

AN EMPIRICAL TEST OF A FREE-WILL CENTERED, PHENOMENOLOGICAL
APPROACH TO ORGANIZATIONAL BEHAVIOR EDUCATION

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In the late 1970's I completed the first formulation of a free-will centered, phenomenological approach to organizational behavior education (Mcknight, 1979), and shortly thereafter performed an empirical test of the theoretical system. This paper summarizes results of that test.

BACKGROUND

The theoretical system tested was based on the notion that there is a separate type of truth, other than the factual truth of the traditional objective sciences, and that this type of truth should be the proper domain of the human sciences in general and of the science of organizational behavior in particular. This truth is a truth of value--of what is truly valuable for the quality of human experience. For example, this approach says that the truth that is most relevant for a subject such as leadership is that of what makes leadership truly valuable, and the same is true for human motivation, communication, and any other subject area within the science of organizational behavior.

One interesting aspect of this reformulated science is that it is, at least theoretically, a transcendental science. Thus if a truth of what is truly valuable exists, and if we had a science which could discover that truth such that its findings were accepted by society so that human behavior

classroom. This paper summarizes a test of the validity of this vision by evaluating it on the level of the transcendental classroom.

In the discussion that follows, I will refer to the reformulated science as "subjective science" to distinguish it from our traditional objective one. Finally, as indicated in my earlier writing (McKnight, 1979) this new science is also a synthesis of science and religion. It is the form of science, applied to the truth system (content) of religion.

Research Design

The evaluation effort involved a direct empirical test, and was focused on the question of the effect of learning the ideas and knowledge of the subjective science theory. Specifically, the theory predicts that its idea should be, in itself, transcendent in the sense that as one comes to believe it and predicate behavior on it, one should move in the direction of becoming a self-actualized and self-actualizing individual as described by Maslow (1968) in his studies of fully functioning, healthy people. Therefore this evaluation effort involved teaching the subjective science theory to my students, then using suitable pre, post and follow-up measurements to determine the effect of exposure to it versus changes in a parallel, partial control group.

In his studies of self-actualizing people, Maslow found the following:

These healthy people are defined by describing their clinically observed characteristics. These are:

7. Greater freshness of appreciation and richness of emotional reaction.
8. Higher frequency of peak experiences.
9. Increased identification with the human species.
10. Changed (the clinician would say, improved) interpersonal relations.
11. More democratic character structure.
12. Greatly increased creativeness.
13. Certain changes in the value system. (p.26)

Maslow further says that these changes in the value system are toward the presence of what he calls the values of Being, or for short, B-values.

He lists these as follows:

Wholeness, perfection, completion, justice, aliveness, richness, simplicity, beauty, goodness, uniqueness, effortlessnes, playfulness, truth and honesty, and self-sufficiency. (p. 83)

The test of the theory consisted simply of teaching the subjective science vision to my students at California Polytechnic State University and taking suitable pre, post and follow-up measures to see if the changes in the psychological orientations of the students were in line with those predicted by the theory.

The subjective science theory says that the basic psychological orientation of an individual holding a belief is determined by the implicit value system contained in the belief. This orientation is the basic form of

becomes a standard for the valuation of reality. Since the dominant belief system in society at the present time is that of objective science, the change which should result from adopting the subjective science vision is from the form of objective science to that of subjective science. The essential differences between these forms is then as follows:

The most basic difference is that of determinism versus free will. If one adopts the objective science vision, one necessarily assumes that one's behavior in the present is a function of one's past since causes always lie in the past. Further, one cannot possibly will events in the past--the existential nature of human consciousness does not permit this possibility--so the logical implication of the belief is that one cannot possibly be responsible for one's behavior. In behaviorism (Skinner, 1974), this becomes the notion that human behavior is shaped by "environmental" forces. One who believes this will thus logically not even try to assume that responsibility, and the result of this will be that one will, in fact, become determined by forces beyond oneself. Thus, one's theory about reality will come to be true, and the only remaining indication that it might not actually be subjectively true will be a vague unhappiness and dissatisfaction at being so helpless. Also, since the past is a subjective fact which has already been determined, and since one cannot possibly consider the processes by which behavior is determined until one locates the cause associated with them, life will naturally also come to be seen as relatively static or "fixed." Thus, conscious life will come to assume the form of the vision of reality it

responsible for the choices one makes and therefore for one's life. Further, this vision also holds the processes by which choices determine behavior to be primary so life is seen to be essentially dynamic. It is also dynamic because the theory holds that every human essentially desires a higher quality of life. This vision does not, however, deny the validity of the deterministic vision, rather it agrees that our present is a function of our past since the choices we have formerly made are now in the past and therefore already actualized or determined. But since they were our choices we remain responsible for them. Finally, the theory holds freedom of choice itself to be a project; that is, one may be either determined or a product of free choices and this itself is a choice. The goal is then to become choiceful and therefore in charge of one's life.

Based on this difference, we can hypothesize that the adoption of the subjective science vision should result in the following structural changes in orientation:

- (a) an increase in the acceptance of personal responsibility. This necessarily brings with it an increase in the extent to which one is "inner-directed," and a corresponding decrease in the extent to which one is "other-directed," and
- (b) a shift in temporal focus toward being more present centered.

There is, of course, also a qualitative difference between these theories; the objective science vision holds the universe to be essentially material, while subjective science--which holds caring to be the organizing

In addition a self-report as to morality is not likely to be valid, and even projective methods are not likely to yield valid results in a situation where a moral truth system is used as an experimental intervention. For these reasons, this part of the study was limited primarily to an evaluation of structural changes.

Instrumentation

Shostrom's (1966) Personal Orientation Inventory (POI) was chosen as the instrument for measuring the degree to which the above structural changes, in fact, resulted from exposure to the subjective science theory. This instrument is a self-report paper and pencil type of test which, "consists of 150 two-choice comparative value and behavior judgments." (p. 4). It was chosen because it is designed to measure the characteristics of self-actualizing people ala Maslow (1968). Specifically, it is constructed around two primary measures which are (a) a "support" scale, and (b) a temporal orientation scale. Shostrom describes these scales as follows:

The time and the support ratio scores cover two major areas important in personal development and inter-personal interaction. The support scale is designed to measure whether an individual's mode of reaction is characteristically "self" oriented or "other" oriented. Inner, or self, directed individuals are guided primarily by internalized principles and motivations while other directed persons are to a great extent influenced by their peer group or other external forces. The time scale measures the degree to which the individual lives in the present as

The POI is an ideal instrument for evaluating the theory not only because its two primary scales directly measure the essential structural changes predicted by the theory, but also because it contains ten sub-scales which measure elements or characteristics of self-actualizing. In general, these scales measure changes which are implications of believing the subjective science vision and which would therefore be expected to follow over time. As a whole then, the instrument has the same structure as the changes expected from adopting the subjective science theory and is therefore ideal for this purpose.

In general, we would expect positive directional changes in these ten sub-scales, and we would further expect these changes to become more pronounced over time. These ten sub-scales and the predictions of the theory with respect to each are as follows:

SAV Self-Actualizing value: "Measures affirmation of primary values of self-actualizing persons." The theory predicts a positive change since the implicit value system of subjective science is more in accord with these values than that of objective science.

EX Existentiality: "Measures ability to situationally or existentially react without rigid adherence to principles." Since process is primary in subjective science its outlook is more flexible than objective science; we would expect a positive change.

Fr Feeling Reactivity: "Measures sensitivity of responsive to one's own needs and feelings." Since the theory is more positive than that of

Sr Self regard: "Measures affirmation of self because of worth or strength." The notion of the subjective science vision as a better map predicts that this should increase, but increases would be expected to occur over longer periods of time.

Sa Self-acceptance: "Measures affirmation or acceptance of self in spite of weaknesses or deficiencies." It is difficult to make a clear prediction here. Subjective science is a very optimistic and self-affirming vision so we might expect a positive change, but it would probably be less pronounced than others.

Nc Nature of Man: "Measures degree of constructive view of nature of man." This scale actually measures the extent to which one sees man as basically good or basically evil. Since subjective science has a very different view--that we are projects capable of becoming either--we cannot make a prediction.

Sy Synergy: "Measures ability to be synergistic, to transcend dichotomies." We should definitely see an increase since subjective science is synthetic.

A Acceptance of Aggression: "Measures ability to accept one's natural aggressiveness as opposed to defensiveness, denial and repression of aggression." Again, this scale does not really fit the theory since subjective science does not agree that we are "naturally aggressive." We cannot make a clear prediction.

C Capacity of Intimate Contact: "Measures ability to develop

these was a test-group-only longitudinal study which lasted approximately eight months and consisted of pre-test followed by seven weeks of exposure to the subjective science vision followed by a first post-test. This was followed six months later by a second post-test with no experimental intervention during these six months. The reason for this design was that a simple pre-post design leaves open the possibility that any resulting changes are simply due to the subjects essentially being told the "correct answers" during the intervention. If the changes which result are due to this alone, however, then we should see a change between the pre and first post tests but either no change or a decline in the period following this when the intervention has been removed. On the other hand, the subjective science theory predicts that the effects of learning it should actually become stronger over time. Thus, if the changes are actually due to the structure or implicit orientation of the theory they should both continue and strengthen once the intervention is removed, and we should see additional and stronger changes between the first and second post-tests.

This, of course, still leaves open the possibility that such changes are due to some factor other than the experimental intervention, and accordingly the second cell of the study was designed to provide at least a partial evaluation of this. This cell consisted of a simple test-group/control-group design consisting of pre-test followed by seven weeks of treatment followed by a single post-test. Further, in order to obtain a direct and isolated measurement of the effect of differing value

second instructor and from a traditional objective science orientation, while the test group was taught by me from the perspective of subjective science. Thus, any resulting difference in the pre-post changes between the two groups could only be due to the difference in implicit value orientations, which, was, of course, precisely the difference which was the object of the study. The subjective science theory predicts that while some changes might be expected in both groups, the magnitude of these changes should be much greater in the subjective science group.

Finally, it would, of course, have been better to have also conducted the longitudinal test in this way, but it was not possible to control the populations sufficiently to accomplish this within the constraints of the budget. These two types of evaluation together, however, should be sufficient to determine the overall validity of the theory..

Sample design

Subjects for the study, as noted above, were college-level juniors and seniors enrolled in a course in organizational behavior for managers in the business school at California Polytechnic State University. The students were essentially self-selected by virtue of enrollment in a particular section of the course at a particular time, and this was the only type of selection performed. This should in no way bias results for several reasons.

First, the primary focus of the test was the difference in test scores within populations. Secondly, the changes of interest are theoretically independent of any demographic criteria whatsoever. Further, the only

was administered during May of 1978. Approximately one-hundred students began the experiment and about 70 percent completed it with usable questionnaires. The test-control study began on January 11, 1978 and ran to March 1. Approximately twenty usable questionnaires were obtained from the control group, and approximately eighty from the test group. Pre-test results were analyzed for both cells using the t distribution test for differences. In all cases the null hypothesis (H) was no difference, while the test hypothesis (H1) was that a positive directional difference existed. Although the difference of interest was unidirectional, a two-tailed test of significance was used in the interest of conservatism in all cases. The test versus control populations were also compared using the F statistic in a one-way analysis of variance.

Results

The most interesting results are those from the follow-up test of the longitudinal study. This is true because, as noted earlier, any changes that occur from the pre-test to the first post-test are open to the charge that the students were simply "told" the right answers. Since there was no intervention between the post-test and the follow-up test six months later, any changes which resulted over this period could only be due to the effectiveness of the experimental intervention, i.e. learning the theory. As Table 1 shows, the strongest changes did occur during this follow-up period as predicted by the theory.

Table 1
 Longitudinal Study: Means, Standard Deviations
 and Tests of Significance Between Mean Differences

POI Scale	Pre(1)		Post (2)		Follow-up (3)		Differences	
	M	SD	M	SD	M	SD	1-2	2-3
Time Competent	16.4	2.9	17.2	2.6	18.6	2.8	+0.8**	+1.4***
Inner Directed	84.9	10.6	88.1	11.1	91.3	11.6	+3.2***	+3.2***
Self-Actualizing Value	20.7	2.5	21.3	2.6	21.8	2.4	+0.6**	+0.5
Existentiality	20.6	4.0	21.2	4.2	23.0	4.4	+0.6	+1.8***
Feeling Reactivity	15.8	3.1	16.4	3.0	17.1	2.7	+0.6*	+0.7**
Spontaneity	12.2	2.7	13.1	2.8	13.6	2.5	+0.9***	+0.5*
Self-Regard	12.6	2.1	12.9	2.4	13.4	2.4	+0.3	+0.5*
Self-Acceptance	15.2	3.1	15.9	3.5	16.8	3.5	+0.7*	+0.9**
Nature of Man	11.7	1.7	12.3	1.6	12.6	1.7	+0.6*	+0.3
Synergy	7.2	1.1	7.3	1.1	7.5	1.2	+0.1	+0.2
Acceptance of Aggression	16.0	3.4	16.3	3.3	17.0	3.2	+0.3	+0.7*
Cap. for Int. Contact	17.8	3.5	18.7	3.6	19.6	3.5	+0.9**	+0.9**

* P < .05, two-tailed test; ** P < .01, two-tailed test; *** P < .001, two-tailed

Specifically, changes in the two major scales--Time Competent and Inner-Directed--were significant at the .001 level over this period. In the pre-post period, the Time Competent change was significant at the .01 level, while the Inner-Directed change was again significant at the .001 level.

For the ten sub-scales results were somewhat mixed. The differences

<u>POI</u>	<u>Prediction</u>	<u>pre-post</u>	<u>Post-follow-up</u>
Self-Actualizing Value	increase	+0.6**	+0.5
Existentiality	increase	+0.6	+1.8***
Feeling Reactivity	increase	+0.6*	+0.7**
Spontaneity	increase	+0.9***	+0.5*
Self-Regard	incr.w/time	+0.3	+0.5*
Self-Acceptance	increase	+0.7*	+0.9**
Nature of Man	none	+0.6*	+0.3
Synergy	increase	+0.1	+0.2
Acceptance of Aggression	none	+0.3	+0.7*
Capacity for Intimate Contact	strong incr.	+0.9**	+0.9**

In general, all of the results were in line with those predicted by the theory except for the prediction concerning the synergy scale, which was not confirmed. This, however, is probably an artifact of the instrument itself. The synergy scale consists of only nine items, and these are poorly chosen for actually measuring synergy. For example, two of these items are actually factually incorrect from a synthetic perspective. These are, "I believe the pursuit of self-interest is not opposed to interest in others" and "people are both good and evil." The problem with the first of these is that it is stated from the perspective that actually is contradictory. The second is simply factually untrue--good and evil are the most basic of all existential choices rather than being synthetic.

.001 level for the two major scales and for five of the sub-scales, and differences were significant at the .01 level for all of the remaining scales but the Acceptance of aggression scale for which we did not make a prediction. In contrast, the control group showed a significant (.05 level) difference on only one of the sub-scales--Nature of Man. These test-control differences however, must be interpreted with a great deal of caution, both because the analysis of variance differences were not pronounced and also because they are susceptible to the charge that I taught the students the right answers. I did not, of course, explicitly do so, however the subjective theory is very similar to Maslow's work upon which the POI is based; thus learning it might very well teach the "right" answers to the POI.

Table 2

Test/Control Group Study: Means, Standard Deviations, and Tests of Significance

<u>POI Scale</u>	<u>Test-Group</u>				<u>Control-Group</u>			
	<u>Pre-test</u>		<u>Post test</u>		<u>Pre-test</u>		<u>Post-test</u>	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Time Competent	16.4	2.5	b17.8***	2.6	16.8	3.2	16.7	3.3
Inner Directed	83.8	7.7	88.6***	7.7	79.2	14.0	81.9	13.1
Self-Actualizing Value	19.9	2.3	21.2***	2.1	18.4	4.0	19.4	3.2
Esistentiality	20.6	3.4	21.9***	3.6	19.5	5.5	20.6	3.8
Feeling Reactivity	15.8	2.7	16.8**	2.4	14.2	3.2	14.3	3.6
Spontaneity	12.5	2.4	a13.3**	2.6	12.0	3.6	11.8	3.7
Self-Regard	12.2	1.9	13.2***	1.7	11.8	2.6	12.1	2.9
Self-Acceptance	14.7	2.7	15.7***	2.8	14.3	3.4	14.8	3.8

In summary, results of these tests generally confirm the prediction that learning the subjective science theory will result in a movement toward self-actualization. The follow-up period of the longitudinal study is the most important part of the experiment for validating the theory, and results here were very much in line with the predictions of the theory. Thus, we can, in a course in organizational behavior, actually help students become healthier human beings, and, presumably also, then, better managers and leaders.

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