do is persuade an individual to perform a trivial favor on his or her behalf. Once this has been accomplished, the individual is more likely to comply subsequently with a larger, more substantial request than an individual who was not approached initially. The self-perception interpretation claims that after having agreed to the initial request, the individual comes to view himself as the kind of person who agrees to such requests.

It is, however, difficult to believe that a long lasting change in one's self-concept (of such magnitude so as to affect later behavior) would result from performing such pedestrian behaviors as answering a few brief survey questions over the telephone. The self-perception of dispositional properties even seems less likely in cases of

negative, socially undesirable behaviors. For example, Snyder and Cunningham (1975) found marginal support for the self-perception prediction that subjects who initially refuse an unreasonably large request will be less compliant to subsequent requests than untreated controls. However, under such stark conditions, it seems more probable that subjects would (correctly) conclude that very few people would acquiesce to such a request, rather than that they are, by nature, unhelpful.

Crano and Sivacek (1979) have provided an alternative account of the FITD phenomenon based on the principles of social reinforcement. This position argues that the outcome of the subjects' initial compliance, rather than the conditions under which their initial compliance is secured, is critical to producing increased acquiescence to the second request. In Study 1, subjects initially took part in a brief interview regarding their behavior as consumers. Since subjects in both the positive and negative outcome conditions performed identical actions, voluntarily, they would be expected by self-perception theory to respond identically and positively to the second request. The social reinforcement prediction, on the other hand, was that only those leaving the initial request situation in a positive affective state would be likely to acquiesce to the second request. Consistent with the social reinforcement position, only those subjects who were reinforced

(i.e., thanked) for their initial assistance proved more compliant to the later request than controls.

In Crano and Sivacek's (1979) second study the approach was to vary the degree of positive affect associated with the initial act of compliance. Under these conditions social reinforcement reasoning would predict acquiescence with the second request to be directly related to the level of reinforcement provided following the first contact. The self-perception prediction in this circumstance is not as obvious given the theory's vague position on the experience of internal states. Since both the mildly and extensively reinforced groups performed identical initial behaviors, they would be expected to generate the same altruistic self-inferences. On the other hand, different internal states might be induced by variations in the reinforcement levels accompanying the initial behavior, and thus overshadow the self-perception process to produce differences between the groups. Of course, this assumes that people are relatively sensitive to minor variations in internal states, a presumption that would severely restrict the range of situations to which self-perception theory could be applied.

An alternate reading of self-perception theory suggests another possible outcome. The extensively reinforced subjects received some reinforcement concurrent to their participation in the initial interview. If this

reinforcement was part of the surrounding conditions of subjects' behavior, available for all to see, then the theory might predict the extensively reinforced subjects to be less acquiescent to the second request than those mildly reinforced. (Recall the self-perception postulate that the greater the reward one is offered to perform a behavior, the less likely one is to conclude that the behavior reflects his or her true disposition.)

Contrary to either of the self-perception possibilities, the results of the second experiment found extensively reinforced subjects more susceptible to a later request than mildly reinforced participants, who in turn were more acquiescent than untreated control subjects. The results of both studies provide strong support for the social reinforcement interpretation of the FITD effect over the self-perception model. It also should be noted that the social reinforcement explanation is more parsimonious in that it does not require an alteration of subjects' self-concepts to account for their subsequent behavior.

In summary, self-perception theory's appeal as an explanatory device for many psychological phenomena is diminished by the diverse evidence contrary to its underlying principles as well as our own research on two of the theory's major phenomena. However, the best empirical evidence for the theory--the OSJ effect--has received strong

support from numerous studies designed to test the self-perception explanation. If the theory actually is as untenable as the preceding review suggests, then a reconsideration of the OSJ effect is in order.

The Oversufficient Justification Effect

Several investigators (e.g., Lepper et al., 1973; Calder & Staw, 1975; Ross, 1976) have observed that extrinsic rewards can undermine one's intrinsic interest in an activity. The self-perception explanation of this effect holds that individuals gauge their attitude toward an activity by observing their own behavior and the conditions under which it occurs. Thus, a person who observes him- or herself "freely" engaging in an activity concludes that he or she must enjoy it, else why would the action be performed? The person who is paid or coerced into the activity, however, discounts internal motivations, and attributes his or her behavior to external factors.

Although self-perception theory provides the most popular account of the OSJ effect, other explanations have been proffered. For example, Reiss and Sushinsky (1975) have suggested that the anticipation of reward distracts subjects from the ongoing activity and thereby decreases their enjoyment of it. Competing response and delay of gratification explanations, however, seem appropriate only for studies involving children. Furthermore, recent research by self-perception advocates has disconfirmed

these rival hypotheses (e.g., Ross, 1975; Ross, Karnoil, & Rothstein, 1975). The self-perception thesis also has received support from studies which show that other potential discounting cues such as surveillance (Lepper & Greene, 1975), deadlines (Amabile, DeJong, & Lepper, 1976), and coercion (Swann & Pittman, 1977) produce the OSJ effect.

An Incentive-Aroused Suspicion Analysis of the OSJ Effect

Although self-perception theory provides the principal explanation for the OSJ effect, a strict reading of the theory requires that unrewarded subjects become more favorable toward the activity while rewarded subjects remain constant or neutral in their opinions. The reverse pattern is actually observed in the research literature, i.e., unrewarded subjects remain constant and rewarded subjects evidence a decline in interest. These results can be explained in terms of the incentive-aroused suspicion analysis that was applied to Bem's observer-subject studies of the ISJ effect. Subjects may view an "unnecessary" incentive as an indication that the favored or reasonable activity does have its negative aspects. Of course, such a devaluation of the activity should occur only when the subject can confirm his suspicion by "discovering" the negative aspects of the activity.

This reasoning seems particularly compelling given Abelson and Schank's work on social scripts (Abelson, 1976,

1978; Schank & Abelson, 1977). These authors argue that individuals develop certain expectations concerning apparent regularities in their social environments, and thus anticipate standard event sequences in the presence of particular situational cues. Thus, the OSJ effect might result from a commonly held script: "When someone offers me an extrinsic reward for doing something, that something is probably difficult, boring, or unpleasant." (This general script may have its foundation in many ubiquitous childhood experiences, e.g., "when mom says I can't have dessert until I finish what's on my plate, what's on my plate usually tastes awful.")

At first glance, the incentive-aroused suspicion (IAS) analysis may seem less appealing than the more prosaic self-perception model because of its greater complexity. The reader will note, however, that people have been found to be responsive to very subtle cues as evidenced by the well known placebo and expectancy effects (see Rosenthal, 1967; Rosenthal & Rosnow, 1969; and Jones, 1977 for reviews). Also it is difficult to accept the self-perception explanation if one concedes that subjects do have initial (favorable) attitudes toward the activity in question. That is, subjects should not necessarily become less favorable toward an activity they enjoy simply because they are paid for it in one instance. Put another way, if you know what your attitude is, then there is no reason to apply the

discounting principle to your behavior. (Of course, Bem argues that self-perception occurs because we are unsure of our attitudes.) The IAS analysis, on the other hand, suggests that unnecessary inducements can, in some instances, prompt one to reconsider the tenability of his or her position. Notice that this analysis also can be applied to OSJ studies in which other "external constraints" (e.g., surveillance, coercion, etc.) have produced a decline in intrinsic interest. This is significant because other rival explanations of the OSJ effect are limited to rewards and positive inducements, and cannot account for these other external constraints.

Scott and Yalch's (1978) recent test of the self-perception explanation of OSJ effects provides support for the IAS analysis. Since rewards occasionally enhance one's intrinsic interest in situations of OSJ, Scott and Yalch's experiment was designed to show that "rewards undermine or enhance intrinsic interest in a task to the extent that individuals interpret their behavior as being motivated by the reward." These authors applied Nisbett and Valins (1971) revision of self-perception theory to account for the occasional enhancement effects of rewards. Nisbett and Valins (1971) argue that extrinsic constraints lead individuals to hypothesize that their behavior is externally motivated; however, self-perception effects will occur only when they can confirm this hypothesis through further

inspection of relevant stimuli. Scott and Yalch (1978) thus reasoned that subjects would attribute their behavior to the reward and discount internal motivations when they had the opportunity to examine the activity closely prior to evaluating it. They further reasoned that subjects denied the opportunity to inspect the stimulus object (activity) would exhibit an enhanced interest in it as a result of the reward's secondary reinforcing properties. Subjects in their "marketing" research were offered a cash bonus, or no bonus, to choose to taste test a new soft drink. Half of these subjects were then allowed to inspect the beverage prior to tasting it. All subjects then tasted either a good, neutral, or bad tasting beverage and evaluated it. As expected, rewarded subjects who were allowed to visually inspect the beverage rated it less favorably than did comparable unrewarded subjects. This OSJ effect only occurred after subjects tasted the neutral and bad tasting beverages. Although these results were predicted, it is not clear how being able to inspect the beverage allowed subjects to conclude that the cash bonus motivated their choice. That is, the opportunity to examine the product presumably confirmed their personal hypotheses that their behavior was externally motivated. Unfortunately, this "confirmation" is difficult to imagine in this context, and Scott and Yalch do not describe the subjects' presumed cognitions.

The IAS analysis provides a plausible account of Scott and Yalch's data. Recall that rewards only undermined subjects' evaluations after they tasted the beverage, and then only when it had a neutral or bad flavor. These results suggest the following interpretation: subjects who are paid to perform a brief and perfectly reasonable behavior become mildly suspicious because such behaviors are seldom rewarded. When these subjects can confirm that the activity is not as pleasurable as they anticipated the "purpose" of the incentive becomes clear to them and has a negative impact on their evaluations. The IAS analysis also can account for the perplexing finding that the OSJ effect only occurred when subjects had an opportunity to look at the beverage. Perhaps this "examination opportunity" provided subjects with enough time to complete the cognitive work proposed by the present suspicion/reevaluation framework.

Kiesler and Sakumura's (1966) research provides further support for the incentive aroused suspicion analysis. Subjects in their study were paid either $1 or $5 to make proattitudinal statements. Half of the subjects in each payment condition then received a countercommunication arguing against their beliefs. The amount of payment had no impact on the attitudes of subjects in the no-countercommunication conditions. However, subjects paid $5 were more persuaded by the countercommunication than

were subjects paid $1. The IAS analysis suggests that a large incentive for belief-consistent behavior prompts one to reconsider the tenability of his or her position, and the presence of a countercommunication further encourages such a reevaluation by presenting the other side of the issue.

Benware and Deci (1975) also found that large incentives for espousing an attitudinally consistent position has a negative impact on one's attitude. Subjects in their study received either $7.50 or no pay for reading a proattitudinal communication five times in order to persuade others of the position. Paid subjects evidenced greater attitude change, relative to unpaid subjects, away from the espoused position. Notice that the IAS analysis is particularly applicable to this study. Subjects were given a large inducement in a situation where none was necessary or expected. Furthermore, subjects read the communication five times, thereby affording them the opportunity to reevaluate their position, and reconsider the merits of the opposing position. Although Benware and Deci view their results as supporting the self-perception analysis, their commentary hints at the present interpretation: "Since money is so widely used to get people to do things they would not otherwise do, a person who sees himself being paid might readily assume that he would not do it if he were not being paid." The IAS analysis differs in

that the "sees himself being paid" element is not crucial, but rather suspicion and reevaluation are emphasized: since money is used to get people to do things they would not otherwise do, a person who is paid might question the legitimacy of the requested behavior, or the tenability of her position. Thus, she might reconsider the other point of view and moderate her position.

Proposed Research

The IAS and self-perception explanations of the OSJ effect can be tested by varying the manner in which extrinsic rewards are assigned. If the former analysis is correct, then negating the information value of the incentive (e.g., by having it emanate from a source "independent" of the one with which the experimenter is associated), should eliminate the OSJ effect. Self-perception theory would not predict such an attenuation because subjects should discount their internal motivations in the payment conditions regardless of how the money is awarded.

Procedurally, the present experiment is a hybrid of the Kiesler and Sakumura (1966) and Benware and Deci (1975) studies. Subjects read proattitudinal communications into a tape recorder under the pretext that their statements would be used as stimulus material for a persuasion experiment involving high school students. Half of these subjects were asked to read and comment on a countercommunication, the others were not. The

countercommunication was intended to help confirm any suspicions or doubts raised by the payment.) Subjects also were assigned to one of three conditions of payment. That is, one-third of the subjects were not offered any inducement for recording statements, while another third of the sample was simply offered $5.00 in return for their brief services. A third payment condition provided the critical test of the IAS and self-perception explanations: Subjects in this group received the $5 inducement, but in such a manner as to preclude their viewing it as a cue that the requested behavior was questionable or reprehensible. Subjects in this group believed the inducement was provided by an independent researcher who preferred awarding money to his colleague's subjects to completing the paper work required to return the money to his granting agency. Self-perception theory predicts the OSJ effect to occur in this third payment condition because subjects agreed to the behavior in order to obtain the inducement. The IAS analysis, however, predicts no change in attitude among subjects in this condition since the inducement cannot be viewed as an indication that the requested behavior is unpopular or distasteful.

Hypotheses

1. The OSJ effect will be observed in the countercommunication conditions. That is, subjects in the standard payment group will evidence a more negative

attitude toward the target issue than unpaid subjects. No prediction is made for the no countercommunication conditions because previous research has obtained both OSJ and reinforcement effects (cf. Scott & Yalch, 1978).

2. Subjects who are led to believe that the payment originates from an independent source will evidence no decline in attitude, i.e., they will be comparable to unpaid subjects.
3. Subjects who are paid in the standard manner and are exposed to the countercommunication will be less favorable toward the target issue at the posttest than they were at the pretest. However, the attitudes of unpaid subjects (as well as those in the "independent source" groups) will not change from pretest to posttest.

METHOD

Subjects

One hundred and three male and female undergraduates were recruited from introductory psychology courses to complete the pretest questionnaire. Based on their responses to this questionnaire, 31 males and 32 females were recontacted to participate in the experiment. All subjects received extra course credit for their participation in one or both sessions. In addition, subjects in four of the payment conditions received $5.

Pretest Questionnaire

The pretest questionnaire was designed to serve two functions. First, it was necessary to select a controversial issue toward which most subjects were moderately favorable. The six issues that were considered were marijuana decriminalization, abortion, nuclear power, reinstating the military draft, lowering Michigan's drinking age, and the equal rights amendment. Second, subjects' responses for the issue selected served as an estimate of their initial attitudes (to be compared with their attitudes at the end of the experiment).

Based upon the distribution of subjects' attitude scores on these six issues, marijuana decriminalization was chosen as the issue for the present research. At the time of the pretest, all 63 subjects selected for the experiment indicated a moderately favorable attitude toward decriminalizing marijuana, i.e., on a scale of 6 to 42, these subjects' scores ranged between 24 and 38 (higher scores indicate a more favorable attitude toward decriminalization).

Design

The six group experimental design is a 2 x 3 factorial. The first factor, Payment, has three levels (no payment, $5 standard payment, $5 incidental payment). The second, two level factor, is Countercommunication (present, absent). In addition to these two experimentally manipulated factors, Sex of Subject also was considered a factor in the analyses, and equal numbers of male and female subjects were assigned to each of the six treatment conditions.

Procedure

Subjects who indicated a moderately favorable attitude toward decriminalization were telephoned and offered extra course credit to participate in a "study of the formation and structure of attitudes regarding the military draft." Those who agreed to participate were randomly assigned to one of the six treatment conditions (described

below) prior to their arrival. All subjects were studied individually.

When a subject arrived at the laboratory he or she was told that the video equipment used to display the persuasive communication had just broken down, so the experiment could not be conducted as planned. The experimenter then signed the subject's card for having kept the appointment and, as the subject rose to leave, asked whether he or she would be willing to help him prepare a stimulus tape for another experiment on persuasion that he was planning to conduct. Only three (of 63) persons asked refused the experimenter's request.

No Payment Condition.--Subjects in this condition were asked to read a prepared statement into a tape recorder. The experimenter told subjects that this (pro marijuana decriminalization) message would be heard by junior high school students during an experiment on communication and persuasion. Furthermore, the experimenter asked each subject to read the statement (see Appendix A) to him or herself a couple of times before making two recordings of it. (To increase this situation's credibility, subjects were told that two recordings were necessary so that the experimenter could choose the better of the two for his research.)

$5 Standard Payment Condition.--Subjects in this condition were offered $5 to record the pro-decriminalization

statement, and were paid (and signed a payment voucher) prior to making the recordings. Since these recording sessions only lasted 10-15 minutes, this situation was clearly one of oversufficient justification. In all other respects these subjects received the same information, and participated in the same activity as did subjects in the no payment condition.

$5 Incidental Payment Condition.--After the experimenter informed subjects that the planned experiment could not be conducted and signed their cards, a "colleague" of the experimenter knocked at the door and asked him to step out into the hall for a moment. These subjects overheard this individual explain that his survey research was now completed, but that he had $15 left over from the fund he was using to pay interviewees. He also said that it was less bother for him to award this money than to return it to the granting agency. Thus, he asked the experimenter if he would award $5 to three of his research participants or assistants and ask these persons to sign his payment voucher. The experimenter agreed, and returned to the subject and offered him or her $5 on the condition that she/he record the proattitudinal statement. Except for overhearing the brief encounter between the two researchers, subjects in this condition received the same information and performed the same activities as did subjects in the other payment conditions.

Countercommunication Conditions.--After having made the recordings, half of the subjects in each of the three payment conditions described above were asked to read and comment on the "stimulus material" that would be used to present the opposing point of view. The experimenter indicated that he was concerned whether the pro and con statements were of approximately equal persuasiveness (thus the rationale for having these subjects read the anti-decriminalization statement). These counterarguments stressed the various health hazards, the potential for abuse, and impairment of learning among younger people as reasons for not decriminalizing marijuana (see Appendix B). Subjects in the no countercommunication condition simply advanced to the posttest phase of the experiment.

Posttest of Attitudes

The last thing subjects in each of the six treatment conditions were asked to do was indicate their current attitudes toward the decriminalization of marijuana. In a casual manner the experimenter explained that this information was necessary for control purposes because "the communicator's actual opinion is known to have an impact on his or her persuasiveness, and must therefore be taken into account in this type of research." Following this final attitude assessment, subjects were informed of the actual purposes of the research and thanked for their participation.

RESULTS

Dependent Measure

The dependent measure for this experiment was computed by summing subjects' responses to the six Likert items comprising the "attitudes toward the decriminalization of marijuana" subscale of the pretest questionnaire and the posttest (see Appendix C). Since seven-point scales were used, the possible range of scale scores was 6 to 42. Based on the entire pretest sample (n = 103), the mean and variance of the scale is 24.37 and 56.04 respectively. The reliability coefficient (Cronbach's alpha) for this six-item scale is .74. For a scale of this length, a value of this magnitude indicates that the scale is measuring a single dimension.

Analysis of Scale Scores

A four way ANOVA was performed to assess the effects of Sex of Subject, Payment, Countercommunication, and Time of Measurement variables on subjects' attitudes toward the decriminalization of marijuana. (Time of Measurement was a repeated measures factor in this analysis.) The Payment x Countercommunication x Time of Measurement interaction was the only significant effect in this analysis, $F(2,48) =$

5.605, $p = .006$. This interaction was decomposed to reveal two significant two-way interactions. First, among subjects who were exposed to the countercommunication, the Payment x Time of Measurement interaction was significant, $F(2,27) = 3.412$, $p < .05$. Simple effects analyses of this interaction indicated that the three payment groups did not differ prior to the experiment, but that they did differ at the posttest and in the expected fashion. Consistent with previous research, subjects in the standard payment condition were less favorable toward decriminalization than those in the no payment group at the final attitude assessment ($M = 25.4, 28.6$, respectively, $t(18) = 1.99$, $p < .05$). This outcome constitutes a replication of the usual OSJ effect. As expected by the IAS analysis, but not by self-perception theory, however, subjects in the incidental payment group were no less favorable toward decriminalization than those in the no payment group ($M = 29.4, 28.6$, respectively, $t(18) = .50$). Furthermore, subjects in the standard payment group were significantly less favorable toward decriminalizing marijuana than were those in the incidental payment group ($M = 25.4, 29.4$, respectively, $t(18) = 2.48$, $p < .05$). This finding also is consistent with the IAS position that the no payment and incidental payment groups are psychologically equivalent.

An analysis of changes in subjects' attitudes from pretest to posttest also supports the IAS model over the

Table 1

Analysis of Variance Summary Table for the Dependent Measure

Source	Error Term	df	Mean Squares	F Ratio	p
C	S	1	.075	.002	.962
P	S	2	.400	.012	.988
X	S	1	8.010	.244	.623
CP	S	2	45.300	1.381	.261
CX	S	1	25.208	.768	.385
PX	S	2	39.433	1.202	.309
CPX	S	2	27.233	.803	.442
S	NONE	48	32.804		
T	ST	1	1.408	.206	.652
CT	ST	1	7.008	1.027	.316
PT	ST	2	4.633	.679	.512
XT	ST	1	12.675	1.858	.179
CPT	ST	2	38.233	5.605	.006
CXT	ST	1	1.408	.206	.652
PXT	ST	2	6.400	.938	.398
CPXT	ST	2	19.033	2.790	.071
ST	NONE	48	6.821		
TOTAL		119			

C: Communication
P: Payment
X: Sex of Subject
T: Time of Measurement

Table 2

Mean Attitudes of Subjects in Each of the Experimental Conditions

Communication Condition	Payment Condition	Time of Attitude Assessment	
		Pretest	Posttest
No Countercommunication	No Payment	28.6	27.0
	$5 Standard Payment	28.4	30.3
	$5 Incidental Payment	26.9	27.4
Countercommunication	No Payment	27.9	28.6
	$5 Standard Payment	28.8	25.4
	$5 Incidental Payment	28.8	29.4

self-perception explanation of the OSJ effect. Recall that self-perception theory suggests that those who "freely" endorse a position should become more favorable toward that position given that they now have behavioral evidence of their (favorable) attitude. Those who are paid for their advocacy, on the other hand, are said to be uncertain of their motivations, and thus should remain unchanged. The IAS analysis predicts the opposite pattern of results to occur. Subjects who are <u>not</u> paid should not change their position. However, those who have reason to be suspicious of the requested behavior (the standard payment group) should become less favorable. Consistent with IAS expectations, subjects in the $5 standard payment condition evidenced a decline in attitude ($M = 28.8, 25.4$, pretest to posttest, $t(9) = 2.69$, $p = .002$). But subjects in the no payment group remained unchanged ($M = 27.9, 28.6$, pretest to posttest, $t(9) = .55$), as did those in the incidental payment condition ($M = 28.8, 29.4$, pretest to posttest, $t(9) = .47$).[1] Thus, the pattern of attitude change within these payment conditions provides additional support for the IAS account of the OSJ effect.

As mentioned earlier, the decomposition of the Payment x Communication x Time of Measurement interaction yielded a second two-way interaction. Among subjects in the $5 standard payment condition, the Countercommunication x Time of Measurement interaction was significant, $F(1,18) =$

16.93, $p < .001$. As anticipated on the basis of the IAS reasoning, subjects in the standard payment group who were exposed to the countercommunication were less favorable toward decriminalization than were subjects not so exposed ($M = 25.4$, 30.3, respectively, $t(18) = 3.38$, $p < .01$). (Notice that the mean attitudes of these groups were almost identical at the pretest.) Also notice once again that these results fit the IAS analysis in that subjects exposed to the countercommunication became less favorable from pretest to posttest (see Table 2).

Simple effects analyses of this interaction also revealed a slight reinforcement effect. That is, subjects in the standard payment group who did not see the counterarguments became somewhat more favorable from pretest to posttest ($M = 28.4$, 30.3, respectively, $t(9) = 2.09$, $p < .10$). This outcome is not surprising because previous studies have found that rewards sometimes enhance, diminish, or have no impact on attitudes toward initially favored behaviors.[2] Indeed, Scott and Yalch (1978) argue that certain conditions produce the OSJ effect (via self-perception), whereas others make a simple reinforcement effect more likely. The IAS interpretation suggests that the OSJ effect is most likely to occur when the individual is suspicious of the requested behavior (e.g., overpaid for it), can see negative aspects of his or her initial position, and does not hold that position too rigidly to preclude

change. Thus, in the present experimental setting it appears that both the overcompensation and plausible counterarguments were necessary to prompt subjects to reevaluate and moderate their positions. This suggests that subjects in those studies which obtained OSJ effects without providing counterarguments probably produced their own arguments upon becoming suspicious. This seems plausible because subjects in these experiments generally engaged in the requested behaviors long enough to think about them thoroughly. In the present experiment, however, subjects' participation was limited to only ten minutes. This may be too short a time to complete the cognitive work necessary for the OSJ effect to occur. Thus, if subjects are not exposed to counterarguments, or given enough time to consider the "meaning" of the payment, then their positive affect (from being paid) may generalize in a manner so as to produce a slight reinforcement effect. If this reasoning is correct, then even standard payment subjects who did not see the countercommunication might have evidenced a decline in attitude had they been given more time to consider the situation.

DISCUSSION

This research was undertaken to examine an alternative to the self-perception account of the oversufficient justification phenomenon. The empirical research reviewed in the introduction provides several good reasons for questioning, perhaps abandoning, the self-perception model. However, despite the contrary evidence, self-perception theory gains strong support from the OSJ effect due to the high level of interest in this phenomenon, and because (1) a description of the effect appears to follow directly from Bem's (1972) statement of the theory, and (2) the competing dissonance formulation cannot be applied to situations of oversufficient justification. Since the self-perception model depends so heavily upon the OSJ effect, a successful alternative account of this phenomenon would call into question the tenability of the theory. The results obtained in the present experiment suggest that the IAS analysis provides just such an alternative.

Though several explanations for the OSJ effect have been proffered, the self-perception account has remained the most popular. Much of this explanation's appeal lies in its simplicity. Self-perception theory posits that

individuals have little knowledge of their attitudes prior to engaging in attitude-relevant behaviors. Thus, an individual who advocates a position on an issue without inducement or coercion concludes that he or she must support that position. Else why would s/he have endorsed it? However, if this individual observes him or herself advocating a position for a large inducement, then s/he has no basis for inferring a positive attitude and remains uncertain. A second reason that the self-perception explanation remains popular is that it can account for the negative effects of both rewards and coercion on subsequent attitudes. Rival explanations based upon the notions of competing responses or delay of gratification (e.g., Reiss & Sushinski, 1975) can account for OSJ effects only when rewards are utilized. Moreover, these explanations seem most plausible for studies involving children.

The IAS analysis provides both a straightforward account of the OSJ effect, and an explanation of the impact of threats and coercion as well as rewards, on behavior. This analysis is based, in part, on recent theorizing regarding social schemas or scripts (cf. Abelson, 1976; Schank & Abelson, 1977). A script can be described as an organized event sequence that one anticipates in the presence of particular situational cues. Scripts thus reflect a person's expectations concerning regularities in his or her social environment. In the case of the OSJ effect, a

commonly shared script based upon childhood experiences may be evoked, e.g., "If Dad won't let me go out and play until I eat this new vegetable, then it must taste pretty awful," or "If I'm offered a large reward to do X, then X is probably unpleasant or boring." Thus, to the extent that contextual variables, such as overpayment, activate this sort of script, one is likely to become suspicious of the requested behavior.

The differences between the incentive-aroused suspicion and self-perception explanations of the OSJ effect suggested the present experimental test. This experimental design was advantageous because it provided two bases for comparison of these rival explanations. First, the two formulations differ in terms of the role that inducements play in producing the effect. Self-perception theory holds that rewards cause the individual to discount his behavior so that it provides no basis for inferring his own attitude. Moreover, the source of the reward is unimportant--so long as the individual performs the requested behavior as a condition of being paid, he will be uncertain of his actual opinion. According to the IAS analysis, however, the source of payment can be crucial. This analysis suggests that an individual knows what his initial attitude is, but that unnecessary inducements may make him suspicious, causing him to reconsider the merits of his initial position. Thus, if the payment cannot be viewed as remuneration for

performing a questionable or undesirable behavior, then it should not prompt one to rethink or modify his or her opinion.

Consistent with the IAS reasoning, but contrary to the self-perception analysis, subjects in the incidental payment condition did not evidence the usual OSJ effect. That is, subjects in this group were not less favorable toward marijuana decriminalization than unpaid subjects. The self-perception expectation was that these subjects would be less favorable because they performed the requested behavior as a condition for receiving the $5 payment. The IAS analysis, on the other hand, postulated no difference between these groups because the payment was fortuitously provided by an external source, and thus could not be viewed as an indication that the requested behavior was in any way illegitimate.

The results obtained for the incidental payment group are particularly impressive given that the OSJ effect did occur when subjects were awarded payment in the standard manner. That is, subjects in this condition were less favorable toward decriminalization than subjects in either the no payment or incidental payment conditions. Taken together, this pattern of outcomes supports the IAS formulation, but poses difficulties for the self-perception account of the OSJ effect.

The second basis for comparing the two explanations concerns the presumed patterns of attitude change thought to produce the effects. A strict reading of self-perception theory suggests that the OSJ effect occurs because unpaid subjects attribute a favorable, i.e., behavior consistent, attitude to themselves, whereas subjects paid in the usual manner are unsure of their motivations so their attitudes remain unchanged. The IAS analysis holds that the effect is caused by the opposite pattern of results. Unpaid subjects should not change their attitudes, but paid subjects should reevaluate their opinions and become less favorable toward the position implied by their behavior. Since the present research observed all subjects' attitudes both before and after the experimental sessions, an analysis of the pattern of changes was made. Consistent with the IAS analysis the attitudes of subjects in the unpaid (and incidental payment) conditions did not change. However, subjects paid in the standard manner became less favorable toward decriminalization from pretest to posttest. While this pattern of results fits the IAS interpretation of the OSJ phenomenon, it is quite contrary to self-perception expectations.

Although the results reviewed thus far only apply to subjects who read the anti-decriminalization counterarguments, the absence of significant differences among the no countercommunication groups in no way invalidates

the test of the two explanations. A critical test of the self-perception and IAS accounts of the OSJ effect can only occur under conditions which replicate the phenomenon (in this case, the countercommunication conditions). Moreover, the lack of differences in attitudes of the no countercommunication conditions can be accounted for in a manner which is more consistent with the present analysis than the self-perception model.

The equivalence of the groups not exposed to the countercommunication is evident from the nonsignificant Payment x Time of Measurement interaction, $F(2,27) = 2.38$, $p > .10$. However, among all subjects who were paid in the standard manner a significant Communication x Time of Measurement interaction was observed. Simple effects analyses of this interaction revealed that subjects who did not read the counterarguments actually became slightly more favorable toward decriminalization from pretest to posttest, $p < .10$ (see Table 2). As noted earlier, this slight reinforcement effect is not uncommon in previous research, and can be accounted for more easily by the IAS analysis than the self-perception model. That is, the brief 10 minute period that subjects were engaged in the rewarded behavior may not have been sufficient time for them to become suspicious about the large payment, and reconsider their beliefs. Thus, the reinforcement effect among those not exposed to the counterarguments may be explained by their

positive effect (from the payment) becoming associated with the activity. Those who saw the countercommunication, however, may have been prompted into rethinking their beliefs.

While the IAS analysis thus provides a feasible explanation for this reinforcement effect, self-perception theory cannot easily apply a similar "time needed for cognitive work" argument to these results. If ten minutes is not sufficient time for self-perception to occur in the no countercommunication conditions, then the OSJ effect should not have occurred in the countercommunication conditions either.[3]

The "time needed for cognitive work" interpretation is admittedly speculative. However, the importance of the no countercommunication conditions should not be overemphasized because they do not provide a test of the two explanations. A test of the competing accounts of the OSJ effect must occur under conditions in which the effect has been replicated. Thus, emphasis has been placed on the results of the countercommunication conditions of this experiment.

Conclusion

The results of this experiment support the IAS analysis, but are contrary to the self-perception interpretation of the OSJ effect. Self-perception theory places no emphasis on the source of inducement in accounting for this phenomenon: so long as one accepts payment in return for his endorsement, he should remain uncertain of his attitude.

However, this research demonstrates that this decline in attitude does not occur if the reward (which is still contingent upon performing the service) can be viewed as fortuitous rather than as compensation or a bribe.

The present experiment provides a second basis for favoring the IAS interpretation of the OSJ effect. A strict reading of self-perception theory requires that unrewarded subjects become more favorable toward the advocated position while rewarded subjects should be uncertain of their motivations and thus remain unchanged. The IAS interpretation, however, calls for paid subjects to become less favorable, while unpaid subjects should remain unchanged. Consistent with these latter expectations, subjects who were paid in the standard manner became less favorable toward the target issue, whereas unpaid subjects, as well as those in the incidental payment conditions, remained unchanged.

Taken as a whole, this research provides a cogent argument against the self-perception interpretation of the OSJ effect. This is significant because the OSJ effect constitutes the clearest example of Bem's (1972) hypothesized process of self-perception. When the present results are considered along with the problems of the self-perception model reviewed in the introduction, the theory's utility becomes very questionable.

Although the IAS analysis of the OSJ effect was developed primarily to illustrate the shortcomings of the self-perception model, it also may be of practical value. For example, devaluation of desired behaviors may be prevented by controlling individuals' perceptions of the meaning of inducements. However, further research to validate the IAS interpretation should precede such applications.[4]

FOOTNOTES

FOOTNOTES

[1]The finding that subjects in the $5 incidental payment group did not change from pretest to posttest appears to be consistent with self-perception expectations. However, at the posttest, these subjects were more favorable toward decriminalization than the standard payment group, and no different than the unpaid subjects. Thus, this group appears to be psychologically equivalent to the no payment group, and under such conditions the IAS analysis does not predict any change from pretest to posttest.

[2]While this slight reinforcement effect can be attributed to positive affect from the reward becoming associated with the attitude position, it is then odd that those in the "incidental" payment condition did not also evidence this tendency.

[3]It may appear that the difference between the no countercommunication and countercommunication conditions (for $5 standard payment subjects) simply reflects the persuasive impact of the counterarguments. However, no such difference as a function of countercommunication was observed in the unpaid or incidental payment groups (see Table 2). Thus, the impact of the countercommunication was dependent on the method of payment.

[4]A possible method further verifying the IAS analysis could consist of asking observer subjects to witness reenactments of the various experimental trials and then indicate their own opinions on the target issues. If large, unnecessary rewards prompt individuals to reexamine the position they are being asked to endorse, then perhaps even observers would undergo a similar reevaluation of their attitudes. Such a demonstration also would produce further problems for the self-perception model; the observer subjects did not engage in the behavior and yet their attitudes would have mirrored the actor subjects.

REFERENCES

REFERENCES

Abelson, R. P. Script processing in attitude formation and decision making. In J. S. Carrol & J. W. Payne (Eds.), Cognition and social behavior. Hillsdale, New Jersey: Lawrence Erlbawm Associates, 1976.

Amabile, T. M.; DeJong, W.; & Lepper, M. R. Effects of externally imposed deadlines on subsequent intrinsic motivation. Journal of Personality and Social Psychology, 1976, 34, 92-98.

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.

Bem, D. J., & McConnell, H. K. Testing the self-perception explanation of dissonance phenomena: On the salience of premanipulation attitudes. Journal of Personality and Social Psychology, 1970, 14, 23-31.

Benware, C., & Deci, E. L. Attitude change as a function of the inducement for espousing a proattitudinal communication. Journal of Experimental Social Psychology, 1975, 11, 271-278.

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

Bramel, D. A dissonance theory approach to defensive projection. Journal of Abnormal and Social Psychology, 1962, 64, 121-129.

Calder, B. J., & Staw, B. M. Self-perception of intrinsic and extrinsic motivation. Journal of Personality and Social Psychology, 1975, 31, 599-605.

Crano, W. D., & Sivacek, J. Social influence and the foot-in-the-door phenomenon. Paper presented at the meeting of the Midwestern Psychological Association, Chicago, May, 1979.

Festinger, L., & Carlsmith, J. M. Cognitive consequences of forced compliance. Journal of Abnormal and Social Psychology, 1959, 58, 203-210.

Glass, D. C. Changes in liking as a means of reducing cognitive discrepancies between self-esteem and aggression. Journal of Personality, 1964, 32, 531-549.

Jones, E. E., & Nisbett, R. E. The actor and the observer: Divergent perceptions of the causes of behavior. In Jones, Kanous, Kelley, Nisbett, Valins, & Weiner (Eds.), Attribution: Perceiving the causes of behavior. New York: General Learning Press, 1972.

Jones, R. A. Self-fulfilling prophecies: Social, psychological, and physiological effects of expectancies. Lawrence Erlbaum Associates, Inc., 1977.

Kahle, L. R., & Berman, J. J. Attitudes cause behaviors: A cross-lagged panel analysis. Journal of Personality and Social Psychology, 1979, 37, 315-321.

Kahle, L. R.; Klingel, D. M.; & Kulka, R. A. Interpersonally outgoing attitudes and behaviors. Paper presented at the fifty-second annual meeting of the Midwestern Psychological Association, St. Louis, May, 1980.

Kelley, H. H. Attribution in social interaction. In Jones et al. (Eds.), Attribution: Perceiving the causes of behavior. New York: General Learning Press, 1972.

Kiesler, C. A., & Sakamura, J. A test of a model for commitment. Journal of Personality and Social Psychology, 1966, 3, 349-353.

Lepper, M. R.; Greene, D.; & Nisbett, R. E. Undermining children's intrinsic interest with extrinsic reward: A test of the "overjustification hypothesis." Journal of Personality and Social Psychology, 1973, 28, 129-137.

Lepper, M. T., & Greene, D. Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation. Journal of Personality and Social Psychology, 1975, 31, 479-486.

Nisbett, R. E., & Valins, S. Perceiving the causes of one's own behavior. In Jones et al. (Eds.), Attribution: Perceiving the causes of behavior. New York: General Learning Press, 1971.

Regan, D. T.; Straus, T.; & Fazio, R. Liking and the attribution process. Journal of Experimental Social Psychology, 1974, 10, 17-22.

Reiss, S., & Sushinsky, L. W. Overjustification, competing responses, and the acquisition of intrinsic interest. Journal of Personality and Social Psychology, 1975, 31, 116-125.

Rosenthal, R., & Rosnow, R. L. (Eds.). Artifact in behavioral research. New York and London: Academic Press, 1969.

Ross, M. Salience of reward and intrinsic motivation. Journal of Personality and Social Psychology, 1975, 32, 245-254.

Ross, M. The self-perception of intrinsic motivation. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), New direction in attribution research (Vol. 1). Lawrence Erlbaum Associates, 1976.

Ross, M.; Karniol, R.; & Rothstein, M. Reward contigency and intrinsic motivation in children: A test of the delay of gratification hypothesis. Journal of Personality and Social Psychology, 1976, 33, 442-447.

Schank, R., & Abelson, R. P. Scripts, plans, goals, and Understanding. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1977.

Scott, C. A., & Yalch, R. F. A test of the self-perception explanation of the effects of rewards on intrinsic interest. Journal of Experimental Social Psychology, 1978, 14, 180-192.

Sivacek, J., & Crano, W. D. Attributional reanalysis of the dissonance--self-perception controversy. Paper presented at the Meeting of the Midwestern Psychological Association, Chicago, May, 1977.

Swann, W. B., & Pittman, T. S. Initiating play activity in children: The moderating influence of verbal cues on intrinsic motivation. Child Development, 1977, 48, 1128-1132.

Snyder, M., & Cunningham, M. To comply or not to comply: Testing the self-perception explanation of the foot-in-the-door phenomenon. Journal of Personality and Social Psychology, 1975, 31, 64-67.

Taylor, S. E. On inferring one's attitudes from one's behavior: Some delimiting conditions. Journal of Personality and Social Psychology, 1975, 31, 126-131.

Valins, S. Cognitive effects of false heart rate feedback. Journal of Personality and Social Psychology, 1966, 4, 400-408.

APPENDICES

APPENDIX A

THE PROATTITUDINAL STATEMENT THAT SUBJECTS RECORDED

APPENDIX A

THE PROATTITUDINAL STATEMENT THAT SUBJECTS RECORDED

The Case for Decriminalizing Marijuana

Each year thousands of Americans are arrested for the use and possession of marijuana. This is a situation that is intolerable and must be changed. Enforcing the current marijuana laws is pointless, unjust, and a waste of taxpayers' money. Moreover, the prohibition against any popular behavior fosters a contempt for the law in general by making criminals out of otherwise law-abiding citizens. For these reasons and many others, the possession and use of marijuana should be decriminalized.

Consider the following facts regarding the issue of marijuana decriminalization. Our society spends millions of dollars annually to enforce our marijuana laws. This money is being wasted on a victimless crime because unlike alcohol, which plays a role in many violent crimes, the use of marijuana is unrelated to antisocial behavior. Furthermore, the prohibition of marijuana ties up police personnel whose time could be better spent preventing serious offenses. In addition to these tangible costs of enforcing marijuana

laws, people view these laws as a farce because so many members of our society (including legislators and police) use the drug.

So why then does marijuana remain illegal? Most likely because of public fear and misunderstanding. Marijuana was not illegal until the mid 1930s when it was misclassified as a dangerous drug such as heroin. However, marijuana is a relatively mild substance compared to our society's favored recreational drug, alcohol. Whereas alcohol is very toxic and its dosage is often difficult for people to control, marijuana appears to be quite harmless and rarely do people smoke more than they can physically tolerate.

To summarize on this issue, enforcing the prohibition against marijuana is expensive, hypocritical, distracts police from more important concerns, and lessens many peoples' respect for law enforcement in general. Since there is no good reason for marijuana to remain illegal, our representatives in Congress must be urged to set aside the old myths and support legislation to decriminalize marijuana.

APPENDIX B

THE ANTI-DECRIMINALIZATION COUNTERCOMMUNICATION

APPENDIX B

THE ANTI-DECRIMINALIZATION COUNTERCOMMUNICATION

The Case Against Legalizing Marijuana

In the last decade, the abuse of marijuana among young people has become a serious problem. There is reason to believe that the use of marijuana interferes with children's learning in school, is costing society millions of dollars in lost productivity, causes numerous accidents, and may be dangerous to one's health. Thus, there are many good reasons why marijuana should not be decriminalized.

Proponents of decriminalization, such as the National Organization for the Reform of Marijuana Laws (NORML), have argued that marijuana is a rather harmless substance. For example, it has been claimed that marijuana does little to harm one's lungs given the small amount that is usually smoked. However, some authorities now believe that marijuana is more harmful than tobacco because its tar content is higher and the user generally holds the smoke in his or her lungs for as long as possible. Those who favor decriminalizing marijuana also like to point out that alcohol is a much more dangerous drug than marijuana. While

this may be true, the long term effects of smoking marijuana are not known. Besides, whether a dangerous substance such as alcohol is legal or not is irrelevant to the issue of decriminalizing marijuana.

Another reason marijuana should remain illegal is that it could harm our society even without injuring anyone's physical health. To the extent that the use of marijuana reduces one's ability or motivation to learn or work well, our society will suffer from its use. Since the long term effects of this drug on people's health, motivation, and ability to perform well are not conclusively known, decriminalization could dangerously encourage its use. Therefore the decriminalization of marijuana, at least at this point in time, is not worth the potential risks.

APPENDIX C

DEPENDENT MEASURE

APPENDIX C

DEPENDENT MEASURE

Please respond to the following statements by checking the appropriate space.

Penalties for the use and possession of marijuana should be reduced.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

It should be legal to cultivate marijuana for your own personal use.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Marijuana should remain illegal.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Marijuana does not impair one's driving abilities.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Marijuana is no more dangerous than tobacco.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Marijuana use during school impairs a child's learning.

:	_____ :	_____ :	_____ :	_____ :	_____ :	_____ :
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree