Behavior Change Through Value Self-Confrontation: A Field Experiment

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A field experiment was conducted to determine the generalizability of Rokeach's self-confrontation model. A total of 182 student teachers were randomly assigned to either an experimental group, which received objective feedback concerning their own values and the values of previously surveyed "good" and "mediocre" teachers, or to a control group that did not receive such feedback. Posttests administered 13 weeks after the treatment showed that the experimental subjects ranked the values, mature love and loving, significantly higher and the value, self-respect, significantly lower than control subjects. More important, experimental subjects were rated significantly higher on a measure of teaching ability by double-blind judges. Implications and suggestions concerning the applicability of self-confrontation theory in modifying other kinds of behavior are offered.

Previous research (Rokeach, 1973) has claimed that long-term cognitive and behavior changes can be effected by a simple procedure called *self-confrontation*. This procedure consists of the objective feedback of one's own and significant others' values, attitudes, and behaviors. Available evidence suggests that this feedback made certain experimental subjects aware of previously existing contradictions within their own belief systems. Such awareness was hypothesized to have produced an affective state of self-dissatisfaction that culminated in behavior changes as long as 21 months after the experimental treatment session.

If self-confrontation does in fact offer a means to modify complex social behaviors enduringly, it represents a major development in social psychology. Any theory making such claims, however, demands rigorous experimental verification. The present research is designed to study the generalizability of self-confrontation theory and to test its effectiveness in a field setting.

Rokeach (1973, Ch. 8) has posited a theory of cognitive and behavioral change that addresses itself to the contradictions that may exist between an individual's self-conceptions and his/her own behaviors, attitudes, and values. The theory is based on the assumption that human beings possess hierarchically ordered belief systems in which self-conceptions (i.e., cognitions about one's own competence or morality in specific situations or roles) are the most central elements. Values defined as enduring beliefs [i.e., "a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973, p. 5)] are the next most central or important elements in the belief system. Less central than self-conceptions and values are attitudes or organizations of "beliefs around a specific object or situation" (p. 18).

According to Rokeach (1973), values provide the individual with "standards employed to maintain and enhance self-conceptions" (p. 217). Rokeach theorizes that "a contradiction between values and self-conceptions

can be most effortlessly resolved by changing the less-central values" (p. 217). If one becomes aware of previously existing contradictions or inconsistencies between one's values and self-conceptions, one should reorganize one's value system to become more consistent with one's self-conceptions. Since values are postulated to be dynamically related to behavior, value system reorganizations are conceptualized to lead to some form of value-related behavioral change.

Although superficially similar to other theories concerned with the perception of inconsistency, Rokeach (1973, pp. 230–234) has pointed out several ways in which self-confrontation theory is fundamentally different from other consistency theories. First, the inconsistency involved stems from the recognition of contradictions between self-conceptions, on one hand, and values, attitudes, or behaviors, on the other. Second, the primary focus is on values rather than attitudes: "As long as the values underlying a changed attitude remain intact, there is no compelling theoretical reason why a short-term attitude change should lead to behavior change" (p. 232). Third, the theory is explicitly about the conditions that lead to long- as opposed to short-term changes in cognitions and behavior. Rokeach notes that "most cognitive theories in social psychology turn out . . . to be theories about conditions leading to short-term change" (p. 232).

Most interesting, perhaps, is the technique employed to induce a long-term change. McGuire's (1969) review of attitude change research suggests that such research may generally be placed in one of two types: (a) A person may be exposed to information about the cognitions or behavior of a significant other that is discrepant with one's own cognitions or behavior, or (b) a person may be induced to engage in behavior that is discrepant with one's own cognitions. Self-confrontation, on the other hand, exposes a person to information about *oneself* in order to make one aware of previously existing contradictions within one's own belief system or behavior.

Rokeach's main experimental research using self-confrontation procedures has concentrated on values, attitudes, and behaviors relating to racism. Certain experimental subjects discovered—through an experimental session that supplied objective feedback concerning the subjects' own and other students' values and behavior—that they held value rankings for equality that were inconsistent with their (assumed) self-conceptions as nonracists. As long as 15 months after the treatment, experimental subjects showed significantly higher rankings for equality than comparable control subjects. More importantly, experimental subjects showed a significantly higher rate of joining the National Association for the Advancement of Colored People when solicited to do so 3 months after the experimental session, registered significantly more often for ethnic core courses, and changed their academic majors as long as 21 months after the experimental treatment. Penner (1971), Rokeach and Cochrane (1972), Rokeach and McLellan (1972), and McLellan (1974) have confirmed these findings in subsequent research.

Other researchers have shown that self-confrontation may be used to induce long-term change in other contexts. Hollen (1972) successfully induced long-term value and attitude change concerning environmental issues. Conroy, Katkin, and Barnette (Note 1) focused their study on smoking behavior and values relating to self-control. Hamid and Flay (1974) induced value change and changes in locus of control among college students in New Zealand, while Rokeach (1975) has induced long-term change through feedback supplied by a computer terminal. Sherrid and Beech (in press) induced change in values among New York Police officers using self-confrontation procedures.

The purpose of the present study is to provide a theoretical replication of Rokeach's original (1973) experiments using self-confrontation. To provide a totally different context in which to conduct the experiment, the replication was attempted using students enrolled in a teacher preparation program as subjects. While the field setting of the experiment is irrelevant to the theoretical replication, it offers a number of methodological refinements over previous self-confrontation

research. First, the experiment was conducted outside the laboratory and designed so that the subjects were unaware that they were participating in an experiment. Second, the behavior under study—performance in the classroom during a 16-week student teaching experience—was of undeniable consequence to the subjects, possibly affecting their career opportunities. Third, the study employed an unobtrusive, nonreactive behavior measure obtained from judges who were also unaware that an experiment was in progress. All of these factors combined to provide the most rigorous test of the self-confrontation technique to date.

In the present experiment, student teachers were given the opportunity to compare their own values with the values of "good" and "mediocre" teachers, as determined from an earlier survey. More specifically, this previous research had shown that good teachers (those who had scored in the upper 10% on a behavioral measure of teaching ability) had ranked the personal achievement value, a sense of accomplishment, significantly lower, and the socially oriented value, mature love, significantly higher, than did mediocre teachers (those who were judged to be in the bottom 10% in teaching ability).

The self-confrontation model would predict that an affective state of self-dissatisfaction would result if an individual learned of contradictions between his values and self-conceptions. If student teachers discovered that they valued personal achievement over sensitivity to the problems of others, we would expect them to experience a state of self-dissatisfaction, since such values would contradict their self-conceptions as good or competent teachers. This self-dissatisfaction should lead to a reorganization of the student teachers' value systems and ultimately to changes in behavior that are consistent with these changed values. The primary hypothesis of this research, therefore, is that values and behaviors related to teacher competency will be significantly modified by the objective feedback of information concerning one's own values and those of others differing in teaching ability.

METHOD

Subjects

A total of 182 student teachers, enrolled in the teacher certification program at Central Michigan University, participated in the study. The teacher preparation program places the student teacher with an experienced supervising teacher in a cooperating public school in the appropriate subject area for approximately 16 weeks. During this time the student teacher is required to assume an increasingly greater responsibility for the supervisor's class. After an appropriate interval, the student has accepted virtually all of the supervisor's teaching responsibilities such as planning, classroom management, and pupil evaluation.

The students are initially assigned to teaching centers composed of about 25 students and headed by a full-time university faculty coordinator. Assignment to the center is determined on the basis of availability of appropriate student teaching positions in the adjacent public school systems and the proximity of the student's home to the center. Thus, while assignment to the center is decided on a nonrandom basis, it is nonsystematic insofar as the experimentally relevant variables are concerned.

Instrumentation

Rokeach's (1973) Value Survey, Form E, was used to assess the value systems of the subjects at pretest and posttest. Subjects were asked to rank the two lists of terminal and instrumental values "in order of their importance to you, as guiding principles in your life." Test–retest reliabilities for the terminal scale are in the .70s, while instrumental reliabilities range from .65 to .70 (Rokeach, 1973, p. 32).

Measurement of teaching competency was accomplished through the use of the teaching program's Evaluation of Student Teaching form. This form, which is compiled at the end of the teaching experience by the student's supervising teacher, consists of 6-point ratings of performance on each of seven dimensions relating to teaching ability: personal qualities, human relations, communication skills, academic preparation, classroom effectiveness, professionalism, and overall teaching potential. Factor analyses of pilot study data revealed that the scale is unidimensional; using an oblique rotation, one factor accounts for over 75% of the variation in scores. Accordingly, the seven subscales were summed to form a single measure of teacher competence. Cronbach's α for this scale is .973.

Procedure

The experiment is a pretest–posttest control group design with pencil-and-paper and behavioral posttests given approximately 13 weeks after the experimental session.

Pretest. During the first week of the teaching program, the experimenter administered the pretest questionnaire, meeting with each of the seven teaching

centers separately. The experimenter was introduced by the center's coordinator with the statement that he was conducting a research program with the co-operation of the university. The students completed a questionnaire containing the Value Survey and various attitudinal and demographic items unrelated to the present research; the entire session lasted about an hour.

Treatment. Experimental and control group sessions for each center took place on the same day, approximately 10 days after the pretest was administered to each center. The same experimenter conducted both sessions, and the order in which he met with the experimental and control groups was determined randomly. Within each center, students were randomly assigned to experimental or control groups. These groups ranged in size from 10 to 15 students.

Experimental session. Subjects received a "result summary" booklet with their name on the front page. Upon opening the booklet, the subject found his or her own rankings of the terminal value scale, as obtained from the pretest session 10 days before. The scale had been physically removed from the pretest questionnaire so that the subjects would identify their own handwriting.

The subjects were then given feedback that enabled them to compare their own values with those of others. This feedback was presented in written form as well as orally by the experimenter:

Last spring, 308 student teachers from Central Michigan University filled out the same value survey that you completed a short time ago. The responses of these 308 student teachers were collected and averaged together.

The subjects were then shown Table 1, which displayed these results, and the experimenter drew

TABLE 1

VALUE RANKINGS OF 308 CENTRAL MICHIGAN UNIVERSITY STUDENT TEACHERS

Rank	Value
14	a comfortable life
12	an exciting life
4	a sense of accomplishment
10	a world at peace
13	a world of beauty
11	equality
9	family security
7	freedom
2	happiness
1	inner harmony
8	mature love
18	national security
15	pleasure
16	salvation
3	self-respect
17	social recognition
6	true friendship
5	wisdom

TABLE 2

AVERAGE VALUE RANKINGS FOR GOOD AND MEDIOCRE TEACHERS

	Teachers	
Value	Good	Medi-ocre
A sense of accomplishment	9	2
Mature love	2	9

the subjects' attention to two target values in particular, as follows:

One of the most interesting findings shown in Table 1 is that the student teachers, on the average, felt that *A Sense of Accomplishment* was very important—they ranked it *4*; but that *Mature Love* was considerably less important—they ranked it *8.* Apparently, Central Michigan University student teachers value *A Sense of Accomplishment* far more highly than they value *Mature Love.*

The experimenter then invited the student teachers to compare their own value rankings with those of the previously sampled group of student teachers. After allowing them a few minutes to do so, the experimenter continued as follows:

At the same time that we collected the value ranking data on these 308 student teachers, we were able to compare their value rankings with the evaluation report that each student teacher received from his or her supervising teacher at the end of the student teaching experience. We divided the student teachers into two groups: "good teachers," or those who received favorable evaluations; and "mediocre teachers," or those who had received relatively poor evaluations from their supervisors. Table 2 shows what we feel are some very interesting differences between these two groups of student teachers.

The experimenter then went on to say:

Notice that in Table 2 the rankings of *A Sense of Accomplishment* and *Mature Love* are exactly reversed for the two groups of student teachers. Good teachers value *Mature Love* rather highly, and place much less emphasis on *A Sense of Accomplishment.* Mediocre teachers, on the other hand, place a great deal of emphasis on *A Sense of Accomplishment* while deemphasizing *Mature Love.*

These data raise the question as to whether being concerned with the problems of others, and placing less emphasis on personal achievement, is essential to success as a public school teacher. These data could be interpreted to mean that good teachers value the problems of others above their own personal gain or advantage.

The student teachers were again invited to compare their own value rankings with those of the

"good" and "mediocre" teachers. The subjects were then invited to discuss the interpretation of the differences, and during the course of this discussion, some offered their own interpretations of the findings. After the discussion tapered off, the experimenter thanked the students and dismissed them with the comment that he hoped that the students had found the comparisons of their own values with those of others interesting and meaningful.

Control session. The control session was deliberately designed to create interest on the part of the control subjects. The experimenter realized that the student teachers were likely to discuss the study with each other, so the sessions were created to be nearly identical save for the crucial experimental variable of feedback of information designed to implicate the subjects' self-conceptions. The control subjects received a "result summary" booklet with a cover page identical to that received by the experimental subjects. Upon opening the booklet, however, the control subjects were asked to rank the values of the Value Survey as they perceived professors of education might rank them. Upon completing the rankings, the control subjects turned to the next page, where the actual composite rank orderings of the values of 347 professors of education were listed (Spear, 1973). The subjects were encouraged to discuss these findings, and after about 15 minutes, the experimenter thanked the control subjects and dismissed them.

It is important to note that there are no compelling reasons to expect that the control treatment might have affected the values or behavior of the control subjects. The control subjects were not exposed to information concerning their own values (remember that all subjects completed the Value Survey 10 days before at the pretest, but that only experimental subjects were shown their value rankings at the treatment session). Second, no interpretation concerning the professors' value rankings were offered. Third, McLellan (1974) has demonstrated that long-term change is unlikely to result in the absence of such an interpretation of target value findings. For these reasons, it is apparent that the session is an appropriate control for the experiment.

With the exception of the crucial experimental variable of the feedback of information concerning one's own and others' values, the experimental and control sessions were identical. They both involved the discussion of value data from some education-related group: Both asked subjects to respond to the findings presented, and all sessions lasted about an hour and were conducted by the same experimenter.

Posttest. Thirteen weeks after the treatment session, the posttest questionnaire was administered (either by the center's coordinator or by another experimenter) to all subjects meeting in their respective centers. This questionnaire contained the Value Survey and several attitudinal and demographic items unrelated to the present study.

Behavioral measure. The experimenter was given access to the Evaluation of Student Teaching forms that are routinely completed by each student's supervisor some 12 to 13 weeks after the treatment session. The evaluation score on this form served as a behavioral measure of teaching ability.

The judges rating the student teachers on teaching ability (i.e., the supervising teachers) were blind both to the group assignment of the student teacher they were evaluating and to the purposes and hypotheses of the study. In fact, none of the supervising teachers were aware that any kind of experiment was in progress.

RESULTS

Since subjects were randomly assigned to treatment conditions within centers, it will be useful to test the effects of the treatment within a two-way design, with treatment and center as the independent variables. A significant interaction between these two variables would suggest that the treatment had differential effects across the seven teaching centers and that the study might best be conceptualized as seven separate experiments, one within each center. Accordingly, such interaction effects will be considered when interpreting the differences between experimental and control subjects across centers. No statistically significant value differences between experimental and control groups were observed at the pretest.

Effects on Values

The target values of the treatment were a sense of accomplishment and mature love. The self-confrontation model predicts that the experimental subjects who discovered that they held rankings for these values that were unlike those of the good teachers would subsequently change their rankings of these values to become more consistent with that self-conception. The results are shown in Table 3. Also shown are the posttest median rankings for the remaining 34 values, since Rokeach (1973, p. 257) has suggested that values other than those directly implicated by the treatment may also undergo long-term change.

Posttest differences in the rankings for mature love indicate that the treatment had the predicted effect on this value. Thirteen weeks after the treatment, the experimental subjects had a median ranking of 4.35, while comparable control subjects had a ranking of 9.00. This difference is significant beyond

TABLE 3

POSTTEST TERMINAL AND INSTRUMENTAL VALUE MEDIANS AND COMPOSITE
RANK ORDERS FOR CONTROL AND EXPERIMENTAL SUBJECTS

Value	Subjects		Median test	
	Control[a]	Experimental[b]	x^2	p
Terminal				
a comfortable life	11.00 (12)	12.36 (13)	1.60	.203
an exciting life	11.38 (13)	11.88 (12)	1.25	.263
a sense of accomplishment	6.70 (7)	7.25 (8)	.02	.898
a world at peace	11.00 (11)	11.14 (11)	.01	.910
a world of beauty	14.05 (16)	12.94 (15)	2.42	.116
equality	11.00 (10)	10.00 (10)	.62	.563
family security	9.50 (9)	8.78 (9)	.67	.583
freedom	6.63 (6)	6.78 (7)	.00	.987
happiness	4.41 (3)	3.67 (2)	2.49	.111
inner harmony	3.50 (1)	3.27 (1)	.05	.822
mature love	9.00 (8)	4.35 (3)	16.99	<.001
national security	16.42 (18)	16.63 (18)	.02	.891
pleasure	13.00 (14)	12.81 (14)	.00	.985
salvation	15.30 (17)	16.44 (17)	.84	.638
self-respect	4.17 (2)	6.22 (5)	7.77	.006
social recognition	13.50 (15)	15.00 (16)	2.77	.092
true friendship	6.21 (4)	6.63 (6)	.42	.526
wisdom	6.30 (5)	6.00 (4)	.12	.732
Instrumental				
ambitious	8.25 (8)	8.33 (8)	.00	.984
broadminded	6.00 (3)	7.33 (6)	.50	.512
capable	7.78 (5)	8.35 (9)	.50	.512
cheerful	8.86 (10)	10.56 (11)	.70	.593
clean	14.00 (17)	14.44 (17)	.27	.610
courageous	13.00 (15)	13.11 (15)	.01	.901
forgiving	8.06 (6)	6.94 (4)	1.62	.200
helpful	6.67 (4)	7.56 (7)	.11	.737
honest	2.67 (1)	3.78 (1)	.41	.531
imaginative	12.00 (14)	10.60 (12)	.88	.650
independent	8.13 (7)	7.06 (5)	.62	.563
intellectual	10.88 (12)	12.42 (14)	1.05	.306
logical	11.71 (13)	11.00 (13)	.10	.749
loving	8.57 (9)	4.00 (2)	10.15	.002
obedient	16.15 (18)	17.07 (18)	1.33	.247
polite	13.44 (16)	13.57 (16)	.00	1.000
responsible	5.00 (2)	5.80 (3)	1.34	.246
self-controlled	9.75 (11)	8.71 (10)	.86	.642

Note. Numbers in parentheses are composite rank orders.
[a] $n = 76$ and 73 for terminal and instrumental values, respectively.
[b] $n = 87$ and 85 for terminal and instrumental values, respectively.

the .001 level using the median test. Additional analyses indicated that nearly two thirds of the experimental subjects increased their ranking for mature love, while only 25% of the control subjects did so.

However, there is no significant difference in the rankings of a sense of accomplishment between the two groups. Inspection of the pretest data (not presented) shows that both groups had relatively low rankings for this value (experimental group, 8.08; control group, 7.13). Since the overall pretest rankings for this value were already consistent on the whole with the values of good teachers,

feelings of dissatisfaction should not have been induced among most of the experimental subjects. Consequently, the theory does not predict that the overall effect for the experimental group as a whole would be significant. On the other hand, the pretest median ranking for mature love for experimental subjects was 6.88, which is clearly inconsistent with the values of good teachers.

Two other values do show significant posttest differences, however, and both of these differences are consistent with theoretical expectations. Experimental subjects ranked loving significantly higher—nearly five units

TABLE 4

Mean Evaluation Scores for Control and Experimental Subjects by Center Assignment

Center	Group		
	Control	Experimental	Total
1	34.07 (15)	34.47 (15)	34.27 (30)
2	37.90 (10)	39.08 (12)	38.55 (22)
3	34.45 (11)	34.85 (13)	34.67 (24)
4	34.90 (10)	35.50 (12)	35.23 (22)
5	35.00 (11)	35.38 (13)	35.21 (24)
6	31.13 (15)	36.00 (10)	33.08 (25)
7	31.25 (12)	36.00 (12)	33.63 (24)
Total	33.87 (84)	35.83 (87)	34.87 (171)

Note. Numbers in parentheses indicate the number of subjects in each cell.

higher—while they ranked self-respect significantly lower than control subjects.

Further analyses of the posttest data indicate that the Treatment × Center interaction is not significant for any of the values discussed above, permitting us to consider the data from all seven centers in one analysis.

It may be argued that a more appropriate analysis technique for these data would be the analysis of covariance, controlling for pretest value ranks. Such a technique is recommended by Campbell and Stanley (1963, p. 23) and, in fact, yields even more striking differences between experimental and control groups. Due to the nonparametric nature of the value rank data, however, the results from the more conservative median test are reported.

Effects on Teacher Behavior

Table 4 presents mean teaching evaluation scores for subjects grouped by treatment within centers. These scores range from 18 to 42, with higher scores indicating better teaching ability. Inspection of the data shows that experimental subjects scored higher on the evaluation measures (i.e., were judged, on the average, to be better teachers) in each of the seven centers. This finding is highly unlikely; the probability of experimental subjects scoring higher in all seven centers by chance alone is .008 (by randomization test for matched pairs).

Table 5 shows a two-way analysis of variance for these data. The Treatment × Center

interaction is not significant, and we are consequently justified in conceptualizing the study as a single experiment. Overall, the experimental subjects show a mean evaluation score nearly two points higher than the control subjects, a difference that is significant at the .008 level.

DISCUSSION

In a substantive sense, the major finding of the research reported here is that a self-confrontation procedure showed significant effects on the values and behavior of experimental subjects 13 weeks after the treatment session. Student teachers who received objective feedback concerning their own values and those of good and mediocre teachers (a) exhibited significantly higher value ranks for mature love and loving and lower ranks for self-respect, and (b) showed significantly higher scores on a behavioral measure of teaching ability than did student teachers not receiving such feedback.

Why should people who value mature love be better teachers than those who value a sense of accomplishment? This is certainly not an obvious relationship, and we can only speculate at this time about a possible explanation. It might be conjectured that individuals who are primarily concerned with the problems of others (as indicated by higher rankings of socially oriented values such as mature love) and less concerned with personal achievement (as indicated by lower rankings of values such as a sense of accomplishment) should be better able to empathize and identify with their students. Whether or not this speculation is correct, our empirical finding that these values distinguish between good and mediocre teachers is supported by studies

TABLE 5

Two-Way Analysis of Variance for Mean Evaluation Score by Group and Center

Source	df	Mean square	F	p
Treatment	1	163.93	7.08	.008
Center	6	71.99	3.11	.007
Treatment × Center	6	21.02	.91	.508
Residual	157	23.16		
Total	170			

of teacher trainees in Australia (Feather, 1975) and Michigan (Oberle, 1974).

Significant differences in posttest value rankings were found for mature love but not for the other target value of the self-confrontation treatment, a sense of accomplishment. Inspection of the pretest data reveals that the reason that no differences were found for a sense of accomplishment is relatively straightforward and consistent with the theory. Upon receiving the feedback data, the majority of the experimental subjects discovered that they already ranked this value as did the good teachers discussed in the treatment. Consequently, there was no motivation for change on a sense of accomplishment.

On the other hand, experimental subjects generally discovered that their relatively low value for mature love, which experimental subjects ranked eighth on the average at the pretest, conflicted with what they had found out about the values of competent, effective teachers. Thus, we would expect a significant upward shift in this value as a result of the feedback, and the posttest analysis confirms this expectation.

Two other values not directly implicated by the treatment also showed sizable and significant differences between experimental and control subjects at the posttest. The instrumental value, loving, was ranked more than four units higher by experimental subjects at the posttest, while the terminal value, self-respect, was ranked two units lower. These findings provide additional data which suggest that a primary effect of the treatment was to decrease the emphasis that the experimental subjects placed on personal achievement values while increasing the importance they placed on values relating to concern for the problems of others.

All of these differences observed 13 weeks after the experimental treatment can be interpreted as changes occurring in the direction of increasing compatibility with self-conceptions. According to Rokeach's (1973) theory, cognitions and behaviors will undergo long-term change if they are demonstrated to be inconsistent with self-conceptions concerning competence or morality. The experimental treatment in the present study was explicitly designed to implicate the subjects' self-conceptions concerning their competence as teachers. It can be assumed that when subjects learned that they held values that were inconsistent with their self-conceptions, the result was a state of self-dissatisfaction, which then led to the observed cognitive and behavioral changes.

We were not able to gather empirical data on self-dissatisfaction in the present study (so that the subjects would not suspect that they were participating in an experiment), but previous research strongly suggests that this is the most parsimonious account of the psychological process that explains the observed value and behavioral changes. Experimental studies by Rokeach (1973), McLellan (1974), Hamid and Flay (1974), and Sherrid and Beech (in press) have confirmed the hypothesis that self-dissatisfaction is a primary determinant of value change. These studies have uniformly shown that those experimental subjects who reported at the end of the experiment that they were dissatisfied with their ranking for a particular value, manifested significantly more long-term change than subjects reporting that they were satisfied.

The fact that a single brief experimental treatment had such long-lasting effects on complex social behavior should lead the reader to regard the design of the study with the tightest scrutiny. However, various elements of the research design—including the field setting of the study, the length of time (13 weeks) between the treatment and the posttest, and the use of judges who were unaware that an experiment was in progress—combine to provide a preponderance of evidence that the observed differences are, in fact, due to the experimental treatment. The design of the study tends to rule out the usual threats to validity, such as demand characteristics, experimenter effects, or selection problems.

When considered in conjunction with the experimental studies discussed earlier, the findings of this study suggest that self-confrontation techniques offer an effective and practical means of modifying complex social behaviors. Research using such techniques has now successfully modified values and/or behavior relating to racism, smoking, ecology,

police–community relations, locus of control, and teaching.

The experimental confirmation of a cognitively based theory of behavior change represents a major development in social psychology and may provide an alternative to behavior modification for field researchers and practitioners. One apparent advantage of self-confrontation over behavior modification is that while the latter is generally effective in modifying simple or situation-specific behaviors, self-confrontation has been shown to be applicable to a wide range of complex social behavior. It may well be that self-confrontation is especially useful in modifying those behaviors whose reinforcement contingencies are too complex or obscure for the application of behavior modification techniques.

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