THE THEORY OF COGNITIVE DISSONANCE: A CURRENT PERSPECTIVE[1]

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I. Introduction

As a formal statement, Festinger's theory of cognitive dissonance (1957) is quite primitive; it lacks the elegance and precision that are commonly associated with scientific theorizing. Yet its impact has been great. As McGuire has observed in his recent survey in the *Annual Review of Psychology* (1966, p. 492), "Over the past three years, dissonance theory continued to generate more research and more hostility than any other one approach." We will allude to the "hostility" part of this statement from time to time throughout this article; but first, let us discuss the research.

The research has been as diverse as it has been plentiful; its range extends from maze running in rats (Lawrence and Festinger, 1962) to the development of values in children (Aronson and Carlsmith, 1963); from the hunger of college sophomores (Brehm *et al.*, 1964) to the proselytizing behavior of religious zealots (Festinger *et al.*, 1956). For descriptive summaries of dissonance experiments, the reader is referred to Festinger (1957); Festinger and Aronson (1960); Brehm and Cohen (1962); Festinger and Bramel (1962); Festinger and Freedman (1964).

The proliferation of research testing and extending dissonance theory results for the most part from the generality and simplicity of the theory. Although it has been applied primarily in social psychological settings, it is not limited to social psychological phenomena such as interpersonal relations or feelings toward a communicator and his communication. Rather, its domain is in the widest of places—the skull of an individual organism.[2]

A. The Theory

The core notion of the theory is extremely simple: Dissonance is a negative drive state which occurs whenever an individual simultaneously holds two cognitions (ideas, beliefs, opinions) which are psychologically inconsistent. Stated differently, two cognitions are dissonant if, considering these two cognitions alone, the opposite of one follows from the other. Since the occurrence of dissonance is presumed to be unpleasant, individuals strive to reduce it by adding "consonant" cognitions or by changing one or both cognitions to make them "fit together" better; i.e., so that they become more consonant with each other.[3] To use Festinger's time-worn (but still cogent) example, if a person believes that cigarette smoking causes cancer and simultaneously knows that he himself smokes cigarettes, he experiences dissonance. Assuming that the person would rather not have cancer, his cognition "I smoke cigarettes" is psychologically inconsistent with his cognition "Cigarette smoking produces cancer." Perhaps the most efficient way to reduce dissonance in such a situation is to stop smoking. But, as many of us have discovered, this is by no means easy. Thus, a person will usually work on the other cognition. There are several ways in which a person can make cigarette smoking seem less absurd. He might belittle the evidence linking cigarette smoking to cancer ("Most of the data are clinical rather than experimental"); or he might associate with other cigarette smokers ("If Sam, Jack, and Harry smoke, then it can't be very dangerous"); or he might smoke filter-tipped cigarettes and delude himself that the filter traps the cancer-producing materials; or he might convince himself that smoking is an important and highly pleasurable activity ("I'd rather have a shorter but more enjoyable life than a longer, unenjoyable one"); or he might actually make a virtue out of smoking by developing a romantic, devil-may-care image of himself, flaunting danger by smoking. All of these behaviors reduce dissonance, in effect, by reducing the absurdity involved in going out of one's way to contract cancer. Thus, dissonance theory does not rest upon the assumption that man is a *rational* animal; rather, it suggests that man is a rationa*lizing* animal—that he attempts to appear rational, both to others and to himself. To clarify the theoretical statement and to illustrate the kind of research generated by the theory a few experiments will be briefly described.

B. Dissonance following a Decision

One of the earliest experiments testing derivations from dissonance theory was performed by Brehm (1956). Brehm gave individuals their choice between two appliances which they had previously evaluated. He found that following the decision, when the subjects reevaluated the alternatives, they enhanced their liking for the chosen appliance and downgraded their evaluation of the unchosen one. The derivation is

[2] An additional reason for the great number of experiments on dissonance theory is completely *ad hominem;* Leon Festinger has an unmatched genius for translating interesting hypotheses into workable experimental operations and for inspiring others to do so. He has produced a great deal of research irrespective of any particular theoretical approach.

[3] Although dissonance theory is an incredibly simple statement, it is not quite as simple as a reading of this article will indicate. Many aspects of the theory (for example, the propositions relevant to the magnitude of dissonance) will not be discussed here because they are peripheral to the major focus of this essay.

clear: Following a difficult choice, people experience dissonance. Cog
nitions about any negative attributes of the preferred object are disso
nant with having chosen it; cognitions about positive attributes of th
unchosen object are dissonant with *not* having chosen it. To reduc
dissonance, people emphasize the positive aspects and deemphasize th
negative aspects of the chosen objects while emphasizing the negativ
and deemphasizing the positive aspects of the unchosen object (se
also Festinger, 1964).

C. Dissonance Resulting from Effort

Aronson and Mills (1959) reasoned that if people undergo a grea
deal of trouble in order to gain admission to a group which turns out t
be dull and uninteresting they will experience dissonance. The cogni
tion that they worked hard in order to become a member of the grou
is dissonant with cognitions concerning the negative aspects of th
group. One does not work hard for nothing. To reduce dissonance
they will distort their perception of the group in a positive direction. I
the Aronson-Mills experiment, college women underwent an initiatio
in order to become a member of a group discussion on the psychology
of sex. For some of the girls the initiation was very embarrassing—i
consisted of reciting a list of obscene words in the presence of the mal
experimenter. For others the initiation was a mild one. For still other
there was no initiation at all. All of the subjects then listened to th
same tape recording of a discussion being held by the group they ha
just joined. As predicted, the girls in the Severe Initiation conditio
rated the discussion much more favorably than did those in the othe
two conditions [see also Aronson (1961); Zimbardo (1965); Lewi
(1964); Gerard and Mathewson (1966)].

D. Insufficient Justification

Aronson and Carlsmith (1963) predicted that if threats are used t
prevent people from performing a desired activity, the *smaller* th
threat, the greater will be the tendency for people to derogate the activ
ity. If an individual refrains from performing a desired activity, he ex
periences dissonance: The cognition that he likes the activity is disso
nant with the cognition that he is not performing it. One way to reduc
dissonance is by derogating the activity—in that way he can justify th
fact that he is not performing it. However, any threat provides cogn
tions that are consonant with not performing the activity; and the mor
severe the threat, the greater the consonance. In short, a severe threa

provides ample justification for not performing the activity; a mild threat provides less justification, leading the individual to add justifications of his own in the form of convincing himself that he *does not like* to perform the activity. In their experiment, Aronson and Carlsmith found that children who were threatened with *mild* punishment for playing with a desired toy *decreased* their liking for the toy to a greater extent than did children who were severely threatened (see also Turner and Wright, 1965; Freedman, 1965).

II. What Is Psychological Inconsistency?

The very simplicity of the core of the theory is at once its greatest strength and its most serious weakness. We have already discussed the heuristic value of its simplicity. It should be emphasized that many of the hypotheses which are obvious derivations from the theory are *unique* to that theory; i.e., they could not be derived from any other theory. This increases our confidence in dissonance theory as an explanation of an important aspect of human behavior. The weakness occurs primarily in the difficulty involved with defining the limits of the theoretical statement. While at the "center" of the theory it is relatively easy to generate hypotheses that are clear and direct, at its "fringes" it is not always clear whether or not a prediction can be made from the theory and, if so, exactly what that prediction will be.[4] Although investigators who have had experience working with the theory seem to have little difficulty intuiting its boundary conditions, they have had considerable difficulty communicating this to other people; indeed, a situation has evolved which can best be described by the statement: "If you want to be sure, ask Leon." This has proved to be both a source of embarrassment for the proponents of the theory as well as a source of annoyance and exasperation to its critics.

Why is it so difficult to make a more precise theoretical statement? Perhaps the most basic reason has to do with the nature of the inconsistency involved in the core definition of dissonance theory. It would be easy to specify dissonant situations if the theory were limited to *logical* inconsistencies. There exist relatively unequivocal rules of logic which can be applied without ambiguity or fear of contradiction. But recall that the inconsistency that produces dissonance, although it can be logical inconsistency, is not necessarily logical. Rather, it is *psychological* inconsistency. While this aspect of the theory increases its

[4]Later in this article some attempt will be made to specify exactly what is meant by "center" and "fringes."

power, range, and degree of interest, at the same time it also causes some serious problems. Thus, returning to our friend, the cigarette smoker, the cognition regarding smoking cigarettes is not logically inconsistent with the cognition linking cigarette smoking to cancer; i.e., strictly speaking, having information that cigarette smoking causes cancer does not make it illogical to smoke cigarettes. But these cognitions do produce dissonance because, taken together, they do not make sense psychologically. Assuming that the smoker does not want cancer, the knowledge that cigarettes cause cancer should lead to *not* smoking cigarettes. Similarly, none of the research examples mentioned above deals with logical inconsistency; e.g., it is not illogical to go through hell and high water to gain admission to a dull discussion group; it is not illogical to choose to own an appliance that one considers slightly more attractive than the unchosen alternative; it is not illogical to refrain from playing with a toy at the request of an adult.

Festinger (1957) lists four kinds of situations in which dissonance can arise: (1) logical inconsistency; (2) inconsistency with cultural mores; (3) inconsistency between one cognition and a more general, more encompassing cognition; and (4) past experience.

(1) Logical inconsistency: Suppose a person believed that all men are mortal but also held the belief that he, as a man, would live forever. These two cognitions are dissonant because they are logically inconsistent. The obverse of one follows from the other on strict logical grounds.

(2) Cultural mores: If a college professor loses his patience with one of his students and shouts at him angrily, his knowledge of what he is doing is dissonant with his idea about what is the proper, acceptable behavior of a professor toward his students—in our culture. In some other cultures this might be appropriate behavior and, therefore, would not arouse dissonance.

(3) Inconsistency between a cognition and a more encompassing cognition: In a given election, if a person who has always considered himself to be a Democrat votes for the Republican candidate, he should experience dissonance. The concept "I am a Democrat" encompasses the concept "I vote for Democratic candidates."

(4) Past experience: If a person stepped on a tack while barefoot and felt no pain, he would experience dissonance because he knows from experience that pain follows from stepping on tacks. If he had never had experience with tacks or other sharp objects, he would *not* experience dissonance.

The illustrations presented above are clear examples of dissonance. Similarly, the situations investigated in the experiments described above are clearly dissonant. But there *are* situations where for all practical purposes it is not perfectly clear whether two cognitions are dissonant or merely irrelevant. Because dissonance is *not* limited to logical inconsistencies, it is occasionally difficult to specify *a priori* whether or not a cultural more is being violated, whether or not an event is markedly different from past experience, or whether or not it is different from a more general cognition. Recall the basic theoretical statement: Two cognitions are dissonant if, considering these two cognitions alone, the obverse of one follows from the other. The major source of conceptual ambiguity rests upon the fact that Festinger has not clarified the meaning of the words "follows from."

For example, if I learn that my favorite novelist beats his wife, does this arouse dissonance? It is difficult to be certain. Strictly speaking, being a wife-beater is not incompatible with being a great novelist.[5] However, there may be a sense in which the term "great novelist" implies that such a person is wise, sensitive, empathic, and compassionate— and wise, sensitive, empathic, and compassionate people do not go around beating their wives. This is not a logical inconsistency; nor is it a clear violation of a cultural more; moreover, it may have nothing to do with past experience —and it is not *necessarily* embedded in a more general cognition. Thus, a knowledge of the kinds of situations in which dissonance *can* occur is not always useful in determining whether dissonance *does* occur.

A rule of thumb which we have found useful is to state the situation in terms of the violation of an expectancy. For example, one might issue the following instructions: "Consider Mr. Roy Wilkins of the National Association for the Advancement of Colored People. I'm going to tell you something about his beliefs about the native IQ of Negroes relative to that of Caucasians. What do you expect these beliefs to be?" No doubt most people would have a firm expectancy that Mr. Wilkins would say that there are no innate differences. Consequently, one could then conclude that if individuals were exposed to a statement by Mr. Wilkins to the effect that Negroes were innately stupider than Caucasians, most would experience dissonance. Let's try our difficult example. Suppose we confronted a large number of people with the following proposition: "Consider the great novelist, X. I am about to tell you something about whether or not he beats his wife. What do you expect me to say?" Probably most people would shrug; i.e., they would not have a strong expectancy (but, again, this is an empirical question; there is no certainty that

[5] If *I* had beaten my wife I might experience dissonance because of *my* violation of a cultural more. But since I know that many people beat their wives, discovering that a particular person beats his wife is not necessarily inconsistent with my cognition about the world and human nature. More will be said about this later.

it would come out this way). If this occurred, one could conclude that X's wife-beating behavior is irrelevant to his status as a novelist. An empirical rule of thumb may be of practical utility but is, of course, no substitute for a clearer, less ambiguous, more precise theoretical statement. Near the end of the article this rule of thumb will be elaborated upon and it will be indicated how it might be used conceptually.

III. Methodological Problems

Some critics have pointed to the ambiguities inherent in the theoretical statement and have concluded that they make the theory impossible to disprove and, consequently, worthless. As stated above, some conceptual ambiguities do exist and will be elaborated on shortly. But first, we should make it clear that these conceptual ambiguities exist in a very small part of the domain in which the theory has continued to make clear and precise predictions; these predictions have been validated a number of times in a number of different ways. Why, then, does the theory inspire what McGuire (1966) referred to as "... more hostility than any other one approach"? We feel that a good deal of the hostility is misdirected—stemming from a confusion between conceptual and methodological ambiguities. Much of the difficulty in disproving dissonance theory arises from weaknesses in the method of social psychological experimentation. These weaknesses are hardly the fault of the theory. Moreover, these methodological problems are not peculiar to research on dissonance theory but are shared by research on all theories that predict social psychological phenomena. They tend to have been associated with dissonance theory precisely because of the great quantity of research generated (and, therefore, of methodological problems unearthed) by that theory. The major methodological problems stem from the lack of tried and true, standardized techniques for operationalizing conceptual variables in social psychology. Consequently, any single failure in a given experiment can be attributed to a failure in the experimental operations rather than an error of conceptualization. At the same time, repeated failures across a wide variety of techniques would spell the end of dissonance theory or any theory.

The Problem of Alternative Explanations

The lack of a standardized method in social psychology has contributed to another major difficulty with research in this area: It is frequently possible to come up with alternative explanations for empirical results. Thus, like experiments testing other theories in social psychology, many of the experiments testing dissonance theory are

subject to alternative explanations. If some of the data can be explained without recourse to dissonance theory, our confidence in the theory is weakened. At the same time, dissonance theory does provide the most parsimonious explanation for the data taken as a whole—as McGuire has argued: "The whole set of dissonance studies would require accepting a tremendous variety of alternative explanations, whereas dissonance theory alone explains a large subset of them" (1966, p. 493). Although this is some recommendation, it is not wholly sufficient. One still wants to be able to determine which explanation is more nearly correct. The best way to distinguish among plausible alternative explanations is through a series of well-controlled systematic experiments which are essentially conceptual replications using markedly different sets of operations to test the same hypothesis. This technique has been referred to as "purification"; the necessity for such procedures as well as a fuller description is provided elsewhere (Aronson and Carlsmith, 1968).

Let us take, as an illustration, the initiation experiment by Aronson and Mills (1959). Recall that the investigators predicted the results on the basis of dissonance theory; specifically, the cognition that one has gone through an unpleasant and embarrassing initiation in order to get into a group was dissonant with the cognition that the discussion group was dull and dreary. In order to reduce dissonance, subjects in the Severe Initiation condition (but not in the Mild Initiation condition) convinced themselves that the "dull" group was really quite exciting. In order to maximize credibility and impact, the investigators constructed a rather novel method for operationalizing "unpleasant effort"; they had the girls in the Severe Initiation condition recite a list of obscene words and some lurid passages from contemporary novels in the presence of a male experimenter. This procedure made sense in terms of the over-all "scenario" of the experiment, thus effectively masking the true purpose of the experiment and reducing the possibility of suspicion. It also seemed to be effective in the sense that the girls appeared to be embarrassed—they tended to hesitate, blush, cast their eyes downward, etc. Nevertheless, the use of sexually related material opened the door for at least two plausible alternative explanations, both offered by Chapanis and Chapanis (1964). One is that while reciting the material the girls did not become embarrassed, but, rather, became sexually aroused; this could have produced pleasure or the expectation of pleasure which supposedly would increase the attractiveness of the discussion group. The second is quite the reverse: The subjects in the Severe Initiation condition felt relief (from sexual anxiety?) when they found the group discussion banal instead of embarrassing. Supposedly, this could lead them to rate the discussion as not banal at all.

Whether these explanations are more or less plausible than the dissonance explanation is not important. The important point is that they are at least possible. In order to distinguish between the dissonance explanation and these alternative explanations, the same hypothesis should be tested using an operational definition of "unpleasant effort" which has nothing to do with the pleasantness of sexual arousal or relief from sexual anxiety. Such an experiment has been performed by Gerard and Mathewson (1966), who replicated the Aronson-Mills (1959) experiment conceptually. In their experiment they advertised their group discussions as being on the topic of college morals; the actual discussion was a rather pallid one involving cheating on examinations. The initiation procedure consisted of electric shocks instead of obscene words as used by Aronson and Mills. The results paralleled those of Aronson and Mills and confirmed the prediction from dissonance theory: Those subjects who underwent a series of severe electric shocks in order to gain admission to a dull discussion group came to rate that group more favorably than those who gained admission after having undergone mild electric shocks.

This single procedure, of course, does not eliminate all alternative explanations. Let us return to the critique of the Aronson-Mills (1959) experiment. To quote Chapanis and Chapanis:

> It is interesting to speculate what would have happened if the girls had been 'initiated' into the group by the use of a more generally accepted painful procedure, such as using electric shock. Somehow it seems doubtful that this group would appreciate the group discussion more than the control group, unless —and here is the crucial point—the conditions were so manipulated that *S*s experienced a feeling of successful accomplishment in overcoming the painful obstacle. It seems to us that if there is anything to the relationship between severity of initiation and liking for the group, it lies in this feeling of successful accomplishment. The more severe the test, the stronger is the pleasurable feeling of success in overcoming the obstacle. There is no need to postulate a drive due to dissonance if a *pleasure principle* can account for the results quite successfully (1964, p. 5).

Thus, while Chapanis and Chapanis would appear to have been wrong in their conviction that the effect demonstrated by Aronson and Mills would *not* replicate if electric shock had been used, they have apparently left themselves an escape hatch. Fortunately, however, there are some data on this issue also. According to Chapanis and Chapanis (1964), the more painful the situation one overcomes, the greater the feeling of successful accomplishment. Although they do not explain how this feeling of pleasure would make subjects like the discussion group better, one assumes that they are using a rather simple contiguity model: If a person feels good, contiguous stimuli (e.g., the discussion group) look and feel good. Dissonance theory, of course, does not make use of such a contiguity explanation; i.e., the group discussion looks good *not* because it is contiguous with pain reduction (dissonance reduction)—rather, it comes to look good as a *means of reducing* dissonance. The crucial aspect of dissonance arousal in this situation is that getting into a group was contingent upon going through a severe initiation; that is, it was an initiation, not simply a stimulus that was contiguous with a pleasant feeling. Consequently, if one simply hears a group discussion after having successfully undergone a severe shock, dissonance theory would make no prediction regarding the attractiveness of the group. It would make a prediction only if the person had experienced dissonance; i.e., if the person had undergone a severe initiation *in order to* get into a dull group.

Thus, a test between the Chapanis and Chapanis "successful accomplishment" explanation and the dissonance explanation can be arranged simply by comparing an initiation (i.e., an "in order to" situation) with a contiguous situation. Such a test was built into the Gerard-Mathewson (1966) study. In this experiment some subjects underwent a severe shock in order to get into a group (Initiation condition) while other subjects simply underwent severe shock (No Initiation condition). If a feeling of success is aroused by getting through the shock situation, both groups had it. All subjects were then exposed to a taped group discussion. Thus, for subjects in both conditions the discussion was contiguous with feelings of "successful accomplishment"; but only those in the Initiation condition experienced dissonance. The results clearly support dissonance theory. Those who went through severe electric shock in order to get into a dull group rated the taped group discussion as more attractive than a "mild shock" control condition. Those who went through a severe shock (without dissonance) and then listened to the same tape rated the discussion as less attractive than those in the Initiation condition—indeed, they tended to rate the taped discussion as *less* attractive than subjects in the parallel (No Initiation) condition who underwent mild electric shock. This latter finding suggests that even in the absence of dissonance, "a feeling of successful accomplishment" does not operate—but something else does; more will be made of this later.[6]

To sum up this point, it should be made clear that neither the receiving of electric shock nor the recitation of obscene words is a perfect empirical realization of the conception "unpleasant effort." Neither, by it-

[6]One additional piece of data is of relevance. One-half of the subjects in the Initiation condition were told they passed the test and one-half were not told. The "told—not told" manipulation did not interact with the severity of shock. This provides further evidence against the "successful accomplishment" explanation.

self, is free of alternative explanations. The recitation of obscene words is open to alternative explanations involving sexual matters—electric shock is open to alternative explanations involving pain, fear, pain reduction, and fear reduction. But taken together, they eliminate most possible alternative explanations. Accordingly, many of the results supporting dissonance theory have been and can continue to be strengthened by eliminating alternative explanations through the purification of operations afforded by conceptual replications. As this process continues, our confidence in the validity and viability of the theory increases—in spite of its simplicity and inelegance as a conceptual statement.[7]

Of course, as indicated, not all the problems of dissonance theory are methodological. Several additional conceptual problems will be discussed in a moment.

IV. The "Nothing But" Critique

Scientists tend to be conservative, parsimonious creatures. This is generally a healthy attitude which most frequently manifests itself in a reluctance to accept a new theory or a novel explanation for a phenomenon if the phenomenon can be squeezed (even with great difficulty) into an existing approach. In this regard, dissonance theory has been referred to as "warmed-over soup"; i.e., as nothing but a new name for an old explanation. This has been most persistently stated in regard to that aspect of the theory related to decision making. In this context dissonance theory has been referred to as nothing but another name for conflict theory.

A. Dissonance or Conflict?

In fact, there are several differences. Conflict occurs before a decision is made, dissonance occurs after the decision. During conflict it is assumed that an individual will devote his energies to a careful, dispassionate, and sensible evaluation and judgment of the alternatives. He will gather all of the information, pro and con, about all of the alternatives in order to make a reasonable decision. Following the decision, a person is in a state of dissonance—all negative aspects of X are dissonant with having chosen X; all positive aspects of Y are dissonant with *not* having chosen Y. Far from evaluating the alternatives impartially (as in conflict), the individual experiencing dissonance will seek biased information and evaluations designed to make his decision appear more reasonable. As in Brehm's (1956) experiment, he will seek to spread the alternatives apart. The more difficulty a person had making a decision, the greater the tendency toward this kind of behavior as a means of justifying his decision.

But how can we be certain that the "spreading apart" of the alternatives in Brehm's experiment occurred after the decision? Could it not have occurred during the conflict stage? That is, it is conceivable that, in order to make their decision easier, subjects in Brehm's experiment began to reevaluate the appliances in a biased manner *before* the decision. If this were the case, then there is no essential difference between predecisional and postdecisional processes; if so, this behavior can be considered part of conflict—and there is, indeed, no need to complicate matters by bringing in additional terminology.

Brehm's experiment does not allow us to determine whether the evaluation of chosen and unchosen alternatives was spread apart before or after the decision. Experiments by Davidson and Kiesler (1964) and by Jecker (1964) serve to clarify this issue. In Jecker's experiment, subjects were offered their choice between two phonograph records. In three conditions there was *low conflict*; i.e., subjects were told that there was a very good chance that they would receive *both* records no matter which they chose. In three other conditions, *high conflict* was produced by telling them that the probability was high that they would be given only the record that they chose. All of the subjects rated the records before the instructions; in each of the conflict conditions subjects rerated the records either (*a*) after they discovered that they received both records, (*b*) after they discovered that they received only the one record they chose, or (*c*) before they were certain whether they would get one or both. The results are quite clear: No spreading apart occurred when there was no dissonance; i.e., when the subject actually received both records or when he was not certain whether he would receive one or both, he did *not* reevaluate the alternatives systematically. Where dissonance did occur there was a systematic reevaluation; i.e., subjects spread their evaluation of the alternatives when they received only one record—this occurred independently of the degree of conflict. This experiment provides clear evidence that conflict and dissonance are different processes; whatever else dissonance theory might be, it is *not* "nothing but conflict theory."

[7] In struggling toward greater methodological sophistication, investigators working with dissonance theory face the same problems as other experimental social psychologists. Thus, the major critical review of dissonance theory to date (Chapanis and Chapanis, 1964) is largely a methodological critique. Although many of the points made in this review involve reasonable methodological criticisms, the unfortunate illusion is created that, somehow, "dissonance theorists" commit more methodological blunders than the rest of us. In articulating this point, Chapanis and Chapanis attempt to cite examples of good (i.e., nondissonance) methodology in this area. Ironically, their principal example of good methodology is an experiment where the subjects were allowed to assign *themselves* to experimental conditions (p. 19), thus negating the major defining characteristic of an experiment.

B. Dissonance or Self-judgment?

An intriguing variation on the "nothing but" theme is Bem's (1965, 1967) analysis of the insufficient justification phenomenon. Speaking from the point of view of "a radical behaviorist," Bem suggested that the experiments involving insufficient justification can be accounted for by a self-judgment model. Accordingly, an aversive motivational state (dissonance) is superfluous to an understanding of these phenomena. Bem's model was based upon an individual's ability to infer what his real attitudes are by merely discriminating the circumstances which control his behavior. According to Bem, each person is the observer of his own behavior. The individual, then, in effect asks himself what the reinforcements were which guided his actions. If the person observes that he performed for a large reward, he is *less* apt to believe that the behavior was a reflection of his real attitudes than if he performed it for a small reward.

To clarify the different approaches, let us examine the experiment by Cohen (1962) in which Yale students were induced to write an essay favoring the repressive actions of the New Haven Police Department in quelling a student riot. Cohen found that those students who were paid 50¢ came to believe in the truth of their statements to a greater extent than did those who were paid $1.00

According to dissonance theory, the cognition that one has written an essay is dissonant with the cognition that one disagrees with the point of view of the essay. The smaller the compensation, the greater the dissonance; the greater the dissonance, the greater the tendency to agree with what one has written.

Bem suggested that what is called "dissonance" is really an instance of self-judgment based upon the subject's simple discrimination of the reinforcement contingencies. According to Bem, the subject says, in effect, "If I wrote the essay for only 50¢, then I must really believe it, whereas if it required $1.00 to get me to write it, then I probably don't believe it as much." This reasoning, in and of itself, is not really different from the way a dissonance theorist would conceptualize the process. But Bem carried his reasoning one step further: He reasoned that an aversive motivational state is unnecessary. Consequently, an observer should be able to arrive at the same inference as the subject himself—if the observer has knowledge of the incentive offered to the subject to induce him to perform a given behavior. Bem tested this prediction by describing to each of his subjects one of the conditions in Cohen's (1962) experiment. He found that these observers could estimate the attitude of Cohen's subjects—even though these observers, of course, were not experiencing dissonance. In short, Bem's observer-subjects estimated that Cohen's subjects who wrote the essay for 50¢ were more favorably disposed to the actions of the New Haven police than those who wrote the essay for $1.00.

But the events experienced by a "real" subject and those experienced by an observer are very different. Taking this position, Jones *et al.* (1968, in press) argue that Bem's results are misleading. Picture the situation: Yale students are asked to write an essay favoring police suppression of Yale students. It seems reasonable to assume that Bem's observers would infer that a typical Yale student would be unwilling to comply with the experimenter's request. But the subject Bem described to an observer *did*, in fact, comply. Because of this, Bem's observers in the 50¢ condition are likely to infer that the behavior of that specific subject was not typical; i.e., since he was quite willing to express an obviously unpopular point of view for such a small sum of money, he must have been more willing to comply than most Yale students. Consequently, it is possible that he favored the actions of the New Haven police in the first place. In Cohen's original experiment, of course, since the subject was himself the complier, if he complied reluctantly and was initially opposed to the actions of the New Haven police, it is more likely that he was aware of it.

This is a subtle distinction, but it may be an important one. In a set of factorial experiments, Jones *et al.* demonstrated that they can replicate Bem's results under Bem's conditions; i.e., observers felt that subjects who wrote the essay for 50¢ were more favorably disposed to the New Haven police than those who wrote the essay for $1.00. But under conditions which effectively eliminated the possibility of observers attributing *a priori* differences to the subjects, the results were opposite to Bem's. Here observers estimated that the original subjects in the $1.00 condition were more favorable to the actions of the New Haven police than were the original subjects in the 50¢ condition. These results, then, cast serious doubt on the contention that the observer (who, of course, is not experiencing dissonance) can effectively infer the attitudes of a subject in a dissonance experiment.

However, this experiment is not completely conclusive because it involves a change in the conditions of Cohen's original experiment. The possibility remains that Cohen's subjects *did* come to feel that they *initially* favored the actions of the New Haven police. Thus, Bem's results may, indeed, be an accurate translation of the Cohen experiment. What must be established in future experiments is whether or not the subject's behavior (writing a counter-attitudinal essay) becomes so very salient that it overwhelms his memory about his original position. This seems unlikely when the issue is as personally involving for the Yale students as the actions of the New Haven police. Nevertheless, the question remains an

open one; at this time the most that can be said is that there is no compelling evidence that dissonance-like phenomena can occur in the absence of an aversive motivational state.

V. The Multiple Mode Problem

As indicated earlier, several problems are central to the theoretical statement. One of the knottiest and most interesting conceptual problems in dissonance theory involves the fact that in a given situation there is usually more than one way for a person to reduce dissonance. For example, the cigarette smoker has several techniques at his disposal. He may use any one, or several simultaneously. Experimentally, this problem can be eliminated by the simple device of blocking alternative techniques of dissonance reduction. This is part of the definition of experimental control; any experimenter worth his salt will attempt to control the environment so that the behavior elicited by his independent variable will occur in a manner which is measurable and at a time and place where the measuring instruments have been set up. To illustrate: In a typical communication–persuasion experiment, if a highly credible communicator states a position which is discrepant from the position of the recipient, the recipient experiences dissonance. He can reduce dissonance in one of four ways: (1) he can change his opinion to make it coincide with the communicator's, (2) he can attempt to change the communicator's opinion, (3) he can seek social support from other members of the audience, or (4) he can derogate the communicator. If one is interested in measuring opinion change (1), one can eliminate (2) and (3) by making it impossible for the subject to interact either with the communicator or his fellow subjects. Furthermore, one can reduce the subject's ability to derogate the communicator by assigning the latter high enough prestige so that he becomes virtually nonderogatable. Thus, if these four techniques exhaust the universe, the only way that a subject can reduce dissonance is by changing his attitude on the issue. The prudent experimenter will have built his experiment to make it appear reasonable to measure the subject's attitudes after the communication, and he will use the most sensitive measuring instrument he can construct.

Thus, if the question one asks is "Does dissonance occur in such a situation and does it get reduced?" the answer can be easily determined experimentally. But we may have a different question in mind: "In a given situation, how do people generally reduce dissonance?" And the answer to this question may be strikingly different from the mode found in the laboratory experiment. To illustrate, in the above example, most people might prefer to argue with the communicator rather than change their opinion.

The above argument suggests that the results from carefully controlled laboratory experiments, on occasion, may be somewhat misleading. For example, suppose a young Ph.D. is being considered for a teaching position in a major department at a prestigeous Ivy League university. What happens if the members of that department decide not to hire him? If he feels that he is a good and worthy scholar, he will experience cognitive dissonance: His cognition that he is a good scholar is dissonant with his cognition that he was rejected by members of a good department. Thus, he can reduce dissonance in at least two ways: (1) he can convince himself that his rejectors are, in reality, stupid, defensive, unprofessional, and/or senile people who cannot or will not recognize a good man when they see one; (2) he can convince himself that if they can reject him (as good as he is), then their standards must be astronomically high and therefore they are a fine group of nonsenile professionals. Both of these techniques succeed in reducing dissonance; moreover, they both protect the individual's ego–he leaves for his job at East Podunk State Teacher's College with the conviction that he is a good scholar. But note that the results of his dissonance-reducing behavior can leave him with totally opposite opinions about the members of the staff at the Ivy League university. Thus, if one wanted to arouse dissonance in an individual for the specific purpose of enhancing his impressions of the people at Ivy University, one had better be careful. The same dissonance-producing situation can result in quite the opposite dissonance-reducing behavior.

A. Consistency with Other Events

This is a serious conceptual problem. One way that it can be solved is by coming up with a set of specific propositions that can lead one to state the conditions under which one mode or the other is more likely to occur. A possible solution was previously outlined in a specific situation (Aronson, 1961). The situation was one involving alternative modes of dissonance reduction following the unsuccessful expenditure of effort. If a person struggles to reach a goal and fails, he experiences dissonance. His cognition that he exerted effort to attain the goal is dissonant with his cognition that he did not reach it. He could reduce dissonance by convincing himself that the goal was not worth it anyway; recall that this was the way that Aesop's fox reduced dissonance in the fable of the sour grapes. There is another reasonable way to reduce dissonance: by the person's finding something else in the situation to which he can attach value in order to justify his expenditure of effort without achieving his avowed goal. Thus,

the fox might convince himself that he got some much-needed exercise while leaping for the grapes, and that even though he failed to get those luscious, sweet grapes, it was worth the effort because of the muscles he developed while trying.

Under what conditions will an individual take one path rather than the other? The first solution (Aronson, 1961) is probably easier, but only in a situation where the effort expended is of short duration. However, if the situation consists of a long and repeated expenditure of effort, it becomes a less viable solution. To use the previous illustration, if the fox made a few leaps at the grapes and failed, he could convince himself that they were probably sour anway; but if he spent the entire afternoon struggling to reach the grapes, it would not effectively reduce dissonance to maintain that the grapes were sour—for if that were the case, why in the world did he try to reach them over and over and over again? The data from the above-mentioned experiment indicated that after the repeated expenditure of effort people *do* attach value to an incidental stimulus; however, the definitive factorial experiment remains to be done.

It is encouraging to note that experimenters are beginning to focus their efforts on this kind of problem. A good example of this trend is described in a very recent article by Walster *et al.* (1967), who hypothesize that individuals will choose that mode of dissonance reduction which is least likely to be challenged by future events. In their experiment, children were given their choice between two toys. In a situation like this, individuals can reduce dissonance in two ways: by cognitively increasing the attractiveness of the chosen alternative and/or by cognitively decreasing the attractiveness of the unchosen alternative. One-half of the children were led to expect that they would subsequently hear objective information about the toy they chose; one-half of the children were led to expect that they would hear objective information about the rejected toy. The investigators found, as predicted, that individuals reduced dissonance by distorting the attractiveness of that toy which they were not going to hear information about; that is, they opted to reduce dissonance in a manner which was less likely to run up against objective reality.

B. Commitment and Volition

In order to be of maximum use, such specific solutions should be restated into more general propositions, where possible, and incorporated into the theory. An important step in this direction was taken by Brehm and Cohen (1962) in emphasizing the importance of commitment and volition in determining not only the strength of the dissonance involved, but also, perhaps more important, in determining the nature of the dissonance

and, hence, the nature of the mechanisms needed to reduce dissonance. Whether or not a high degree of volition is present can change the nature of the prediction even though both situations may involve cognitive dissonance. For example, in a minor part of their experiment, Aronson *et al.* (1963) reasoned that disagreement with a highly credible source produces more dissonance then disagreement with a source having low credibility. The cognition that a highly sentient person believes X is dissonant with the cognition that I believe *not* X. The higher the credibility of the source, the greater the dissonance—because the less sense it makes to be in disagreement with him. This should lead to greater attitude change in the Highly Credible condition—to reduce dissonance. The results of their experiment were consistent with this reasoning. On the other hand, Zimbardo (1960) and Brehm and Cohen (1962) reasoned that under certain conditions a source having low credibility would produce greater attitude change than one having high credibility. Specifically, if a person had chosen of his own volition to go to hear a speech by a low credibility source, he would experience a great deal of dissonance. The cognition involving volition and commitment is dissonant with the cognition that the credibility of the communicator is low; after all, it is absurd to choose to go out of one's way to hear a low prestige source make a speech which is discrepant with one's own opinion. In order to reduce dissonance, one might convince oneself that there was no essential discrepancy—that one always held the position espoused by the low credibility source. Thus, Zimbardo and Brehm and Cohen suggested that under conditions of high commitment one might get greater agreement with a low credibility source than with a high credibility source. This prediction made by Zimbardo and by Brehm and Cohen is consistent with other data involving choice and commitment. For example, Smith (1961) found that soldiers who volunteered to eat grasshoppers when induced by an unpleasant leader, came to like the grasshoppers better than did those who volunteered to eat them when induced by an affable leader. Similar results are reported by Zimbardo (1964a,b).

It should be clear that the prediction made by Aronson *et al.* and that made by Zimbardo and by Brehm and Cohen are not mutually exclusive; rather, they apply to a crucially different set of circumstances. Although both predictions are derived from dissonance theory, they involve different aspects of the theory; the crucial distinction is whether or not a high degree of volition is present. Nonetheless, to avoid confusion, these distinctions should be articulated with even greater clarity.

To sum up this section, dissonance theory, as originally stated, *does* have some areas of conceptual fuzziness. Much of this fuzziness can be eliminated by empirical research. Again, this research should be focused

on the conditions and variables which maximize and minimize the occurrence of dissonance and dissonance reduction as well as the conditions which lead to one or another mode of dissonance reduction. This position will be elaborated upon in a moment.

VI. Dissonance Theory and Reward-Incentive Theory

A. Not Which but When

One of the intriguing aspects of dissonance theory is that it frequently leads to predictions which stand in apparent contradiction to those made by other theoretical approaches, most notably, to a general reward-incentive theory. The words "stand in apparent contradiction" were carefully chosen, for as we shall see, these theories are not mutually exclusive on a conceptual level. No advocate of dissonance theory would take issue with the fact that people frequently perform behaviors in order to obtain rewards or that activities associated with rewards tend to be repeated. What they would suggest is that under certain carefully prescribed conditions, cognitive events are set in motion which result in behaviors quite different from what one would expect from reward-incentive theories. Moreover, they might also suggest that such situations are not rare and, therefore, such behaviors are not flukey. Rather, they are quite common; one reason that they seem strange or "uncommonsensical" to us is that total reliance on other theoretical approaches (explicitly or implicitly) have blinded us to alternative possiblities or have made us disinclined to look beyond the obvious events generated by reward-reinforcement theories. The much discussed "nonobvious" predictions generated by dissonance theory are nonobvious only in an apparent sense; they become obvious and make sense once we gain an understanding of the dissonance-reducing process.

In the previous section, when discussing alternative ways of reducing dissonance, the author tried to make the point that it is not very fruitful to ask what the mode of dissonance reduction is; rather, it is far more meaningful and instructive to isolate the various modes of reducing dissonance and to ask what the optimum conditions are for each. Similarly, rather than ask whether dissonance theory or reward-incentive theory is the more valid, one should attempt to determine the optimal conditions for the occurrence of processes and behaviors predicted by each theory.

One example of this approach has already been discussed. Recall that in the Gerard and Mathewson (1966) conceptual replication of the Aronson-Mills (1959) experiment, they found that when dissonance was eliminated from the experimental situation (in the No Initiation condition)

subjects tended to rate the group discussion as being less attractive if it followed severe electric shock. Recall also that this is opposite to the feelings of "successful accomplishment" interpretation proposed by Chapanis and Chapanis (1964); rather, it can be considered as consistent with a general reward theory; i.e., stimuli contiguous with severe shock are considered to be unattractive. Similar findings relevant to reward theory are reported by Aronson (1961).

Another example of this approach can be found in an experiment by Freedman (1963), who had subjects perform a dull task after first informing them that either (*a*) the data would definitely be of no value to the experimenter since his experiment was already complete, or (*b*) the data would be of *great* value to the experimenter. According to dissonance theory, performing a dull task is dissonant with the fact that it is not very valuable; in order to reduce dissonance, subjects should attempt to convince themselves that they actually enjoyed performing the task for its own sake. However, if the data are valuable, there is little dissonance, hence, little need to convince one's self that the task was enjoyable. Freedman's results confirmed his prediction: Subjects in the No-Value condition enjoyed the task to a greater extent than did subjects in the High-Value condition. In addition, he ran a parallel set of conditions except that he withheld information about how valuable the task performance was for the experimenter until *after* the subjects had completed the task. With this modification he found the opposite effect: Those who were told the task was valuable enjoyed it more than those who were told it was useless.

A moment's reflection should indicate that there is little or no dissonance in the above situation. No subject can have any reason to suspect that an experimenter is observing him for no reason at all. If the subject performed the task in good faith, he had no way of knowing his data would not be used by the experimenter; that is, experimenters do not generally collect data that they have no intention of using. Accordingly, the subject does not need to seek justification for performing the task—the fact that his performance turned out to be futile was nothing that he could have possibly foreseen. On the other hand, if, in advance, he had some reason for believing that his efforts might be futile (as in the previous condition), he *does* need additional justification—he must convince himself that he chose to do it for its own sake. The point stressed here is that where little or no dissonance exists, an incentive effect emerges: The more valuable the task, the "better" it is; the "better" it is, the more the subjects enjoyed doing it. This experiment clearly demonstrates that dissonance effects and incentive effects can exist side by side. Moreover, it helps define some of the limiting conditions of each.

In a similar vein, a recent experiment by Carlsmith *et al.* (1966) has taken us a long way toward an understanding of the conditions optimal for the emergence of incentive and dissonance phenomena following counter-attitudinal advocacy. According to dissonance theory, if a person says something he feels is untrue, he experiences dissonance: The cognition "I said X" is dissonant with the cognition "I believe not X." In order to reduce dissonance, he might attempt to convince himself that what he said was not so very untrue. Thus, dissonance theory suggests that advocating an opposite position increases one's tendency to believe in that position. However, if one is provided with a great deal of justification for advocating an opposite position (for example, if one is paid a great deal of money for telling a lie), one experiences less dissonance; that is, if I told a small lie for $53,000, I would have ample justification for having lied: The cognition that I received $53,000 is consonant with having lied. Consequently, I would have less need to justify my action by convincing myself that I really believed what I said than if I had been paid a mere 53¢ for lying. This general prediction has been confirmed by several experiments (e.g., Festinger and Carlsmith, 1959; Cohen, 1962; Nuttin, 1964; Lependorf, 1964). These experiments have shown greater attitude change for less reward across a wide range of topics; moreover, it has been confirmed across a wide range of rewards, from $20.00 (high) and $1.00 (low) in the Festinger-Carlsmith experiment, to 50¢ (high)[8] and 5¢ (low) in the Lependorf experiment. Thus, it would appear that this is a sturdy finding. On the other hand, there is some evidence that under certain conditions the opposite effect might emerge (Janis and Gilmore, 1965; Elms and Janis, 1965; Rosenberg, 1965).[9] Briefly, under certain conditions, offering a high incentive for advocating a given position may lead to a better performance, i.e., thinking up more and better arguments. This could lead to greater attitude change; i.e., a person changes his attitude *because* he has exposed himself to more arguments *because* he has looked harder *because* he was paid more money.

B. Commitment and Complexity

But what are these conditions? Or, better still, what conditions are optimum for the dissonance effect and what conditions are optimum for the incentive effect? The experiment by Carlsmith *et al.* (1966) provides

[8]"High" and "low" means, of course, relative to the other conditions; thus, 50¢ is high because it is higher than 5¢.

[9]For a more detailed critical analysis of all of these experiments, see Aronson (1966).

us with a solid clue. In their experiment subjects were put through a dull task and were then asked to describe the task as interesting. The dependent variable was the extent to which the subjects convinced themselves that the task really was interesting. The results showed a dissonance effect (the smaller the reward, the greater the opinion change) only under conditions where subjects lied to another person in a highly committing face-to-face situation. In other conditions, subjects wrote an essay, were assured complete anonymity, and were told that only bits and pieces of their argument would be used. Here an incentive effect emerged: The greater the reward, the greater the opinion change. In the early experiments (e.g., Festinger and Carlsmith, 1959) the importance of the face-to-face situation was not fully appreciated by the investigators because this variable was not systematically manipulated. In a recent analysis of this area (Aronson, 1966) it was suggested that the important distinction between the above conditions is "degree of commitment"; i.e., in the face-to-face situation the subject was saying things to a person which he himself believed were untrue. In our opinion, this situation involves much more commitment and, hence, arouses much more dissonance than the writing of an anonymous essay which the subject has been told would not be used in its original form.

At the same time, it should be noted that the complexity of the experimental operations employed by Carlsmith *et al.* (1966) allow for alternative explanations. One of the most serious of these alternative explanations is in terms of the complexity of the counter-attitudinal task involved. Rosenberg (1966) has argued that dissonance theory may be limited to situations where not much cognitive elaboration is required; he contended that where the task is more complex, incentive effects might occur. In analyzing the study by Carlsmith *et al.*, Rosenberg made the reasonable point that writing an essay and telling a lie not only differ in degree of commitment but also may differ in the degree of cognitive complexity required. Consequently, this experiment cannot be taken as offering unambiguous support for our suggestion that degree of commitment is the decisive factor.

Two very recent experiments shed some additional light on this problem. In one, Linder *et al.* (1967) were careful to hold the complexity of the task constant. The task was a complex one in all conditions: College students were asked to write an essay favoring more stringent paternalistic supervision of students by the college administration. The experimenters varied (*a*) the degree of commitment (in terms of whether or not the subjects were allowed to feel that they had a clear choice as to whether or not to write the essay) and (*b*) the magnitude of monetary incentive for writing the essay. The results are quite clear: When commitment was high there

was a dissonance effect; i.e., the smaller the incentive, the greater the opinion change. When commitment was relatively low there was an incentive effect. A different experiment (Helmreich and Collins, 1968) produced similar results. Here the task was also held constant, but instead of being complex (as in the study by Linder *et al.*) it was a simple one. Subjects were asked to record a statement which would be played to a large classroom of other students. In two relatively high commitment conditions the subject's simple statement was put on *video* tape along with his name, class, major, and hometown. In a low-commitment condition the subjects made statements anonymously on *audio* tape. The results paralleled those obtained by Linder *et al.* In the high-commitment conditions the smaller the incentive, the greater the opinion change (dissonance effect); in the low-commitment condition the greater the incentive, the greater the opinion change (incentive effect).

VII. The "Underlying Cognition" Problem

The importance of commitment emerges most clearly when we scrutinize the phenomenon of the white lie more thoroughly. Clearly, every time we say something that we do not believe, we do *not* experience dissonance. Under certain conditions there are some underlying cognitions which serve to prevent the occurrence of dissonance. For example, if we stated a counter-attitudinal position in the context of a formal debate, we would not experience dissonance (see Scott, 1957, 1959; Aronson, 1966). It is clearly understood both by the speaker and the audience that a debater's own personal views have nothing to do with the opinions he expresses. The rules of the game of debating are an underlying cognition which prevents the occurrence of dissonance. Similarly, as teachers we frequently get exposed to a great many stupid ideas from our students. Unless we know the student well—know that he is capable of better ideas and know that he is capable of "taking it"—most teachers refrain from tearing the idea to pieces. Instead, we tend to give the student our attention, nod and smile, and suggest that it is not such a bad idea. We do this because we have a general underlying cognition that we should not discourage students early in their careers and that it is wrong to be unkind to people who are relatively powerless to fight back. It would be ludicrous to suggest that teachers begin to believe that a student's poor idea is really a pretty good one simply because the teacher had said "pretty good idea" to the student. The underlying cognition prevents the occurrence of dissonance. But observe how commitment can make it a dissonant situation: If, on the basis of the teacher's statement, the student had decided to read his paper at an APA convention, the teacher might begin to convince himself

that it was not such a bad idea—because the teacher has now been committed—he has misled the student into taking some action. This increases the teacher's commitment to the situation and is probably more powerful than the underlying consonant cognition "this is how we treat students." The teacher now seeks additional justification for having misled the student, perhaps by convincing himself that it was not such a bad idea after all.

The general point to be made here is an important one. Inconsistency is said to arise between two cognitive elements if "considering these two alone, the obverse of one element follows from the other" (Festinger, 1957, pp. 260–261). But we know that in most situations two cognitions are almost never taken by themselves. Occasionally, two cognitions, which in the abstract would appear to be dissonant, fail to arouse dissonance because of the existence of a "neutralizing" underlying cognition. For example, suppose I know a brilliant fellow who is married to an incredibly stupid woman. These cognitions are inconsistent but I would contend that they do not necessarily produce dissonance; i.e., I can tolerate this inconsistency—it does not cause me pain, it does not necessarily lead me to change my opinion about the brilliant fellow or his wife. I do not conclude that he is dumber than I thought or that she is smarter. Why? Because I have a general, underlying, pervasive cognition that there are a multitude of factors which determine mate selection—similarities of intelligence being only one of them. Moreover, I know that it is extremely rare for all of these to be matched in a marital relationship. Therefore, although taken by themselves, the above two cognitions are incompatible, I simply do not ever take them by themselves.

Festinger suggested that one way to reduce dissonance is to martial consonant cognitions; thus, he might say that the above reasoning is one way of reducing dissonance. But it is a moot yet important point whether I martialed the above cognitions as a result of the inconsistency, or whether I walked around with these cognitions about mate selection before the fact. If the latter is the case, then it can hardly be said that I dredged up this overriding cognition as a means of reducing dissonance. For example, let us look at the finding (Aronson and Carlsmith, 1963; Turner and Wright, 1965; Freedman, 1965) that children threatened with mild punishment for playing with a toy tend to derogate that toy after refraining from playing with it. Suppose that many children entered the situation with the strong feeling that adults must be obeyed always, even when commands are arbitrary and threats are nonexistent ("My mother, right or wrong!"). Put another way (which will become important in a moment), suppose that part of the self-concept of these children involved "obedience to adult authority." If this were the case there would have

been no dissonance even though, *taken by itself,* the cognition "I like that toy" is dissonant with the cognition "I'm not playing with it." If this were *not* already a part of the person's self-concept, it might have become one as a function of the experiment; i.e., developing a belief in the importance of obedience is one way of reducing dissonance in the above situation. But if it were already there, there would have been no dissonance to begin with.

This added complexity should not lead us to throw up our hands in despair. Rather, it should lead us to a more careful analysis of the situations we are dealing with and perhaps even to a greater concern with individual differences.

VIII. The Importance of the Self-Concept and Other Expectancies

In discussing the difficulties involved in making precise predictions from dissonance theory in some situations, we have purposely tiptoed around the problem of individual differences. The fact that all people are not the same presents intriguing problems for dissonance theory as it does for all general motivational theories. Of course, one man's problem is another man's primary datum; i.e., psychologists who are interested in personality regard individual differences as being of great interest. For those who are primarily interested in establishing nomothetic laws, individual differences usually constitute nothing more than an annoying source of error variance. Nevertheless, whether or not we are interested in individual differences per se, an understanding of the way people differ in dissonant situations can be an important means of clarifying and strengthening the theory. Basically, there are three ways that individuals differ which should be of concern to people investigating dissonance theory:

(1) People differ in their ability to tolerate dissonance. It seems reasonable to assume that some people are simply better than others at shrugging off dissonance; i.e., it may take a greater *amount* of dissonance to bring about dissonance-reducing behavior in some people than in others.

(2) People probably differ in their preferred mode of dissonance reduction; e.g., some people may find it easier to derogate the source of a communication than to change their own opinion. Others may find the reverse resolution easier.

(3) What is dissonant for one person may be consonant for someone else; i.e., people may be so different that certain events are regarded as dissonant for some but not for others.

The first two possibilities are covered in depth elsewhere (see Abelson *et al.*, 1968). We shall not dwell on them here except to say that earlier in this article we underscored the difficulty of ascertaining the proper conditions for establishing whether or not dissonance exists for *most people* and the conditions for determining which mode of dissonance reduction *most people* will use; the existence of individual differences complicates matters further by adding another important dimension which should eventually be specified. The third case will be discussed here because it is of great relevance for the general theory. Furthermore, it is prior to the other two, for before one can determine whether (*a*) an individual is experiencing *enough* dissonance to reduce it or (*b*) *how* he will reduce it, we must first determine whether the events are indeed dissonant, consonant, or irrelevant to him.

Dissonant or consonant with what? Recall the earlier discussion wherein a rule of thumb based upon an expectancy was described (e.g., the Mr. Roy Wilkins of the NAACP and wife-beating novelist illustrations). Dissonance theory makes a clear prediction when a firm expectancy is involved as one of the cognitions in question. Thus, our cognition about Roy Wilkin's *behavior* can be dissonant with our expectancy about how he *will* behave. Dissonance theory is clearer still when that firm expectancy involves the individual's self-concept, for—almost by definition—our expectancies about our own behavior are firmer than our expectancies about the behavior of another person. Thus, at the very heart of dissonance theory, where it makes its clearest and neatest prediction, we are not dealing with any two cognitions; rather, we are usually dealing with the self-concept and cognitions about some behavior. If dissonance exists it is because the individual's behavior is inconsistent with his self-concept.

As we suggested several years ago (Aronson, 1960), this point has been elusive because almost all of the experiments testing dissonance theory have made predictions based upon the tacit assumption that people have a high self-concept. Why do people who buy new cars selectively expose themselves to advertisements about their own make of car (Ehrlich *et al.*, 1957) and try to convince themselves that they made the right choice? Because the knowledge that one has bought a junky car is dissonant with a high self-concept. But suppose a person had a low self-concept? Then the cognition that he bought a junky car would *not* be dissonant. Indeed, if the theory holds, such a person should engage in all kinds of "bizarre" behavior such as exposing himself to advertisements about other cars, hearing squeaks and rattles that are not even there, and saying, in effect, "Just my luck, I bought a lemon—these things are always happening to me." In short, if a person conceives of himself as a "schnook,"

he will expect to behave like a "schnook"; consequently, wise, reasonable, successful, "un-schnooky" behavior on his part should arouse dissonance. One of the advantages of this kind of statement is that it allows us to separate the effects of dissonance from other hedonic effects; that is, people with *high* self-concepts who fail *do* experience dissonance, but they experience many other negative feelings as well simply because failure is unpleasant. No one can deny that success brings pleasant consequences for people with high and low self-concepts alike; that is, regardless of a person's self-concept, successful achievement is often accompanied by such pleasant things as acclaim, money, fame, admiration, and popularity. But dissonance theory allows us to predict that for people with low self-concepts the "good feelings" aroused by the products of success will be tempered by the discomfort caused by dissonance—the dissonance between a low self-concept and cognitions about high performance. Several experiments have demonstrated that people who expect failure are somewhat discomforted by success (Aronson and Carlsmith, 1962; Cottrell, 1965; Brock *et al.*, 1965), but the data are by no means unequivocal (see Abelson *et al.*, 1968).

Thus, although we were not fully aware of it at the time, in the clearest experiments performed to test dissonance theory, the dissonance involved was between a self-concept and cognitions about a behavior that violated this self-concept. In the experiments on counter-attitudinal advocacy, for example, we maintain that it is incorrect to say that dissonance existed between the cognition "I believe the task is dull" and "I told someone that the task was interesting." This is not dissonant for a psychopathic liar—indeed, it is perfectly consonant. What is dissonant is the cognition "I am a decent, truthful human being" and the cognition "I have misled a person; I have conned him into believing something which just isn't true; he thinks that I really believe it and I cannot set him straight because I probably won't see him again." In the initiation experiment, in our opinion dissonance does not exist between the cognition "I worked hard to get into a group" and the cognition "The group is dull and stupid." Recall that for a "schnook" these cognitions are not at all dissonant. What is dissonant in this situation is the cognition "I am a reasonable and intelligent person" and the cognition "I have worked hard for nothing." Reasonable, intelligent people usually get a fair return for their investment—they usually do not buy a pig in a poke (unless there is some reasonably implicit guarantee, as in Freedman's [1963] experiment discussed above).

As an empirical refinement this self-concept notion is probably trivial. Experimenters have made the tacit assumption that people have high self-concepts—and these experimenters achieved positive results; this implies that the assumption is valid for most people in these situations.

But the self-concept notion may constitute a valuable and interesting *theoretical* refinement. A theory becomes infinitely more meaningful when its domain is clearly demarcated; i.e., when it states clearly where it does not apply. If it is the case that dissonance theory makes unequivocal predictions only when the self-concept or another strong expectancy is involved, then an important set of boundary conditions has been drawn. What we have described earlier as a rule of thumb may actually be a conceptual clarification.

It was stated early in this article that "at the center of the theory" predictions are unequivocal, but at the "fringes" they are somewhat fuzzy. At this point, we can assert that "at the center" means situations in which the self-concept or other firm expectancies are involved—and in which most people share the same self-concepts or other firm expectancies. Thus, most people have self-concepts about being truthful and honest so that we can make clear predictions intuitively, as in the Carlsmith *et al.* (1966) experiment. Most people have self-concepts involving making reasonable and wise decisions so that we can intuit clear predictions, as in the Brehm (1956) or Jecker (1964) experiments. Also, most people have firm expectancies about what Mr. Wilkins might say about Negro intelligence, so that a dissonance theory prediction makes sense and can be made clearly, even though a self-concept is not involved. The prediction about the great novelist who beats his wife gives the theory trouble precisely because people differ tremendously with regard to whether or not they expect a particular novelist to be a gentle and considerate man. In a specific instance, the knowledge of whether or not individual X has this expectancy would increase the accuracy of the prediction. In our opinion, this is of no great importance. What we consider important is the recognition of the fact that dissonance theory may be best suited for making general predictions in situations where expectancies are firm and nearly universal.

Several years ago, Zajonc (1960) raised a very interesting and reasonable question: If dissonance is bothersome, why do we enjoy magicians? That is, magicians can be thought of as people who arouse dissonance. Should we not experience pain and discomfort when we see rabbits pulled from hats, women sawed in half, or dimes turned into quarters? Perhaps the reason that we are not upset by magicians is because the behavior of a magician is consonant with our expectancy regarding magicians. That is, since we know in advance that a magician uses tricks and sleight-of-hand techniques to produce interesting illusions, why should we experience dissonance when we see him do these things? Is this not akin to the "schnook" who expects to purchase an inferior car?

Before the reader dismisses this as mere sophistry, it should be re-

marked that this is an empirical question. What is suggested is that we enjoy magicians *only* when they are billed as magicians. If they were not billed as magicians, they would cause quite a bit of discomfort. If the fellow sitting next to us at the bar suddenly "became" a fat woman, this would be very upsetting—unless the bartender had forewarned us that we were sitting next to a professional quick-change artist known as "Slippery Sam, the man of a thousand faces." If he then "became" a fat woman, we would be thrilled and delighted. It is interesting to note that the bartender could have produced a similar result if he had forewarned us that he had placed some LSD in our drink. In short, either being told a man is a magician or being told we were fed a halucinogen is consistent with seeing a man "become" a fat woman.

Empirically, this can be tested by finding some young children or some people from a different culture who have never seen or heard of magicians. Without the expectancy regarding magicians that Zajonc and the author share, these subjects might be quite upset by the goings on.

IX. Man Cannot Live by Consonance Alone

The implication of this article is that dissonant situations are ubiquitous and that man expends a great deal of time and energy attempting to reduce dissonance. It should be obvious that man does many other things as well. Festinger never intended dissonance theory to be imperial or monolithic. In 1957, he emphasized the fact that dissonance reduction is only one of many motives and can be counteracted by more powerful drives. We have already discussed how dissonance effects and reward-incentive effects can both occur in the same experimental design. Even more basic is the confrontation that occurs when consonance needs meet utility needs head-on. An extremely high drive to reduce dissonance would lead man to weave a cocoon about himself; he would never admit his mistakes and would distort reality to make it compatible with his behavior. But if a person is ever going to grow, improve, and avoid repeating the same errors, he must sooner or later learn to profit from past mistakes. One cannot profit from one's mistakes without first admitting that one has *made* a mistake. And yet, the admission of error almost always arouses some dissonance. The fact is, people frequently *do* profit from their mistakes; thus, people occasionally do not avoid or reduce dissonance.

To illustrate, if a man spends $50,000 for a home, dissonance theory would suggest that he may be the last to notice that during the rainy season there is water in the basement. Noticing water would arouse dissonance by making his purchase appear to have been a mistake. But to notice the water has great utility—for he must notice it in order to repair it,

or at least to prepare for the flood. Moreover, if he does not take cognizance of his leaky basement he may walk into the same problem the next time he purchases a house. Thus, dissonance and utility are in constant tension by virtue of the fact that under certain conditions dissonant information may be extremely useful and, conversely, useful information can arouse dissonance. This phenomenon was discussed by Mills *et al.* (1959), who suggested that one reason why people frequently do not avoid dissonant information is that it often has great utility. In their experiment, they found that many subjects who had recently committed themselves to taking essay examinations as opposed to multiple-choice examinations opted to read articles explaining why essay examinations were more difficult, anxiety-provoking, etc. In this situation, apparently, the utility of the information was considered worth the price to be paid in dissonance. More recent experiments by Canon (1964) and Aronson and Ross (in preparation) have begun to indicate the requisite conditions for these effects. Precise predictions can be made by manipulating the strength of the opposing drive. As utility increases and dissonance becomes weaker, individuals begin to show a preference for dissonance-arousing but useful information. But as dissonance increases (i.e., immediately after a decision or when commitment is high, etc.), individuals tend to manifest dissonance-reducing behavior in spite of the fact that the future consequences of such behavior tend to be unpleasant.

X. Epilogue

The theory of cognitive dissonance is much more complicated than we thought it was some 10 years ago. A good deal of research has been done since then. Many of the problems which were specified earlier have been solved; many new problems have been unearthed, some of which remain to be solved. Hopefully, future research will lead to the emergence of still new problems, which will lead to still more research, which will continue to yield an increased understanding of human behavior. Perhaps this is what the scientific enterprise is all about.

In their critique of five years of dissonance theory, Chapanis and Chapanis (1964) concluded with the pronouncement "Not proven." Happily, after more than 10 years, it is still not proven; all the theory ever does is generate research.

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ATTITUDES AND ATTRACTION

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