THE PSYCHOLOGY OF SELF-AFFIRMATION: SUSTAINING THE INTEGRITY OF THE SELF

Claude M. Steele

DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Sam: Why is it what you just said strikes me as a mass of rationalizations?
Michael: Don't knock rationalization. Where would we be without it? I don't know anyone who could get through the day without two or three juicy rationalizations. They're more important than sex.
Sam: Ah, come on. Nothin's more important than sex.
Michael: Oh Yeah? You ever gone a week without a rationalization?
(*The Big Chill,* 1982)

I. Introduction

In 1957 Leon Festinger relied heavily on the rationalizations of cigarette smokers to illustrate the nature of dissonance processes. The smoker's dilemma was ideal for this purpose; smoking cigarettes stands in dissonant relationship to evidence that cigarettes harm health, an inconsistency clearly in need of resolution. Means of reducing dissonance were illustrated as possible resolutions of the dilemma: the smoker could quit, deny or diminish the health risks, rationalize that the benefits of smoking (e.g., relaxation) outweighed its risks, and so on. Importantly, from the standpoint of the reasoning presented in this article, Festinger's description of these resolutions included only changes (cognitive or behavioral) related to the provoking inconsistency; the elements of the inconsistency—the habit of smoking and the belief that smoking causes disease—had to be changed, rationalized, or diminished in importance. In 1957, this restriction

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surely seemed reasonable. Society was not saturated with information linking smoking to lung cancer, heart disease, and emphysema. Nor was there a prevalent social disapproval of smoking. Thus the smoker might well have escaped his dilemma through denial of the smoking–health link or another of Festinger's remedies.

These remedies, however, should be less effective in the world of the contemporary smoker. Evidence that smoking causes serious disease is virtually unassailable and widely disseminated. Social disapproval of smoking borders on the zealous; laws even restrict it to isolated areas. Aside from quitting, contemporary society has made it difficult for the smoker to resolve his dilemma through any of the remedies outlined by Festinger. Still, of course, people continue to smoke, and this fact raises an interesting question: Is the battery of cognitive strategies and rationalizations that Festinger granted to the smoker sufficient to explain how he copes with his dilemma in these times, or does the smoker have an extra degree of psychological resilience not captured by dissonance theory?

In this article, I will argue that the latter of these possibilities is closer to fact and attempt a general analysis of the processes through which this "resilience" is achieved. At the basis of this analysis, I propose the existence of a self-system that essentially explains ourselves, and the world at large, to ourselves. The purpose of these constant explanations (and rationalizations) is to maintain a phenomenal experience of the self—self-conceptions and images—as adaptively and morally adequate, that is, as competent, good, coherent, unitary, stable, capable of free choice, capable of controlling important outcomes, and so on. I view these self-affirmation processes as being activated by information that threatens the perceived adequacy or integrity of the self and as running their course until this perception is restored, through explanation, rationalization, and/or action.

From the standpoint of these processes, what is disturbing about the inconsistency of smoking cigarettes (aside from fear of the actual effects of smoking) is not the inconsistency itself, as Festinger had argued, but the threat the inconsistency poses to the perception of self-integrity, its implication that one is foolish or unable to control important behavior. Thus, to reduce the disturbing impact of his dilemma, the smoker need not—in contrast to Festinger's view—resolve the provoking inconsistency. He need only engage in some affirmation of general self-integrity, even when that affirmation bears no relationship to smoking or to the inconsistency that smoking produces. He might, for example, join a valued cause, spend more time with his children, or try to accomplish more at the office, and in these ways affirm a larger sense of being an adequate person. The inconsistency would remain, of course, yet in the context of other valued self-concepts, it should pose less threat to global self-integrity and thus be more tolerable. Herein may lie the smoker's resilience—a resilience that, I hope to

demonstrate, has been underestimated in many areas of social psychological research, including research on dissonance and attributional processes, the focus of this article.

The smoker's dilemma can illustrate another point as well, a point primarily of orientation: the research reported in this article focuses on how people cope with the implications of threat to their self-regard rather than on how they cope with the threat itself. Smoking cigarettes and the possibility of ill effects that go with it obviously constitute a physical threat to the smoker's welfare and outcomes. The smoker must in some way cope with this threat; he can quit, deny the risks, smoke less, and so on. Considerable research and theory in psychology have examined how people cope with threats per se (e.g., Lazarus, 1968, 1983). Indeed, nearly all theory concerning how people respond to environmental and interpersonal demands can pertain to how people cope with actual threat. In addition to constituting a threat to physical health, however, smoking cigarettes can threaten the perceived integrity of the self, one's sense of adaptive and moral adequacy. In general, threats of this sort can arise in many ways: from our own behavior, as in the case of smoking or personal failure; from the judgments of others, as in the case of prejudicial judgments; from catastrophic events, as in the case of serious illness that threatens our sense of control over important outcomes; and so on.

In making this point, several additional considerations should be emphasized. Threats can differ in how much they threaten one's welfare versus one's self-regard. An earthquake, for example, may pose considerable threat to one's actual life outcomes but relatively little threat to one's self-regard. In contrast, faculty raise reviews may pose relatively little threat to life outcomes but might pose considerable threat to self-regard. It is also clear that adaptation to one of these aspects of threat can constitute adaptation to the other. Surely if the smoker successfully stops smoking, he will have coped effectively with both its threat to health and its threat to self-regard. Likewise, if the smoker develops strong self-conceptions of efficacy with regard to quitting, he should find it easier to quit, as efficacy expectations foster strong behavior motivation (cf. Bandura, 1977, 1982). Adaptations to these different aspects of a threat can be interrelated, even interchangeable. This article, however, analyzes how coping processes restore self-regard rather than how they address the provoking threat itself.

A. NAME-CALLING AND COMPLIANCE: A DEMONSTRATIONAL STUDY

That people might try to cope with one kind of self-threat by affirming an unrelated aspect of the self—an idea central to our later reasoning about self-

affirmation—was first suggested in our research by the results of an experiment conducted some years ago on the effect of name-calling on compliance (Steele, 1975). The important elements of this study were as follows.

In the first part of this experiment, the part in which self-threat was manipulated, women in Salt Lake City who were at home during the day were telephoned on a Wednesday afternoon by a male experimenter posing as a pollster. After introducing himself and inquiring as to their interest in participating in a future poll on women's issues, he told women randomly assigned to a relevant negative name condition that it was pretty much common knowledge that, as members of their community, they were uncooperative with community projects. That was the name-calling. He ended his calls by asking each subject whether she would like to see a future poll on women's issues conducted in her community. Because of the unusually strong ethic for community cooperation in this heavily Mormon city (approximately 50% of the population), especially among women who work at home, we presumed that this name-calling would threaten a reasonably important self-concept of these women. The experiment included several other conditions as well. In a positive name condition, the pollster in the first telephone contact told the women that it was common knowledge that, as members of their community, they were cooperative with community projects. In an irrelevant negative name condition, again based on their community membership, the pollster impugned their concern for driving safety and the carefulness of their driving. Finally, there was a base rate control condition in which subjects did not receive an initial name-calling telephone contact.

Two days later, on Friday, the women in all conditions (in the control condition these women had not received an initial call) were contacted by a female experimenter posing as a community member ostensibly unrelated to the first caller. She asked each woman to help with a community project—the development of a food co-op—by listing everything in her kitchen to help guide the wholesale buying for the co-op. She told the women that she would call them back the following Monday to collect the information. (Subjects who agreed to help were recontacted and their information passed on to a real food co-op.)

The predictions for this experiment were guided by a general cognitive consistency theory framework. The relevant negative name condition, we assumed, would establish an inconsistency between the implications of the name—that as a member of her community the subject was perceived as uncooperative—and the subject's self-concept of being a cooperative person. Furthermore, we expected more subjects in this condition to help with the food co-op to bolster their self-concept of being cooperative, thereby refuting the provoking inconsistency. Following this logic, we expected less helping in the other conditions: in the positive name and control conditions because no motivating inconsistency had been established, and in the irrelevant negative name condition, because, presumably, the driving safety inconsistency could not be discounted by helping

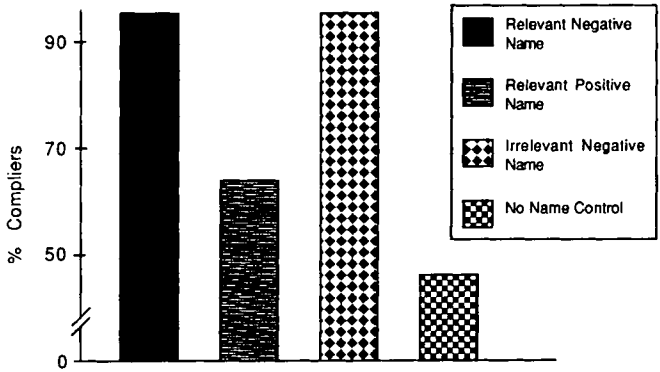

Fig. 1. Name-calling and compliance.

with a food co-op. In fact, as a point to which I shall return, the irrelevant negative name condition was included only at the last moment as a control for the role of consistency processes in mediating the predicted effects.

The mean percentages in Fig. 1 show that, as expected, the relevant negative name condition caused more helping than either the base rate or the positive name conditions, virtually twice as much. The figure, however, reveals a surprise: the irrelevant negative name condition also caused twice as much helping as these other conditions. Regardless of whether subjects were called uncooperative with community projects or bad drivers, more of them helped in these negative name conditions than in the other conditions, and dramatically so. These same condition effects were also reflected in the actual amount of compliance, as measured by the amount of information subjects provided during the final phone contact. These results bring to light several issues that have directed our research in the years hence and that comprise the major themes of this article.

B. SELF-AFFIRMATION PROCESSES AND THEIR IMPLICATIONS

1. The Importance of Self-Affirmation Processes

Clearly, consistency-maintaining processes did not mediate the effects of name-calling in this study. Helping with the establishment of a community food co-op could not refute, in the irrelevant negative name condition, the specific inconsistency stemming from the bad driver name. Thus the greater helping of women in this condition had to be mediated by some process other than the need for psychological consistency. The simplest explanation seems to be that women in the negative name conditions helped more in order to reaffirm their general

goodness and worth after their goodness had been threatened. Whereas helping with a food co-op could not disprove the bad driver label, it could go some way in proving that they were good, worthy people. We argued, then, that name-calling induced helping in this study by arousing a general ego-protective system, one function of which is to affirm an overall self-concept of worth after it has been threatened.

In doing so, we suggest that the importance of such a self-system in mediating many social psychological phenomena, in particular, responses to self-threat. In different terms, virtually all self-theorists have described this aspect of the self: William James (1915) used the terms "self-seeking" or "self-preservation" to describe the seeking of things, including relationships and beliefs, that benefit and protect our welfare and self-esteem; Allport (1943) described the same aspect of the self with the term "ego-enhancement"; (Epstein (1973) asserted that there is a basic need to enhance and protect the self to which "all other needs are subordinate"; Greenwald (1980) recently proposed a "totalitarian ego" that biases information processing to affirm the goodness, strength, and stability of the self. The function of this ego-protective system is generally assumed to be that of sustaining self-concepts that facilitate effective behavior. This view is most explicit, perhaps, in Bandura's theory of self-efficacy (cf. Bandura, 1977, 1982), which assumes that expected efficacy with regard to a behavior is critical to motivating performance of the behavior. Other research, as well, has demonstrated that expectations of efficacy, even when illusory, are critical to the undertaking and persistence of effective action (cf. Greenwald, 1980; Silver & Wortman, 1980; Taylor, 1983).

Despite the broad historical recognition of these processes, they really have never occupied center stage in scientific psychology. A probable reason is that the idea of the self and its ego-protective processes have run afoul of the major paradigms guiding psychology. Allport (1943) made this point when he stated that the concept of the ego (self) "fell from grace in psychology" with the rise of positivism, the victim of positivistic imperatives for "absolute objectivity, and absolute reductionism." Although the currently dominant cognitive paradigm in psychology has greatly aided the study of the self (several superb demonstrations of which are included in this volume), ego-protective processes, I shall argue, remain difficult to reduce to purely cognitive mechanisms, at least as far as these have been elucidated. As a result, ego protection exists in social psychology as a "crabgrass" process, popping up frequently as a alternative to more paradigm-consistent mediators but rarely as a focus of inquiry itself.

Still, findings like those of the name-calling experiment suggest that attention to these processes as foreground might be worthwhile. In this article, I report the efforts of my colleagues and I to do this. As noted earlier, this work assumes the existence of a self-system that explains ourselves to ourselves, a system that persistently explains our behavior, and the world at large, so as to sustain a phenomenal experience of the self as adaptively and morally adequate. This self-

affirmation system, we assume, is activated whenever information threatens the perceived integrity of the self and pressures for adaptation, behavioral or cognitive, until this perception is restored. Our research suggests that these processes have more systematic influence on social psychological phenomena than has yet been recognized. This article describes this research first and then presents a model of these processes.

2. *The Fluidity of Self-Affirmation Processes*

That some women responded to an impugnment of their driving by helping more with a food co-op suggests that people respond more fluidly to self-threat than is typically recognized. Like the smoker described earlier in the article, people apparently can adapt to self-threat through actions that affirm the general integrity of the self, even when these adaptations do nothing to resolve the provoking threat itself. Indeed, for some threats this may be the only adaptation possible. Taylor (1983) has found, for example, that breast cancer victims, unable to eliminate the threat they are under, adapt by changing their lives to affirm their basic values, such as quitting a boring job and beginning to write short stories.

As important, this fluidity of adaptation suggests the existence of a larger, ego-protective self-system not geared to resolving specific self-concept threats, but geared to maintaining an overall conception of self-integrity. Allport (1943) made a similar point in reacting to educator John E. Anderson's remark that a student's "success in one area may more than compensate for failure in many areas" (1942, p. 349):

> Only in terms of ego psychology can we account for such fluid compensation. Mental health and happiness, it seems, does not depend upon the satisfaction of *this* drive or *that* drive, it depends rather upon the *person* finding *some* area of success *somewhere*. (p. 466)

Thus, perhaps more than any other effect attributable to ego protection, this "fluid compensation" implies the existence of a system for maintaining the perceived integrity of the self rather than for resolving particular self-threats.

3. *Self-Affirmation Processes and Social Psychological Theory*

If this reasoning can be granted for the moment, it has implications for an important class of theories in social psychology—theories constructed around distinct motives, such as for consistency, equity, self-completion, control, and freedom. In tests of these motives, they are aroused invariably by some form of self-threat; for example, in reactance research (Brehm, 1970) by threatening a personal freedom, in self-completion research (e.g., Wicklund, 1983) by threat-

ening the achievement of an important self-goal, in equity research (e.g., Walster, Berscheid, & Walster, 1975) by threatening a self-conception of fairness, in learned helplessness research (Seligman, 1975) by threatening one's environmental control, and so on. Self-affirmation logic suggests that the actual goal of subjects following these manipulations may be to affirm the integrity of the self—like the women called a negative name in the name-calling experiment, or like our modern smoker—rather than to resolve particular motive states tied to particular threats.

This possibility may have been obscured by a paradigmatic problem in the tests of these models. Specifically, subjects usually are given only one means of responding to the threat, a means that invariably counters the particular threat itself. For example, following an equity manipulation, subjects are only allowed to restore equity; following a dissonance manipulation, subjects are only allowed to restore consistency; following a reactance manipulation, subjects are only allowed to reassert the threatened freedom. Subjects' use of the "forced" options in these experiments—the only available means of reaffirming self-integrity after it has been threatened—is then taken as evidence of a distinct motivational process. Were other self-affirming responses available in these experiments, subjects might have used them, and having done so, they might even have foregone attempts to resolve the provoking threats. Taylor (1983) recently made a similar point in describing some women's adaptations to contracting breast cancer; ". . . the specific [adaptive] response . . . has no fixed meaning independent of the goals or functions it serves. The specific form matters little or not at all" (p. 1169). This fact, I shall argue, clouds the interpretation of much of the research testing specific motivational processes in social psychology.

The logic underlying these themes can be summarized in two working assumptions. First, after an important self-concept is threatened, an individual's primary self-defensive goal is to affirm the general integrity of the self, not to resolve the particular threat. Second, because of this overriding goal, the motivation to adapt to a specific self-threat of one sort may be overcome by affirmation of the broader self-concept or of an equally important, yet different, aspect of the self-concept, without resolving the provoking threat.

Over the years we have tested this reasoning in several contexts, in particular those that would allow us to pit these arguments against specific motive theories in social psychology. I turn first to our research examining these ideas as an alternative account of dissonance processes.

II. Dissonance as Self-Affirmation

Some affirmation of our worth seems to stem for the very nature of life. To live is to act; to act (without whim) is to act for reasons; to view our actions as based on good reasons is

> to see them as endowed with some degree of worth; and to identify ourselves with such acts is tacitly to regard ourselves as having worth. (Martin, 1985, p. 6)

What disturbed the women in the name-calling experiment about being called uncooperative with community projects was apparently not the inconsistency established by the name, but the name's threat to their sense of being good people. Could the same thing be true for psychological inconsistency in general? Could the motivation to reduce inconsistency stem more from a need to affirm the integrity of the self than from a need to resolve important inconsistencies per se? To examine this possibility, we turned to the largest body of findings attributable to a consistency motive: dissonance phenomena.

For nearly 30 years, dissonance researchers have tricked subjects into "volunteering" such self-contradictory actions as writing public essays against their beliefs, expending effort on meaningless tasks, and delivering embarrassing speeches in front of prestigious audiences. Lacking any better means of reducing the distress over these actions, subjects typically attempt to justify them by changing their beliefs or attitudes to be more consistent with their actions. For example, they state that their beliefs were not really so different from the essay they wrote or that the meaningless task they worked so hard at was not really so meaningless. Most versions of dissonance theory (e.g., Cooper & Fazio, 1984; Fesinger, 1957; Wicklund & Brehm, 1976) assume that the sheer inconsistency of these relatively important cognitions implores some resolution.

Our interest in dissonance was piqued by another fact as well. Almost from the inception of the theory, there has been ambiguity over the role of self-based processes in mediating dissonance effects (e.g., Aronson, 1969; Brehm & Cohen, 1962; Wicklund & Brehm, 1976). While keeping the consistency principle as the basic framework of the theory, revisionists have argued that conditions unrelated to consistency are necessary for dissonance arousal: the dissonant act has to be freely chosen; its negative consequences have to be foreseeable; it has to contradict an important, firmly held expectancy, and so on. Clearly, these conditions have as much to do with ensuring that the dissonant act will threaten one's goodness, competence, and worth as with activating consistency motives. Greenwald and Ronis (1978) offered the following analysis of the counterattitudinal role-playing experiment which highlights this point:

> It becomes possible to hypothesize that the pair of cognitions that produces the tension toward cognitive change [i.e., dissonance motivation] is not the AB pair . . . A (*I believe X*, where X is the initial opinion) and B (*I agreed to advocate not X*) . . . but rather a somewhat different pair, that is, C (*I caused [undesired] consequence Y*) and a self-concept cognition, D (*I am a good [or intelligent] person who does not do such evil [or stupid] things*) . . . The motivation for cognitive change in contemporary versions of dissonance theory is indistinguishable from ego defense. (pp. 54–55)

Although the contending interpretations of dissonance phenomena became increasingly distinct at the conceptual level, research achieved little empirical

separation. Invariably, the conditions tested by the revisionists confounded both sources of change. Consider, for example, the foreseeability variable. Research has shown that subjects must be able to foresee the negative consequences of a dissonance act for it to arouse dissonance (e.g., Cooper, 1971; Goethals & Cooper, 1975). Such foreseeability, however, establishes both an inconsistency (i.e., "I believe x, yet knowingly did not x") and impugns the self (i.e., "having done x in the face of its negative consequences, I am bad or stupid"). Which of these effects, then, causes dissonance?

These accounts of dissonance processes, we recognized, paralleled the accounts of the name-calling results. Greater compliance following the uncooperative label, like the changes following dissonant acts, could stem from a need to reestablish psychological consistency or a need to reaffirm a threatened self. In the name-calling experiment, the irrelevant negative name condition unconfounded these processes, preventing the operation of consistency processes while allowing the operation of self-affirmation processes.

The logic of this condition suggested how the explanations of dissonance could be unconfounded: simply allow subjects to do something after a dissonant act that left the provoking inconsistency intact but affirmed their larger self-worth. We expressed this logic as follows:

> If dissonance stems from the threat to the self (ego) inherent in a given inconsistency, then after dissonance has been aroused, thoughts and actions that affirm an important aspect of the self-concept should reduce dissonance by casting the self in a positive light. This should occur even when the self-affirming thoughts have no relevance to the provoking inconsistency (in the sense of being able to resolve it or reduce its objective importance). For example, though specific inconsistencies happen to them all, the resulting dissonance may be reduced in the idealist by defense of a good cause, in the religious person by worship, or in the aesthetic by appreciation of a good painting. When considered along with value-affirming images of the self, specific, self-threatening inconsistencies may become tolerable. On the otherhand, if dissonance is rooted in a need for psychological consistency, then self-affirmation—being unable to resolve or dismiss the still important inconsistency—should not reduce dissonance. (Steele & Liu, 1983, p. 6)

The results of an earlier experiment by Steele and Liu (1981) fit this reasoning. Prior to writing dissonant essays opposing state funding for handicap facilities, some subjects were told that after the essay they could help blind students by recording exams onto casettes. Other subjects were given no such expectation. Dissonance-reducing attitude change occurred only among subjects not expecting the later, value-affirming response. Expecting to help may have allowed these subjects to affirm an image of themselves as helpful people (e.g., "Although I am writing the essay, I may still help the blind, showing that I am a concerned person.") Expectations of affirming their image may have reduced dissonance by minimizing the self-concept threat inherent in the dissonant act. Unfortunately, a consistency interpretation cannot be ruled out. Resolving to help the blind could make the provoking inconsistency seem less important (e.g.,

"Although I wrote the essay, my helping the blind will undo some of the harm.")—a standard means of dissonance reduction.

If our reasoning is sound, however, the affirmation of any important self-concept—to the extent that it counters the self-threat inherent in the dissonant act—should reduce dissonance.

A. REDUCING DISSONANCE THROUGH VALUE AFFIRMATION

Our first test of this reasoning used the following version of the standard forced-compliance dissonance paradigm. Subjects were selected for strongly opposing a tuition hike at the University of Washington (identified through classroom questionnaires and contacted by phone) and when they arrived for their individual session were told that the experiment examined the effects of attitudes on social perception. To "activate" their attitudes, ostensibly for the social-perception task, they were asked to participate in a "legislative survey" of student views on tuition increases. Then, because of an ostensible oversupply of essays opposing the hike, they were asked to support a substantial tuition increase in their essays. High dissonance was established by giving subjects ample choice to write this essay; low dissonance was established by giving subjects no choice to write this essay. Dissonance reduction was measured as the amount subjects changed their postessay attitudes to fit their essay position. Typically, of course, subjects with choice change their attitudes in this paradigm, and subjects without choice do not.

To test our reasoning about self-affirmation, we had to somehow allow subjects to affirm an important self-concept between the dissonant essay and the postattitude measure. To provide such a test, we first identified two groups of tuition-opposing subjects, one with a strong economic–political value orientation and another group without this orientation. (This was done by administering Schorr's Test of Values along with the tuition-hike questionnaires described above.) Then, in a high-choice condition of the experiment, between the essay and the attitude measure, both groups of subjects completed the Economic–Political subscale of the Allport–Vernon Study of Values (20 items). Completing this subscale, we assumed, would affirm a valued self-concept for subjects with a strong economic–political value orientation but not for subjects without this value orientation. If self-affirmation reduces dissonance, this subscale should eliminate dissonance-reducing attitude change among subjects who hold this value but not among those who do not.

This experiment also included conditions to replicate the standard effect of dissonance on attitude change. These replication conditions followed the above procedures except that the attitude measure immediately followed the dissonant essay, preceding the value scale. In one of these conditions subjects had a choice

in writing the essay and in the other they did not. We expected significant dissonance-reducing attitude change in the former but not in the latter. Both subject groups were run in each replication condition. The total design of this experiment took the form of a 2 × 3 factorial, which arose from crossing two levels of the subject variable (i.e., whether or not subjects were economic–politically oriented) with three treatment conditions: a high choice-affirmation first condition, a high choice-attitude measure first condition, and a low choice-attitude measure first condition.

Figure 2 presents subjects' postattitudes. (There were no condition differences in subjects' preattitudes.) Larger numbers indicate greater attitude change (away from the most extreme opposition to the hike). For the conditions replicating the standard dissonance effect—labeled High Choice-Attitude Measure First and Low Choice-Attitude Measure First in the figure—the results are collapsed over both subject groups, as this factor made no difference in these conditions. These conditions replicated the standard effect of dissonance on attitude change: subjects given a choice to write the essay were significantly more favorable toward the tuition hike than subjects given little choice.

The central question of this experiment is whether affirmation of a valued, but unrelated, self-concept can eliminate dissonance and its accompanying changes. If this is possible, completion of the economic–political scale should cause less dissonance-reducing attitude among subjects who hold this value than among those who do not. Figure 2 shows that this is precisely what happened. Economic–political subjects who could affirm this value immediately after writing a dissonant essay changed their attitudes significantly less than non-economic–political subjects in the same condition. A self-affirming experience, even one so brief as the completion of a 20-item value scale, eliminated dissonance in this paradigm.

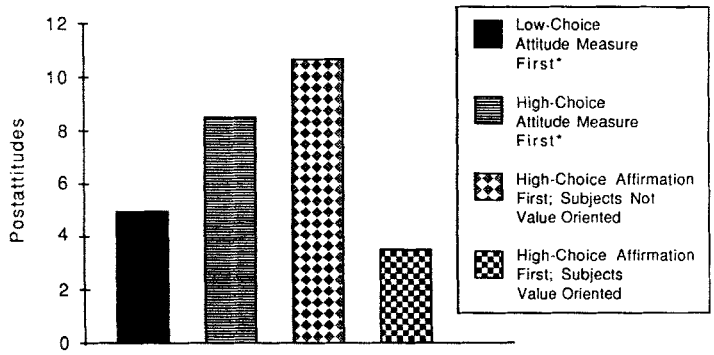

Fig. 2. Dissonance as self-affirmation. In this figure, the 31-point scale has been inverted. Larger numbers indicate more support for the tuition hike, reflecting more dissonance-reducing attitude change. An asterisk indicates data from both value- and non-value-oriented subjects.

B. AFFIRMATION OR DISTRACTION?

We assumed that the value scale eliminated dissonance among like-valued subjects in the above study by allowing them to affirm a valued self-concept. Arguably, however, the scale might have reduced dissonance among these subjects by distracting them from thinking about the dissonant essay. Both the passage of time and distracting activity have been shown to reduce dissonance (e.g., Crano & Messe, 1970; Zanna & Aziza, 1976). Clearly, neither the time delay nor distraction from completing the scale had this effect alone, or in combination, since the same scale did not reduce dissonance among non-economic–political subjects who also completed it. Nonetheless, another version of the distraction explanation remained possible. The high self-relevance of the value scale for economic–political subjects may have caused them to be more absorbed in it, more distracted from dissonant thoughts, and thus less in need of dissonance-reducing change than non-economic–political subjects.

To test this possibility, we designed an experiment, based on the principle that dissonance, once dissipated through misattribution or distraction, can be reinstated. Higgins, Rhodewalt, and Zanna (1979) reevoked dissonance-reducing attitude change 2 weeks after subjects had completed dissonant essays by simply having them write down what they could recall of their earlier essays. This occurred even when dissonance-reducing attitude change in the initial session was attenuated by misattribution (of dissonance arousal) or consonant cognitions (e.g., lack of choice). We reasoned, therefore, that if distraction attenuated attitude change among economic–political subjects in the above study, it should be possible to reevoke this change by having these subjects recall their essays just prior to the postattitude measure. If, however, dissonance was reduced through a genuine self-affirmation, no such reevocation should occur.

The critical condition in this experiment replicated the self-affirmation condition in the earlier study—economic–political subjects wrote dissonant essays followed by a value scale and a postattitude measure—with one exception: just after the value scale and before the postattitude measure, these subjects wrote down three "key" words from their dissonant essays. The results of this experiment, which also included a condition replicating the basic basic effect of dissonance on attitude change and another replicating the dissonance-reducing effect of value affirmation, clearly showed that distraction did not mediate the self-affirmation effect in the earlier study. Economic–political subjects in the "affirmation first/reinstatement" condition did not change their attitudes to reduce dissonance despite evidence (from the dissonance-replication condition) that dissonance had been aroused in this study. This occurred even though they were forced to recall their dissonant essays after the value scale and before the attitude measure, eliminating whatever distracting effect the value scale might have had.

C. GENERALITY OF THE SELF-AFFIRMATION EFFECT IN THE FORCED-COMPLIANCE PARADIGM

We were happy at this point to have replicated the self-affirmation effect, to have done so several times, and to have eliminated several alternative explanations. It was becoming clearer that a need for psychological consistency may not underlie attitude change in the forced-compliance paradigm. When allowed to affirm an important self-concept, subjects seemed surprisingly tolerant of their inconsistencies. They knowingly wrote public essays supporting a tuition hike, yet on the postattitude measure acknowledged their strong opposition to the hike. Even so, concern lingered as to whether the effect would generalize to different materials, a concern based on several considerations. First, the economic–political value orientation is relevant to the tuition hike issue. Thus, completing the scale after the dissonant essay may have reminded these subjects of value-based reasons for opposing the hike, and this "bolstering" of their initial attitudes—a standard dissonance-reduction technique (e.g., Festinger, 1957)—may have eliminated dissonance-reudcing attitude change. A second, related possibility is that the value scale may have "frozen" the initial attitudes of economic–political subjects by making them particularly self-conscious of their attitudes. This possibility was suggested by a finding from Scheier and Carver (1980): when subjects in the forced-compliance paradigm were made self-conscious of their initial attitudes by having to write their essays in front of a mirror, they showed no dissonance-reducing attitude change.

In a third experiment in this series (Steele & Liu, 1983), we changed the materials to test these possibilities. In their dissonant essays, subjects opposed "high funding priority for research and treatment of chronic diseases and handicaps." In place of the economic–political value orientation, we used the aesthetic value orientation to implement the self-affirmation procedure. Subjects scoring high on this orientation appreciated and value beauty in the arts, literature, architecture, and so on. Because an aesthetic value orientation is unrelated to the funding issue, affirming it should in no way bolster subjects' initial favorability toward funding handicap research. To address the self-consciousness explanation, we changed the dependent measure. Scheier and Carver (1980) found that, although their subjects did not reduce dissonance through attitude change, they did reduce dissonance by discounting the strength of their dissonant essays. Thus, the primary dependent measure in this experiment was subjects' ratings of the strength of their essays.

This experiment included four conditions. To replicate the standard effect of dissonance for aesthetic subjects and for the new, perceived essay strength measure, dissonance (high choice) and low dissonance control (low choice) conditions were included. To replicate the self-affirmation effect for aesthetic subjects and the new measure, a self-affirmation condition was included in which subjects

completed an aesthetic value scale between their dissonant essays and the essay strength measure. Finally, a self-affirmation control condition was included, the same as the self-affirmation condition, except that the subjects did not hold the aesthetic value orientation.

Again, the results were clear. Dissonance was successfully replicated for aesthetically oriented subjects using the perceived essay strength measure. And, as in the earlier studies, the value scale eliminated dissonance among subjects holding this value but not among subjects who did not. We concluded, then, that the value scale did not eliminate dissonance in the earlier research indirectly, by allowing subjects to "bolster" their initial opposition to the hike or by "freezing" their initial attitudes through self-consciousness.

D. DISSONANCE AND THE LAB COAT

One criticism of our position thus far has been that it ". . . has not addressed sufficient data to be a complete theory of the causes of cognitive dissonance" (Cooper and Fazio, 1984, p. 232). Pinched as we are by this statement, we acknowledge that it has some validity. Dissonance has not lived by forced compliance alone; whether affirming self-worth can reduce dissonance in other dissonance paradigms is, after all, an empirical question. It might be argued, in fact, that the forced-compliance paradigm is especially favorable to the self-affirmation effect. Writing a public essay against one's beliefs may be more self-threatening than dissonant acts in other dissonance paradigms and therefore more mediated by self-protective processes.

To address this issue, we examined the effect of self-affirmation on dissonance reducing change in the free-choice paradigm, in which subjects simply chose between two moderately valued alternatives—for example, two record albums. The positive features of the nonchosen alternative and the negative features of the chosen alternative are then inconsistent with the choice itself, establishing a dissonance-provoking inconsistency. This inconsistency is reduced by upgrading one's evaluation of the chosen alternative and downgrading one's evaluation of the nonchosen alternative in what is called a "spread of alternatives," or more simply, a rationalization. As they are typically not between highly important alternatives, the choices in these experiments cannot be deemed highly self-threatening—yet a self-affirmation interpretation is possible. Whatever dissonance is aroused in this paradigm may stem less from the inconsistency it establishes than from the choice's threat to the subject's self-competence, goodness, and other self-concepts.

We conducted a free-choice experiment (Steele, Hopp, & Gonzales, 1986) in which, as part of an ostensible "marketing survey," subjects rated their liking of 10 popular record albums and then ranked them in order of preference. The

critical dissonance-provoking choice was produced by giving the subjects a choice to keep either the fifth- or sixth-ranked album. As part of the self-affirmation procedure, half of the subjects had been selected for holding a strong scientific value orientation and for having indicated on a selection questionnaire that a lab coat symbolized their personal values and professional goals. The other subjects were selected for holding a strong business orientation as symbolized by a business suit. After choosing a record album to keep, half of the subjects in each group were asked to put on lab coats in preparation for another experiment involving messy laboratory tasks. For the other half, this instruction was omitted. After waiting 10 minutes, all subjects rerated the albums, providing the critical dependent measure of whether subjects rationalized their choice by changing their evaluations. Putting on a lab coat after the choice and before rerating the albums, we reasoned, whould affirm a central value orientation for the science subjects, but not for the business subjects. These procedures formed a 2×2 design in which one factor was whether or not subjects wore lab coats after their choice and the second factor was whether they held a strong science or business value orientation. If dissonance-reducing change in this paradigm stems from the threat to the self inherent in the choice, the lab coat should eliminate this change among science subjects—for whom it affirms a valued self-concept—but not among business subjects—for whom it affirms nothing. If this change stems from the inconsistency inherent in this choice, the lab coat should not reduce dissonance for either group.

Figure 3 presents the condition means for the "spread of alternatives" index, computed for each subject by adding the increase in rating for the chosen alternative to the decrease in rating for the nonchosen alternative. The larger the rating, the more dissonance reduction; the closer it is to zero, the less dissonance reduction. As the figure shows, the self-affirmation prediction was strongly

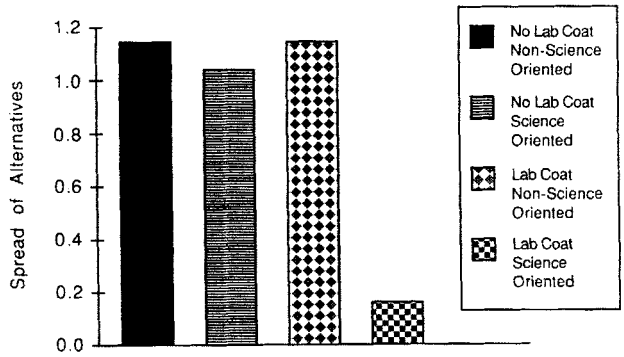

Fig. 3. Dissonance and the lab coat.

supported. For science-oriented subjects, the simple act of putting on a white lab coat significantly reduced their dissonance over the choice of record albums. For business-oriented subjects, the coat had no effect. Science subjects wearing a lab coat showed virtually no spread of alternatives, significantly less than subjects in any other condition. The lab coat eliminated their dissonance completely. This result has been replicated recently (cf. Steele *et al.*, 1986). Clearly, then, the effect of self-affirmation on dissonance generalizes to paradigms other than the forced-compliance paradigm.

E. THE NATURE OF DISSONANCE MOTIVATION

Taken together, the results of this series of studies provide strong support for the reasoning derived from the name-calling experiment. Whether psychological inconsistency emanates from a name or one's own dissonant behavior, the disturbing thing about it, the thing that motivates behavior and cognitive changes, is its inherent threat to self-adequacy, not the fact of the inconsistency. In all of these experiments, once subjects were allowed to affirm integrity-restoring images of the self, they tolerated specific inconsistencies with no attempt at resolution. I might add that the effect of the self-affirmation procedures in these experiments did not stem from their enhancement of subjects' moods, a condition which has been shown to eliminate dissonance effects (cf. Cooper, Zanna, & Taves, 1978; Steele, Southwick, & Critchlow, 1981). Nonetheless, Steele and Liu (1983) measured the effect of the value scales used in these procedures on subjects' moods. Even among subjects holding the same value, the scale had no mood-enhancing effect. Over these studies, self-affirmation appears to have eliminated dissonance by somehow reducing the "sting-to-the-self" inherent in dissonance-provoking inconsistencies.

1. What Dissonance Is Not

As Wicklund and Brehm (1976) have noted, early versions of dissonance theory ". . . did not reduce the tension state of dissonance to more molecular elements in an attempt to explain why inconsistency should be motivating" (p. 283). Revisions of the theory detailed conditions needed for dissonance arousal that, as noted earlier, confounded inconsistency and self-threat. For example, Aronson (1969) argued, in essence, that an inconsistency had to implicate the self to arouse dissonance. (Although Aronson's view essentially limits dissonance-provoking inconsistencies to those that involve the self—a position identical to our own—Aronson retained the idea that dissonance reduction is motivated by a need for psychological consistency among the provoking cognitions rather than a need to affirm the larger self, as we have argued. Aronson, for

example, would not predict that affirming an aspect of the self unrelated to a dissonance-provoking inconsistency could reduce the pressure to resolve the inconsistency.) The present studies unconfounded self-threat and inconsistency and found that an otherwise dissonant-provoking inconsistency does not motivate cognitive change once the self is affirmed.

Other research has shown further that dissonant inconsistency does not motivate change once the unpleasant affect associated with it is eliminated through drugs (e.g., Cooper *et al.*, 1978; Steele *et al.*, 1981) or misattributed to another source, such as an ingested pill or poor lighting (e.g., Zanna & Cooper, 1976). Cognitive inconsistency may be a part of dissonance arousal in the sense that any self-threatening cognitions may be necessarily inconsistent with self-images of adequacy and integrity. Psychological inconsistency may be a necessary form that self-threat takes. Indeed, a perceived "inconsistency" of the self—in the sense of one's actions contradicting one's important beliefs for example—should arouse dissonance. However, our findings show that the inconsistency of such a threat has no motivational significance in its own right; it is not the aspect of these threats that stirs dissonance motivation.

2. *What Dissonance Is*

Rather, dissonance motivation is stirred by the implication of the inconsistency that one is not adaptively or morally adequate. Doing something that meets all of the requirements of a dissonant act—e.g., "choosing" to write an essay against one's beliefs—makes one feel foolish, raises doubts about one's competence, adaptive coherence, self-control, and other self-concepts and, as a consequence, motivates one to reaffirm one's adequacy. At a very important level, dissonance appears to be no more complicated than this.

This analysis does away with the revisions of dissonance theory, that to arouse dissonance the inconsistent action must be chosen, its consequences must be foreseeable, the person must feel personally responsible for the action, and so on (cf. Cooper & Fazio, 1984). In light of our findings, we view these revisions as simply clarifying the circumstances under which an inconsistent action will be self-threatening. More to our point here, these restrictions exclude several examples of dissonance-provoking inconsistencies with which Festinger originally defined the theory (cf. Greenwald & Ronis, 1978). One of these is that "if a person were standing dry in the rain and yet could see no evidence that he was getting wet, these two cognitions would be dissonant with one another" (Festinger, 1957, p. 14). We would agree with Festinger. Standing dry in the rain should certainly threaten the self—drawing one's right-mindedness into question—and, in our view, arouse "dissonance." This "dissonance," in turn, should press one toward some understanding, even though it involved no element of personal responsibility, choice, or foreseeability of consequences. Thus, the

self-affirmation analysis of dissonance would not incorporate these conditions as requirements of dissonance arousal. Whenever an inconsistency threatens the integrity of the self, we argue, it should arouse dissonance motivation. We differ from Festinger, of course, in believing that the motivating aspect of such inconsistency is not inconsistency itself but its threat to the self.

3. Reducing Dissonance

Our findings also suggest that dissonance can be reduced in ways not captured by dissonance theory in any of its past versions, but in ways that may be quite characteristic of real life. As noted earlier, dissonance can be soothed away; that is, factors that directly diminish the negative affect of dissonance (such as phenobarbital and alcohol) or that cause this affect to be misattributed to other sources have all been shown to reduce dissonance. To this list of non-consistency-restoring remedies, we add activities that affirm valued self-concepts. Herein may lie the comforting power of activities such as therapy, prayer, conversation with supportive friends, and reading that frequently do not resolve or dismiss the specific causes of our stresses but nonetheless diminish their effects. Apparently, dissonance can be reduced without altering or adding to the cognitions involved in the provoking inconsistency; it is the image of the self that is at issue, not the inconsistency of cognitions.

II. The Role of Psychological Inconsistency in Mental Life

The idea that cognitive inconsistency is disturbing and that it motivates consistency-restoring cognitive and behavioral changes is one of the founding ideas of contemporary social psychology, originating in Gestalt psychology and finding early expression in the work of Heider, Lewin, and, of course, Festinger. These early theorists believed that cognitive inconsistency was intrinsically disturbing and motivating. Following the Gestalt perspective, they reasoned that, as the structure of the perceptual field could compel perceptual responses (e.g., as a severely curved line compels the perception of a circle), so could the structure of cognitions compel cognitive and even behavioral responses. Inconsistency among related cognitions, by analogy to the perceptual rules of the Gestalt school, could thus compel consistency-restoring changes. In describing this, Abelson (1983) noted that the precise nature of the motivation to reduce cognitive inconsistency has never been very clear, even in the writings of the original theorists. Although at a theoretical level Heider and Festinger, for example, spoke of inconsistency as intrinsically uncomfortable and motivating, the

examples they used and, in the case of dissonance research, the procedures they used, confounded other motivations with inconsistency.

To illustrate the problem, Abelson described how Fritz Hieder once endured a week's visit from Kurt Lewin and Kurt Koffka, both of whom he liked dearly, but who, during that period, hated each other. In addition to its imbalance, this triad gave Heider a real problem in how to relate to his warring friends without taking sides and without provoking their anger at him. As Abelson stated, this ". . . imbalance derives its kick from the behavioral dilemma that the protagonist (Heider) may have to face (i.e., fending the middle ground between feuding friends)." If this reasoning is correct, adaptations that solve the coping dilemma of this imbalance should reduce consistency pressure, even if they fail to resolve the imbalance itself. For example, Heider may well have foregone attempts to balance his feelings toward these friends had he been able to get an ocean between them, thus solving his behavioral problem. In essence, our name-calling and dissonance experiments employed a parallel reasoning. Subjects in these studies were exposed to inconsistencies that also threatened their self-concepts. For this important class of inconsistencies, pressure to restore consistency was eliminated by responses affirming the self though leaving the inconsistency intact.

A. PSYCHOLOGICAL INCONSISTENCY: FORM NOT MOTIVE

Based on this reasoning and evidence, the simplest thing that can be said about psychological inconsistency is that it is an interrelationship that cognitions can have in conveying meanings to an individual. Some of these meanings signify adaptive challenges to the individual (e.g., Heider's social relations problem), some signify threats to the integrity of the self (e.g., cognitive dissonance or name-calling manipulations), some do both (e.g., the self-threat of smoking cigarettes), and some are of no personal consequence. These meanings, our findings suggest, not the fact of psychological inconsistency itself, motivate adaptive reactions.

B. CONSISTENCY VERSUS SELF-ENHANCEMENT STRIVINGS

Having said all this, I must acknowledge the occasional reports that consistency strivings can take precedence over self-enhancement strivings. Although their findings are difficult to replicate (e.g., Brock, Adelman, Edwards, & Schuck, 1965; Cottrell, 1965), Aronson and Carlsmith (1962), for example, found that

subjects would perform poorly on a person-perception task to be consistent with an expectation of poor performance built up from prior experience with the task. More recently, Swann (1985) found that partner satisfaction in romantic relationships depended on partners confirming each other's self-concepts, even when those self-concepts were negative. Such findings could be seen as suggesting that, at least some of the time, people pursue consistency at the expense of self-regard. It is important to stress, however, that confirmation of negative self-concepts or expectations need not be taken as evidence of a consistency motive. Such affirmations can stem from other motives as well, including the self-affirmation motive as I have described it. The goal of this motive is to affirm adaptive and moral adequacy as well as a positive self-image. Thus, under some circumstances, a person may affirm adaptive adequacy at the expense of positive self-regard. A victim of child abuse, for example, may prefer to believe that she is the kind of person who deserves this abuse rather than to believe that she has no control over what is happening to her, that is, that she cannot stop her victimization. Or, we may be happier with a spouse who confirms our negative traits because it affirms our perception that the world is predictable and controllable—a perception that is part of an adaptively adequate self-image. Other motives too, such as for actual predictability and control, may sometimes cause affirmation of negative self-concepts. These processes are discussed in more detail in Section VI,C. For now, these examples hopefully illustrate that a need for psychological consistency need not be invoked to explain the confirmation of negative self-characteristics; such confirmations can reflect other motives as well.

C. FLEXIBILITY IN COPING WITH INCONSISTENCY

If this reasoning is correct, people have considerably more flexibility in coping with psychological inconsistency than has been recognized; people cope with the meanings conveyed by the inconsistencies rather than with the inconsistencies themselves. Many times, of course, this is one and the same thing. Coping effectively with the threat that establishes a psychological inconsistency will also reduce the inconsistency itself. For example, quitting smoking will reduce the psychological inconsistency that smoking produces. In the case of psychological inconsistencies that threaten self-regard, however, such as those in our dissonance and name-calling experiments, an individual has more than consistency-restoring options. He or she can make behavioral or cognitive changes that leave the inconsistency intact but that reaffirm the integrity of the self. *To the extent that self-affirmation motivates consistency restoration, any adaptation that effectively affirms the larger self should be an effective adaptation.* Spending more time with his children might be as effective an adaptation for our smoker as

trying to directly resolve the inconsistency of smoking by quitting or by denying its health risk. There is a near-infinite variety of interchangeable adaptations—cognitive and behavioral—to such inconsistencies. Indeed, our coping options in everyday life are thus widely varied, widely interchangeable, and not restricted by the elements of the provoking inconsistency, but only by the requirement that they affirm the self.

In conclusion, a motive to maintain psychological consistency for its own sake would not seem to make good evolutionary sense. It could be, in fact, a real nuisance. Even if, as dissonance theory stresses, only important inconsistencies were motivating, our mental life would be locked into resolving each of them. We could become immobilized by our inconsistencies, forced to stick with them until they were resolved. In the absence of serving some other inherently important motive, this kind of preoccupation would serve no purpose. It seems more sensible, and correct from the standpoint of everyday experience and our present findings, that mental life have more flexibility.

IV. A Psychology of Experimental Embarrassments: A Paradigm Problem

> The long and short of it may be that the dissonance literature chiefly concerns the psychology of what people do to recover from experimentally engineered major embarrassments. (Abelson, 1983, p. 43)

Abelson's complaint, I suggest, can be taken a step further. If the motivational effects of cognitive dissonance stem from the self-threat inherent in the provoking manipulation (i.e., the inconsistency manipulation), the same may be true of other motivational effects in social psychology. Consider the example of equity research (e.g., Walster, Walster, & Berscheid, 1978). To arouse a motive for psychological equity, subjects in these experiments are put into an inequitable relationship with another person; for example, they are induced to cheat or harm the person or they are given more reward than another person for the same task. Afterward, subjects are given just one means of setting things right: they are allowed to give actual compensation to their victim or their attempts to psychologically justify their inequitable behavior are measured. That subjects usually restore equity, actually or psychologically, is taken, then, as evidence of an underlying motive for equity. The present reasoning, however, suggests that subjects may restore equity in these experiments simply because it is the only available means of self-affirmation after the self-threatening inequity manipulation. Had they been allowed to do something that reaffirmed their worth without

restoring equity, they may well have done so and may well have foregone equity restoration. Evidence to this effect would not argue against the existence of equity restoration effects, rather it would mean (1) that such effects do not stem from a distinct motivation for equity, but from a general motive to affirm the self after it has been threatened and (2) that responses other than equity-restoring responses may reduce this motivation.

The same paradigmatic limitation clouds the interpretation of other social psychological motives as well, including reactance (Brehm, 1966), self-completion (Wicklund & Gollwitzer, 1983), learned helplessness (e.g., Abramson, Seligman, & Teasdale, 1978), uniqueness (Fromkin, 1970), and guilt (Brock & Buss, 1966). In each of these cases, after self-threatening operations are used to arouse the specific motive, subjects are given only one response with which to cope with the threat, a response ostensibly capable of reducing the aroused motive but also capable of affirming the self. When subjects use this response, it is taken as evidence of the existence of a specific motivational process. Were these subjects allowed other coping responses—in particular, responses capable of affirming the self but not capable of resolving the motive presumed to be aroused—a very different picture of the motivational basis of effects in these paradigms would probably emerge.

Whether a self-affirmation interpretation of any of these processes is correct must be verified, of course, by research. Nevertheless, the findings we have presented raise the unsettling possibility that research in these paradigms is not tapping distinctive motivational processes, but rather is tapping how subjects respond to a variety of experimental embarrassments, as Abelson suggested for dissonance research.

V. Attribution as Self-Affirmation

To examine this critique of motivational research, we selected a motivational relationship of central importance in social psychology: the hypothesized relationship between control motivation and attributional analysis. Recently an important fact about attributions has come to light which places this relationship in the forefront of attribution research. Although less obvious from the perspective of most attribution theory—which focuses on how people make attributions—than from the perspective of everyday experience, people apparently do not always make attributions about the events and actions they notice. Sometimes they attribute things to causes; sometimes they don't bother. This fact raises the important question of what causes or motivates people to engage in attributional analysis, to go to the trouble of assigning cause.

The longstanding working hypothesis has been that people assign cause be-

cause of a distinctive motivation to gain and maintain control over the environment. In Kelley's (1971) words:

> The purpose of causal analysis—the function it serves for the species and the individual—is effective control. The attributor is not simply an attributor, a seeker after knowledge. His latent goal in gaining knowledge is that of effective management of himself and his environment. He is not a pure "scientist" then, but an applied one. (p. 22)

Indeed, the factors that have been shown to increase attributional analysis can be viewed as those arousing a distinctive motive for environmental control: unexpected information (e.g., Clary & Tesser, 1983; Hastie, 1984), negative outcomes for oneself and others (e.g., Harvey, Yarkin, Lightner, & Town, 1980), expectations of future interactions with a target person (e.g., Harvey *et al.*, 1980; Miller, Norman, & Wright, 1978), and increased personal involvement with the issue under consideration (Pittman, Scherrer, & Wright, 1977).

Perhaps the clearest support for the control–motivation hypothesis comes from experiments by Pittman and his colleagues (Pittman & D'Agostino, 1985; Pittman & Pittman, 1980) in which control deprivation was manipulated directly through learned helplessness training (Seligman, 1972, 1975). (This procedure involves varying the amount of noncontingent feedback which subjects receive on a concept-formation task.) Following this manipulation, subjects read about an author who wrote an essay opposing nuclear power. Attributional analysis was measured as the extent to which their attributions about the author's motives reflected relevant information they were provided; the more extreme their attributions in the direction of this information, the more attributional analysis they were presumed to have engaged in. Deprivation of control (under both low and high helplessness training) significantly increased attributional analysis on this measure. Control group subjects who experienced no control deprivation (no helplessness training) showed virtually no attributional analysis. These findings fit the view that the act of making attributions serves a distinctive control motive—a view most compatible with Kelley (1971) and Heider's (1958) discussions of control motivation in attribution processes.

The present critique of motivational research, however, suggests another interpretation. Independent of any motive for actual environmental control, the control-deprivation procedures in these experiments may arouse a simple self-affirmation motive, a motive to affirm an image of oneself as competent and able to control important outcomes. This motive could increase attributional analysis in several ways, most obviously, perhaps, by increasing self-serving attributions which protect or enhance the self. The attribution of success to the self and of failure to circumstance is an example. Perhaps less obviously, a self-affirmation motive may increase attributional analysis of events unrelated to the threat or even to the self. Merely explaining an event implies that one can recognize and understand its causes, and thus that one is a more or less efficacious person.

Conceivably, then, after the control threat in the Pittman research, subjects may have made more extreme attributions about the author's behavior only to enhance an efficacious self-image—to appear as if they "knew it all."

Liu and Steele (1986) conducted two experiments to test which motive—one for actual control or one for a self-image of being able to control—mediates the effects of control deprivation on attribution in the Pittman and Pittman paradigm. If after a control threat people make more extreme attributions from available information to affirm a self-image of efficacy, then this effect should be reduced by thoughts and actions following the threat that affirm a valued self-concept. This should occur even when the thoughts contribute nothing to actual environmental control. On the other hand, if after a control threat people make more extreme attributions to regain actual environmental control, intervening self-affirming thoughts should do little to reduce this effect.

Our first experiment attempted to (1) replicate the pattern of effects reported by Pittman and Pittman (1980), and (2) test whether a self-affirming experience could eliminate the increase in attributional analysis that follows control deprivation. In the interest of replication, we used the basic paradigm developed by Pittman and Pittman (1980) in which the attribution measure followed the manipulation of control deprivation through learned helplessness training. The attribution measure asked subjects to rate the strength of external and internal factors in causing an author to write an essay favoring nuclear power plants. As one factor, half of the subjects were told that the author wrote the essay for payment, and half were told that he wrote it for his private journal only. The more that subjects analyzed this information following control deprivation, the more extreme their attributions should be in the direction of the given information. The second factor was three levels of learned helplessness training: no, low, and high. Based on the Pittman and Pittman findings, we expected more extreme attributions (reflecting more attributional analysis) in the high and especially in the low helplessness treatments.[1] A fourth level of this factor was included to test the effects of a self-affirming experience on the control deprivation–attribution relationship. Modeled after the self-affirmation procedure developed by Steele and Liu (1983), this condition allowed subjects to affirm a valued self-concept (again, by completing an economic–political value scale; all subjects in the experiment strongly held this value orientation) immediately after the low helplessness training (the condition that had produced the strongest effects in Pittman and Pittman, 1980) and

[1]Although both treatments led to more extreme attributions, Pittman and Pittman found somewhat stronger attributions among low than high helplessness subjects. They discuss a number of interpretations of this result—for example, that the materials used in this paradigm obscure the monotonic relationship between deprivation and attribution, that the two treatments "represented points equally high on the 'control-deprivation–attributional-activity curve,' but were on opposite sides of the inflection point" (p. 385), and so on—but none have been established. Thus, to maximize the strength of the control deprivation manipulation in our research, we simply used the helplessness procedure—low helplessness training—that showed the strongest relationship to attribution.

before the attribution measure. If more extreme attributions following control deprivation stem from a motive to affirm an efficacious self-image, then attributions in this condition should be less extreme than in other helplessness conditions.

This experiment also included mood and task performance measures. The original Pittman and Pittman study showed that greater control deprivation generally led to worse moods and task performance. We reasoned that if self-affirmation eliminated the effect of control deprivation on attributions, it should do the same for mood and performance.

To summarize, this experiment took the form of a 2 × 4 factorial design with two levels of the information factor (external and internal attributional information) and four levels of control deprivation (no, low, and high helplessness training and a self-affirmation condition).

Figure 4 presents subjects' ratings of how much external influence the essayist was under. Larger numbers indicate stronger attributions to external factors (7-point scale). On this measure, the more attributional analysis that subjects engaged in, the more the attributions made by external attribution subjects (told that the protagonist wrote the essay for payment) should exceed those made by internal attribution subjects (told that the essay was a journal entry). These results clearly replicate those of Pittman and Pittman. Unlike no helplessness training, both low and high helplessness training caused stronger external attributions among subjects given "payment" information than among subjects given "private journal" information. In support of the self-affirmation prediction, the self-relevant value scale in the self-affirmation condition eliminated the effect of

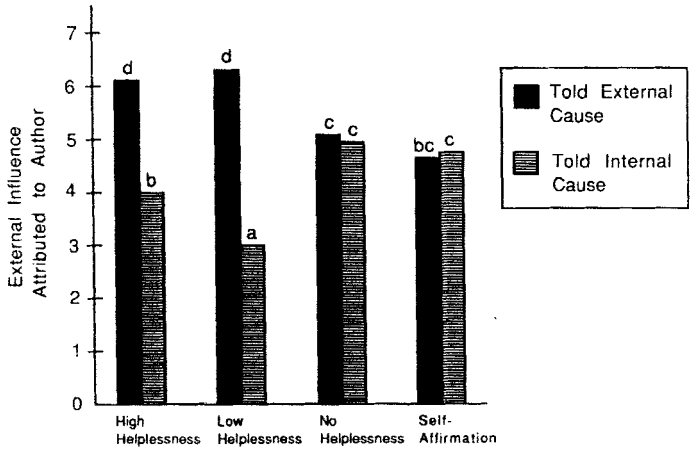

Fig. 4. Attribution as affirmation: Study 1. The 7 on the vertical axis indicates greatest agreement with the statement that "external influences probably caused the author to write the essay." Conditions not sharing letters differ at $p < .05$.

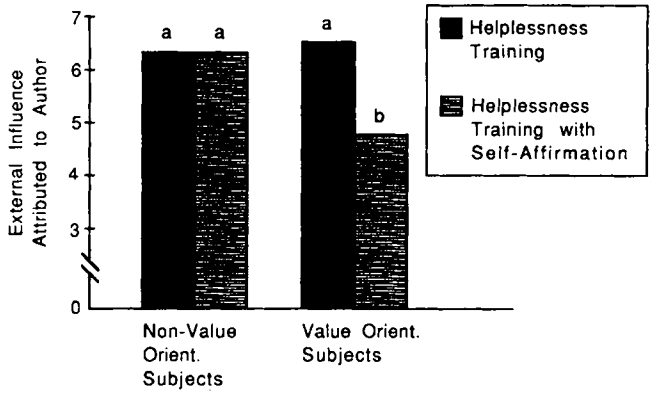

Fig. 5. Attribution as affirmation: Study 2. The 7 on the vertical axis indicates greatest attributed external influence. Conditions not sharing letters differ at $p < .05$.

low helplessness training on attributions. After this scale, subjects who underwent low helplessness training made attributions as though they had received no helplessness training at all. This pattern of effects (supported by a significant information-condition-by-helplessness-condition interaction) was mirrored on all of the other attributional measures as well. Finally, the self-affirmation procedure also eliminated the detrimental effect of low helplessness training on subjects' mood and task performance. These findings suggest that, in this paradigm, greater attributional analysis following control deprivation reflects an effort to regain an efficacious self-image rather than actual environmental control and lends generality to our critique of motivational paradigms in social psychology.

Still, an alternative explanation had to be considered. Completion of any value scale, even one not self-relevant, might have eliminated the effects of helplessness training on attribution and mood. The first experiment did not include a control condition to show that completion of the scale would not eliminate these effects for subjects who did not hold the value represented on the scale. To test this possibility, and to replicate the self-affirmation effect in this paradigm, we conducted a second experiment, which replicated the low helplessness and self-affirmation conditions described above. However, to reduce design complexity, all subjects were given external attribution information (that the author wrote the essay for payment), and the primary dependent measure was attribution of external influence. In addition, half of the subjects in each of these conditions were selected for strongly holding the economic–political value orientation, and half were selected for not holding it. Completion of the economic–political subscale of the Allport–Vernon Study of Values in the self-affirmation condition should be self-affirming for subjects holding this value orientation but not for subjects not holding it.

Figure 5 presents the condition means for subjects' ratings of external influ-

ence. The self-affirmation interpretation was clearly supported. The value scale in the self-affirmation condition eliminated the effects of helplessness training on external attributions only among subjects for whom the scale was self-relevant: economic–political subjects. The same pattern of effects held for the related attribution measures and the mood measure as well. To eliminate the effects of helplessness training on attributions and mood, the value scale had to allow an affirmation of the self. After learned helplessness training, attributional analysis apparently has the goal of affirming one's self-image of efficacy, not of regaining one's actual control of the environment, at least in these experiments.

A note of qualification is in order, however. Although the present findings may be mediated by a self-affirmation motive, a motive for actual control could be equally, or more, important under different circumstances; for example, when the control threat is ongoing. A student's analysis of the reasons for having failed his first chemistry exam (e.g., due to lack of ability, motivation, preparation, etc.) may be motivated as much by a need to gain control of the outcomes in that situation as by a need for self-affirmation. Even so, our research shows rather convincingly that a motive for self-affirmation is one of the motives that control deprivation can arouse and that, in this paradigm, it is the motive that mediates the effects of control deprivation.

The results of these studies also bring to light an undiscovered effect of ego-based motives on attributional processes: these motives can motivate the sheer act of making attributions, of assigning cause, even when the resulting attributions do not pertain to the self. Being able to assign a cause to events and actions—to explain why my friend is an avid sailor, why rock musicians tend to be thin, why people climb mountains, and so on—implies that I have the ability to understand and, perhaps, to control important outcomes. This ability affirms the adaptive adequacy of the self. The findings in our research extend the domain of recognized ego influences on attribution. In addition to influencing the type of attributions made—that is, pressuring attributions to be self-serving—these motives also influence the tendency to make attributions in the first place.

Finally, in conjunction with the dissonance experiments, the present experiments make it clear that to establish a distinctive motivational process in social psychology it must be shown that the motive state in question cannot be reduced by responses that only affirm the self.

VI. Toward a Model of Self-Affirmation Processes

Although models of one or another aspect of what I have been calling self-affirmation have begun to emerge—for example, Tesser's (1983 and this volume) intriguing model of the influence of these processes on social comparison

and Greenwald's description of "totalitarian ego" biases and ego-task functions (e.g., Greenwald, 1980, 1982)—there have been few efforts predicated on experimental evidence to develop a comprehensive model of these processes. No doubt such a model would go well beyond the scope of our present findings as well. Nonetheless, these findings do enable several generalizations, some of which are conclusions about the general nature of these processes based on our research, and some are propositions supported or suggested by this evidence that take our reasoning toward a model of self-affirmation processes. I begin with the conclusions.

A. CONCLUSIONS: THE NATURE OF SELF-AFFIRMATION

1. The Goal of Self-Affirmation: Global Self-Integrity

Our findings support the existence of a self-system that functions to sustain a phenomenal experience of the self—that is, self-concepts and images of the self, past, present and future—as having adaptive and moral adequacy, as being competent, good, stable, integrated, capable of choice and control, and so forth. As noted at the outset of this article, a system of this sort is presumed in all comprehensive models of the self. Our findings provide further evidence of its existence, but most importantly, they bring to light an important fact about the system: its goal is to maintain global conceptions of self-adequacy and not necessarily to resist specific self-threats that arise from self-threatening circumstances and events. In all of our experiments, subjects eliminated the effect of specific self-threats by affirming central, valued aspects of the self. In a dissonance experiment, for example, aesthetically-oriented subjects eliminated the dissonance arising from public opposition to funding for the handicapped through self-affirming thoughts of beautiful concerts and paintings (the item content on the aesthetic value scale). In ego defense, people are concerned with the big picture: they regulate their defensive adaptations to maintain very general conceptions of self-integrity rather than to remedy specific threats. It is the war, not the battle, that orients this system.

2. The Flexibility of Self-Affirmation

Based on this fact, people have considerable flexibility in coping with threats to self-integrity, more perhaps than has been commonly recognized. They can try to adapt to the threat itself: by trying to directly diminish or eliminate the threat, by diminishing the perception of threat, or by diminishing the perception that the threat threatens self-integrity. Most theories relevant to self-threat (e.g., disso-

nance, learned helplessness) have focused on these avenues of adaptation. In addition, however, our evidence shows that people can adapt to a threat with behavioral and cognitive changes not directed toward the threat itself but toward affirming the perception of global self-integrity. This last category of adaptations gives us an extra degree of coping flexibility and resilience that, as I argued at the outset of this article, may explain how an individual continues to smoke despite the inescapable reasons not to. Any adaptation, cognitive or behavioral, that affirms self-integrity can reduce the impact of specific threats to that integrity. These adaptations can vary widely and are widely interchangeable. They allow us "fluid compensation."

3. Self-Affirmation as a Source of Self-Objectivity

Although self-affirmation processes are generally thought of as a source of distortion in information processing, our findings show another side of these processes, one that has a quite different effect. Specifically, the pressure for self-affirming thoughts about one topic can be reduced by salient, self-affirming thoughts about another, even unrelated, topic. In all of our dissonance experiments, for example, when subjects were allowed self-affirming thoughts after their dissonant actions, they gave up trying to rationalize them. Generalizing this point, salient, self-affirming thoughts should make it easier to be objective about other, self-threatening information; they should reduce the pressure to diminish the threat inherent in this information. In this way, self-affirming thoughts may be an effective means of reducing thought-distorting defense mechanisms such as denial and rationalization. At any rate, our ability to think objectively about particular self-threatening information may depend, at least partially, on what other thoughts about the self are salient at the time the information is processed.

B. PROPOSITIONS: THE MECHANISMS OF SELF-AFFIRMATION

In this section, to summarize and make explicit our reasoning, I present three propositions about self-affirmation processes.

1. Arousal of a Self-Affirmation Motive

Proposition 1: Cognitions that threaten the perceived integrity of the self—i.e., its adaptive and moral adequacy—arouse a motive to reaffirm the self, to reestablish a perception of global self-integrity. Threatening cognitions arise from a number of sources: from information in the environment, from the behavior of others toward us, from the judgments of others (e.g., the impugning

judgments of the pollster in our name-calling experiments), from our own behavior (e.g., dissonant actions or failure at a learned helplessness task), and from cognitions that we invoke in response to particular situations or events. In each case, these cognitions threaten the perceived integrity of the self, and in each case, they lead to behaviors that, we argue, reflect an underlying motivation to reaffirm that integrity. In Allport's (1943) words, the "ego-system" is engaged by any ". . . frustration of goal-seeking behavior or any kind of threat to the individual . . ." (1943, p. 470).

2. *The Reduction of the Self-Affirmation Motive*

Proposition II: The motive for self-affirmation can be reduced by behavioral or cognitive changes that (1) reduce the threat or the perception of threat, and/or (2) do not address the threat, but restore the perceived integrity of the self, its overall adaptive and moral adequacy. This last goal can be accomplished by affirming and sustaining valued self-images. To be effective, these images must be at least as important to the individual's perception of self-adequacy as are the negative images inherent in the threat. As noted earlier, the focus of self-affirmation is on maintenance of general conceptions and images of the self rather than on coping with specific self-threats. Thus, the motive for self-affirmation should foster resolution of the provoking threat only to maintain the perception of self-integrity. Moreover, as noted, it is this fact which enables flexibility in our coping with self-threat.

a. The Importance of Self-Affirmation. This proposition addresses another issue as well, one nicely illustrated by a student who, after hearing our ideas in class, asked me if I believed that a brief value scale could counteract the self-threat of being abandoned in divorce. Although I was never sure whether the question reflected intellectual skepticism or personal hope, it touched on a more basic question not addressed in our research that had to be addressed in our model; namely, what degree of self-affirmation is sufficient to reduce the impact of a given self-threat?

In addressing this issue, the present proposition makes explicit an assumption that has been an implicit part of our reasoning and research designs: we have assumed that to effectively reduce the impact of a self-threat through self-affirmation, the self-images that are affirmed must be at least as important to perceived self-adequacy as the self-images that are threatened. The goal of self-affirmation, as we have defined it, is to maintain an overall perception of self-adequacy. Thus, to restore this perception after it has been threatened, the adequacy that is affirmed must be able to offset, in importance to overall adequacy, the adequacy that has been threatened. This has been the case in each of our experiments. The value scale in the dissonant experiments, for example, allowed subjects holding the same value to affirm self-images that were presum-

ably more important to their perceptions of self-adequacy than the negative images stemming from the dissonant act. These experiments, of course, do not constitute a test of this assumption (this would require varying the relative importance of threatening and affirming self-images to the perception of adequacy), and so the present proposition goes beyond our current data. Still, based on the assumption that the goal of self-affirmation is the perception of global self-adequacy, it is implied by our logic; to offset a threat to self-adequacy, one must affirm a self-image that supports this adequacy as much as the threat threatens it. In answer to the student's question, then, the sense of adequacy gained from a self-relevant value scale is likely to counteract the self-threat of a dissonant essay, as a penance would absolve a venial sin, but it is unlikely to counteract the broader threat of abandonment in divorce. In this instance, self-affirmation is likely to become a preoccupying effort, persisting over time until the many threatened self-images become less accessible in thought and memory, and alternative self-affirming images become well established.

b. The Threat-Relevance of Self-Affirmation. Finally, I will note that the relatedness of a self-affirmation to the provoking threat is not included in Proposition II as a determinant of an affirmation's effectiveness, that is, its ability to reduce the self-affirmation motive. However, it might be argued that self-affirming changes addressed to the threat should be more effective than changes that affirm unrelated, valued aspects of the self. Unless the provoking threat is defused, actually or psychologically, the argument goes, its recall over the normal course of events will rearouse the affirmation motive, causing a residual of self-affirmation tension. Our research has shown, however, that both immediate and delayed arousal of this motive can be reduced as effectively by affirmation of unrelated, valued self-concepts as by changes that address the threat directly. If a professor loses at tennis, for example, affirmations that refute the implications of the loss—such as that it resulted from a sore ankle—do not appear to reduce self-affirmation pressure more definitively than affirmation of unrelated self-images—such as that one is a good lecturer (and that tennis is therefore not so important). The effectiveness of a self-affirming adaptation, as Proposition II suggests, seems to depend less on its being related to the provoking threat than on its being able to restore a sense of overall adequacy against which the threat is less important.

Interestingly, however, Proposition II does suggest a circumstance under which relatedness should matter. When the very most important aspects of the self are threatened, so that there are no equally important alternative self-images, self-affirmations that address the provoking threat should be more effecive than affirmations of these less important, alternative self-concepts. Consider, for example, the young tennis professional whose most important self-concepts involve tennis playing. Losing at tennis for this person would threaten self-images for which there are no equally important, alternative self-images that can be

affirmed. Thus, adaptations that address the implications of losing itself—more practice, rationalizations, a rematch with the same opponent, and so on—may be the only route to self-affirmation. Such may be the cost of a highly focused personality whose sense of adequacy is lodged in only one domain of life.

3. Determining the Means of Self-Affirmation

Thus far I have discussed what can affirm the self but have been mute as to how these adaptations are determined, an explanation of which, by the way, has been attempted only rarely. Abelson (1959) argued that, in resolving belief dilemmas, people tend to use the easiest modes of resolution first; Gotz-Marehand, Gotz, and Irle (1974) showed that subjects tend to reduce dissonance through the first means available; Walster *et al.* (1978) reasoned that, in restoring equity, people choose the means that is most effective relative to its costs. Beyond these occasional discussions, the question of how adaptations are determined has received little attention. Our research to date provides no definitive picture of this process but suggests the importance of some determining factors.

In affirming themselves, dissonance subjects used attitude change or value affirmation, depending only on which came first; the same held for control-deprived subjects in the choice between attribution and value affirmation; and subjects called "bad drivers" were willing to seek affirmation through an available opportunity to help with a food co-op. In determining which means of self-affirmation was used, availability was more important in these experiments than either an adaptation's ability to reduce a particular threat (e.g., inconsistency or learned helplessness) or particular social psychological motives (i.e., dissonance and control motives). Based on this reasoning, the following proposition is offered.

Proposition III. The means of self-affirmation will be determined by availability, that is, the degree to which a given adaptation is accessible in the individual's perception, memory, or imagination (cf. Nisbett & Ross, 1980; Tversky & Kahneman, 1973) and, among equally available adaptations, by perceptions of their relative effectiveness-to-cost ratios. An adaptation can be made available by cues related to the threat, by the immediate situation that suggests a means of adaptation, by individual differences that make a given means of adaptation accessible (as prayer may be for the devout), by prior experiences that "prime" a given means of adaptation, by memory associations, and so on.

This is not to argue that we are slaves to availability, locked into seeking affirmation through whatever presents itself. Even when highly available, a given adaptation may be rejected because it is seen as ineffective or too costly in time or resources. Although I may experience a highly available, compensatory impulse to help with the dishes after arriving late at the Fathers-and-Sons banquet, because of the perceived costs, I might wind up seeking an easier route to

affirmation, perhaps donating more to the benefit drive. More likely, once a given adaptation is available, effectiveness-to-cost judgments will influence whether it is used. Still, our findings suggest that availability is a powerful, if not all powerful, determinant of how we go about affirming the self.

C. THE AFFIRMATION OF NEGATIVE SELF-CONCEPTS

The above propositions, it might be argued, depict people as having an unconditional drive for positive self-regard and therefore could be viewed as opposing evidence that people sometimes try to affirm negative self-concepts. As noted earlier, people have been shown to worsen their performance to match negative performance expectations or to be happier with a spouse who confirms negative as well as positive self-concepts (e.g., Aronson and Carlsmith, 1962; Swann, 1985). Some of these findings are not easily replicable (i.e., Aronson and Carlsmith, 1962) and all of them are subject to alternative interpretations. Nonetheless, to further explicate our model, and not to beg the question, it seems important to reconcile our views with the possibility that people may sometimes seek actual confirmation of negative characteristics. The concern here is not with strategic affirmation of negative traits—for example, the husband who argues that his lack of nurturing ability exempts him from getting up with the kids or that his lack of financial acumen exempts him from managing the bills—but with instances in which people appear to genuinely seek affirmation of negative self-concepts.

People may sometimes do this when circumstances subordinate the motive for self-affirmation to other motives. Motives for control and predictability of the environment or of one's personal outcomes, for example, can be more important than self-affirmation in given situations, and these motives may sometimes foster confirmation of negative characteristics. Consider, for example, the person who confirms his "alcoholism" as a means of predicting and controlling the threat this trait poses to his life. Similarly, people may actually try to confirm negative characteristics such as shyness, hot-headedness, being a poor financial manager, klutziness, and so on, as a means of gaining better control over the risks that these traits pose (if through no other means than the avoidance of situations in which they pose a risk). On occasion, then, the confirmation or affirmation of negative self-concepts can offer the benefit of increased understanding and control over one's life, a benefit that may outweigh its threat to positive self-regard.

People may also confirm negative characteristics in the service of self-affirmation. The goal of self-affirmation is to sustain a global image of the self as adaptively and morally adequate. Achieving this goal may sometimes require confirmation of traits that are evaluatively negative but instrumental to adaptive

adequacy. The child abuse victim who would rather think of herself as having characteristics that provoke abusive treatment than to think of herself as unable to stop her victimization illustrates this point. Also, people may affirm negative characteristics that are seen as associated with more global positive characteristics. An accountant, for example, may affirm a certain colorlessness as a sign of an organized, efficient mind, or an academic may affirm a certain critical nastiness as a sign of an incisive intellect, and so on. In these instances, affirmation of specific negative traits essentially affirms a related, more global positive trait.

These arguments are not intended to provide an exhaustive account of why people may try to confirm negative self-concepts. And it is clear that the reasoning offered here goes well beyond our current data base. Nonetheless, these arguments should show that for a number of reasons, some related to self-affirmation and some not, people may be very largely motivated to affirm the self yet occasionally seek confirmation of negative self-concepts.

VII. Implications

A. A MOTIVATIONAL COMPONENT OF THE SELF-SYSTEM

During the last decade the notion that the "self is a concept about oneself" (Kilhstrom & Cantor, 1984, p. 4) has taken firm hold in social psychology, along with the tendency to explain self-phenomena as stemming from the operations of this knowledge structure. These structures heighten subjects' sensitivity to self-relevant stimuli (Bargh, 1982), facilitate the processing and memory of these stimuli (e.g., Bower & Gilligan, 1979; Markus, 1977), foster resistance to information that is incongruent with the structure (e.g., Markus, 1977; Swann & Hill, 1982), and foster assimilation of congruent information (e.g., Jones & Goethals, 1972; Miller & Ross, 1975; Nisbett & Ross, 1980). This approach has also had considerable success in explaining self-serving biases in attribution and judgment (e.g., Miller & Ross, 1975; Nisbett & Ross, 1980): the tendency to credit success to the self and failure to circumstance can mean that successes are accepted as congruent and failures rejected as incongruent with a favorable self-theory or self-expectation (Miller & Ross, 1975); overly positive assessments of our attributes can result from exposure to biased information and feedback from our friends, family, and associates; self-serving behavior and judgments may not mean that underlying perceptions and cognitions are also biased, and so on (cf. Nisbett & Ross, 1980). For nearly every effect that appears to be mediated by self-serving motives, it has been possible to pose an alternative explanation in

terms of informational factors or cognitive processes, leading Nisbett and Ross (1980) to conclude:

> Researchers . . . may yet succeed in establishing relatively convincing evidence of these [self-serving] biases in at least some domains, although the "track record" of those who have sought decisive demonstrations of motivational effects must temper any such optimism. (p. 234)

Although I would argue that the existence of an informational alternative explanation for an apparently self-serving effect is not proof of the informational process, and that this statement may place the burden of proof somewhat unfairly on those demonstrating self-serving motives, it nonetheless captures the basic problem: a frustrating lack of interpretable evidence of this issue.

1. Evidence of a Self-Affirmation Motive

Our findings, I will argue, provide such evidence. In our dissonance experiments, for example, the salience of unrelated, value-affirming cognitions prevented subjects from making changes among the cognitions related to the dissonant act. Clearly, for the salience of one set of cognitions to affect changes in an unrelated set, some mediational process must exist that relates the two sets. My view, of course, is that the affirmation gained from the value cognitions made it unnecessary for subjects to gain affirmation through changing the dissonant cognitions. In other words, we assume that these domains of cognition are related through their relevance to a motive for self-affirmation aroused by the dissonant act. Once this motive is reduced through cognitions in one domain, it need not be reduced by changes in another. We have been unable to develop any convincing account of these effects in terms of cognitive processes alone. Moreover, the motivational interpretation is bolstered by evidence from the dissonance and learned helplessness literatures showing that these phenomena are essentially motivational in nature (cf. Cooper & Fazio, 1985; Kuhl, 1980; Pittman & Pittman, 1980). Although continued research is needed to fully establish the motivational view, our findings clearly indicate that a motive to affirm the self after the self has been threatened is an inherent and important part of the self-system.

2. The Self-Affirmation Technique: Distinguishing Self-Serving from Cognitive-Informational Biases

The self-affirmation techniques used in our research should be helpful in distinguishing self-serving from cognitively mediated biases.The logic is as follows: if a bias stems from a self-protective or self-enhancing motive, then satis-

fying this motive through unrelated, self-affirming cognitions should reduce the bias, even when the self-affirming cognitions have no relevance to the judgment at hand. On the other hand, if the bias stems from cognitive or informational factors, the salience of irrelevant, self-affirming thoughts should do little to reduce the bias. Consider, as an example, the well-documented finding that subjects tend to ascribe successes to themselves and failures to circumstance. As noted earlier, this apparently self-serving bias (cf. Greenwald, 1980) can be explained cognitively as reflecting the use of a self-theory against which successes are accepted as congruent and failures are rejected as incongruent (cf. Miller & Ross, 1975). Providing subjects with strong self-affirming cognitions after their performance and prior to their attributions about that performance should test between these interpretations. If these biases persist despite self-affirmation, chances are they are cognitively mediated; if they do not, chances are they are motivationally mediated.

I have made this proposal in terms of attributional and judgmental biases, as these are perhaps most illustrative of the conflict between self-serving and cognitive explanations. The same logic, however, should apply to other effects, behavioral as well as cognitive, for which self-affirming and cognitive explanations apply.

B. SELF-AFFIRMATION PROCESSES AS BRAIN FUNCTION

An interesting set of parallels has come to light between the nature of self-affirmation processes, as I have described them, and a set of mental functions that Gazzaniga and his colleagues (e.g., 1983, 1985) have located in the dominant left hemisphere of the brain. In recent years, gross oversimplifications about right and left brain function have been widely disseminated. Although I would digress too far to describe it here, the reader is referred to an excellent "debunking" of the myths that have grown up around this work in Gazzaniga's (1985) recent book. Despite its misuses, research on split-brain patients—people who have had the tissue connecting the two hemispheres of their brain cut (usually as a treatment for epilepsy)—has provided insights into many aspects of brain functioning, among them an intriguing function of the conscious, verbal left hemisphere, described by Gazzaniga (1985) as follows:

> The dominant left hemisphere is committed to the task of interpreteing our overt behaviors as well as the more covert emotional responses. . . . It constructs theories as to why these behaviors occurred and does so because of that brain system's need to maintain a sense of consistency for all of our behavior. (p. 80) There are unique neural systems present in the left hemisphere of (right-handed) humans that compel the brain system communicating

> with the external world to make sense out of the diverse behaviors humans produce. (p. 99)

The following experimental result illustrates the nature of this system. In split-brain patients, because there is no communication between brain hemispheres, messages can be projected to one hemisphere without the other hemisphere knowing about it. In one experiment, the written command "walk" was presented to the right hemisphere of a split-brain patient by presenting the message only in the patient's left visual field. In most people, and in this subject, the right hemisphere is mute; it can comprehend the message and initiate a response but has no verbal, conscious capacity with which to initiate speech. The split-brain subject usually responds to this command by begining to leave the testing area. At this point, the experimenter's critical test is to ask the subject why he is leaving. He can answer this question only through the conscious, verbal left hemisphere of the brain, precisely the hemisphere that has no knowledge of the command. The subject is faced with the conundrum of seeing himself leave the room without a conscious awareness of why. Surprisingly, it is a conundrum the left hemisphere readily solves; a typical response is "I'm going into my house to get a Coke" (p. 72). When faced with the conundrum and its implicit threat to self-coherence the self-justifying left hemisphere reflexively provides an answer that gives the illusion of coherence and intention.

This self-sustaining function of the left brain is needed, according to Gazzaniga and his colleagues, because our behaviors and emotions, like those of the split-brain patient, are frequently initiated by processes beneath our consciousness. Of course, like that patient, we are aware of, or can be made aware of, the products of these processes—that is, of the resulting behaviors and emotions themselves—but we do not have access to the processing, and thus the precise causes, that underly these effects—an argument shared by Nisbett and Wilson (1977). The function of the left hemisphere verbal capacity, then, is to provide apparnetly consistent explanations for these behaviors and emotions (and for self-relevant events in the world at large) that make them appear to be the products of a coherent, integrated self. To illustrate this process in intact people, Gazzaniga cited the consistency-restoring changes of dissonance subjects who have been induced to behave inconsistently through processes largely beneath their awareness (cf. Nisbett & Wilson, 1977). These changes, he argues, are the product of the same left-brain functioning that led the split-brain patient, in the earlier example, to say that he needed a coke.

Our findings suggest that the goal of this functioning is the perception of self-integrity rather than psychological consistency. Otherwise, Gazzaniga's description of left hemisphere functioning is strikingly similar to our description of self-affirmation processes. Of course, trying to make any point with a parallel of this sort is dangerous. There are many differences between our subjects and

Gazzaniga's. Most importantly, our subjects presumably have intact brains so that most stimuli are processed in both hemispheres and both hemispheres communicate with each other a great deal. Thus, it is simply not clear that the same left hemisphere functioning that Gazzaniga has identified mediates the changes we observe in dissonance experiments, for example. There are quite possibly alternative neurological processes through which these changes could be mediated. Still, if I, along with Gazzaniga, can be pardoned a moment of speculation, his evidence raises the distinct possibility that the left hemisphere functioning that fosters coherence-sustaining beliefs and verbalizations among split-brain patients is the same functioning that fosters self-affirming belief maintenance among our subjects. At any rate, and perhaps most importantly, this parallel suggests an interesting convergence of evidence for a self-system of the sort we have attempted to describe in this article, adding further weight to the point that rationalizations may be more important than sex.

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