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NONTERMINATING DISAGREEMENTS AND IMPLICIT PRESUPPOSITIONS:  
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#### ABSTRACT

In this paper it is argued that nonterminating disagreements (such as those that Skinner and Rogers represent within the field of psychology) are likely to be associated with contrasting patterns of "implicit presuppositions." Nineteen subjects rated each of two essays, one by Skinner and the other by Rogers, on eleven bipolar presuppositions. There was consensus among raters that the Skinnerian and Rogerian positions contained significantly different presuppositions. An interpretation of disagreements between these two schools of psychology is offered in terms of the contrasting patterns of presuppositions that were identified.

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Nearly a quarter of a century ago a debate between B. F. Skinner and Carl R. Rogers was published in Science. In that debate, Skinner and Rogers disagreed about practically everything except for the applicability and usefulness of the empirical approach to the study of human issues. Despite the vast expansion of information and growth of knowledge in the field of psychology over the last 25 years, Skinner and Rogers are no closer together in their views today than they were when they first agreed to debate. If the same evidence is available to both, and it surely is, why don't these two psychologists resolve their differences on the basis of empirical data? It may be that such disagreements tend to persist because the same "facts" are interpreted differently by the disputants, as Hilgard (1956) has suggested. This seems to us a plausible hypothesis and one worth pursuing. In the series of studies of which this Working Paper is one, we argue that nonterminating disagreements of the kind represented by the Skinner-Rogers debate result, at least in part, from differences in implicit presuppositions -- presuppositions which,

although unstated and even unformulated, affect the nature and course of an argument.

Our research to date has resulted in a set of eleven presuppositions which we have found useful in assessing many different kinds of disagreements, both within particular disciplines and across disciplines. Although in the present study we have asked our subjects to identify implicit presuppositions in the essays of two individual psychologists, we are less interested in the individual differences between Skinner and Rogers than we are in the differences between the two positions or "schools" that are represented in the controversy. So far as we know, ours is the first attempt to identify and assess empirically some of the contrasting presuppositions that underlie nonterminating disagreements between representatives of different "schools" of thought.

#### METHOD

The two essays selected for this study were "The Science of Learning and the Art of Teaching" (Skinner 1954) and "Significant Learning: In Therapy and in Education" (Rogers 1961). These essays were chosen rather than the symposium debate already mentioned because they are comparatively short essays in which Skinner and Rogers independently are discussing a concrete and delimited topic, namely education. We believed that it would be more useful to show that subjects could identify the unstated presuppositions in the focused essays than in the wide-ranging debate in which Skinner and Rogers are discussing directly their differences and similarities.

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Nineteen undergraduate students from the Claremont Colleges<sup>1</sup> rated each of the essays on eleven bipolar "dimensions," or presuppositions. Table 1 presents a statement of the two poles of each dimension.

[Table 1 about here]

Each subject was given a packet containing instructions for rating, eleven rating scales, one to a page, and a copy of each essay. To introduce subjects to the rating procedure, they first were asked to read two short selections and to rate each on two dimensions which were not used in the study itself. When the subjects had completed the two illustrative ratings, they were asked to read and rate the Skinner and Rogers selections. The subjects were unaware of the hypotheses of this study. Each subject recorded his/her judgments by writing the names ("Skinner" and "Rogers") on the appropriate lines of the rating scale for each dimension. (See Figure 1 for a sample rating sheet.)

[Figure 1 about here]

Ratings A through E represent varying degrees of emphasis on the characteristics of one pole, and ratings V through Z represent varying degrees of emphasis on the characteristics of the contrasting pole. Ratings at the middle point of the scale indicate that an article was judged to reflect an equal emphasis on each pole of the dimension.

We predicted that Skinner's position would be rated as reflecting the presuppositions listed in the left hand column of Table

2, and Rogers' article, correlatively, as reflecting the presuppositions listed in the right hand column.

[Table 2 about here]

## RESULTS

The data are presented in two ways: one is based on the direction of difference for each subject's ratings of the Skinner and Rogers essays on each of the eleven dimensions; the other is based on the median value obtained on each dimension for each essay.

For the first analysis (which we call the "directions test") it was hypothesized that a significant majority of ratings would conform to the directional differences outlined in Table 2. The results are shown in Table 3.

[Table 3 about here]

As can be seen, all comparisons are in the predicted direction, and 10 of the 11 comparisons are statistically significant at  $p < .05$ , and the other barely misses significance. This indicates that there is consensus among raters about the direction of the presuppositions that are implicit in the two essays. The unanimity of ratings on four of the dimensional differences is particularly impressive.

The second analysis (which we call the "medians test") focuses on the degree of difference between the Skinnerian and Rogerian positions by considering the median value obtained by each author on each dimension. The data are presented in Figure 2. The amount of

dispersion around the medians is shown by corresponding scale values of the first and third quartiles in each instance.

[Figure 2 about here]

All dimensions except D-11 show median ratings for Skinner and Rogers that are distinctly different from each other. On ten of the dimensions the median ratings are not only quantitatively different; qualitatively they represent diametrically opposed implicit presuppositions. On eight dimensions the interquartile ranges for the two sets of ratings (Skinner and Rogers) do not even overlap. On two of the other three dimensions there is overlap in the distributions of ratings, but the medians are far apart. However, on D-11 there is only a one-step difference between the median ratings. Nevertheless, the "directions test" (Table 3) shows that a significant number of subjects assessed Skinner's essay as presupposing a somewhat more intelligible world than Rogers' essay. On all other dimensions the median ratings for the two were literally poles apart.

#### DISCUSSION

In what ways are the presuppositions related to the contrasting theoretical positions and research strategies of Skinner and Rogers? Here, we will discuss the relation of our findings to some of the issues on which the two schools of psychology take opposing positions.

Skinner's view of the world and the people in it "presupposes" not only that the world is intelligible and relatively simple, but

that it can be understood best from an observer's perspective, e.g., by focusing on external characteristics (stimuli and responses) that are readily interpretable. In his general model, Skinner rejects as unnecessary all intervening variables and hypothetical constructs. Stimuli and behavioral responses carry their own messages, and hence need little decoding. A state of rest or of stable equilibrium (i.e., the operant level) is presumed to be the basic condition. "Conditioning" is a reversible process; extinction procedures return the organism to the former stasis. It is changes in behavior that are explained by general principles of reinforcement, which apply equally well to all people or species. Psychologists of the Skinnerian "school" are predisposed to search for "reinforcers" that can effectively maintain a new operant level, once it has been produced. General reinforcement principles that are applied to units of behavior constitute specifiable means for achieving given ends.

By contrast, Rogers' view of the world and the people in it "presupposes" that, although the world is basically intelligible, it is complex and can be understood best from the perspective of a participant. In understanding and explaining human behavior Rogerians focus on inner qualities (e.g., acceptance of feelings, positive regard, and phenomenal experience), almost to the exclusion of overt, observable responses. Whether analyzing education, creativity, or therapy, Rogerians emphasize process -- the process of "becoming" and of "self-actualization." Therefore, significant theoretical constructs characteristically are inferred from changes in the congruence of phenomenal experience, such as between one's perception

of ideal self and the self-concept. Human beings have the capacity for growth, self-regulation, evaluation of discrepant information, and self-determined choice; the capacity for self-determination is limited only by the information available to the decision process. For Rogerians, dynamic change is the norm; goals, ends, and purposes are open and always emerging.

These two different "schools" or positions reach entirely different conclusions and recommendations on important policy matters, such as education. Here, for instance, is Skinner on the "principal task" of the school:

The school is concerned with imparting to the child a large number of responses of a special sort . . . the principal task is to bring this behavior under many sorts of stimulus control.

Skinner, 1954, p.89

And here is Rogers:

The motivation for learning and change springs from the self-actualizing tendency of life itself . . . students who are in real contact with life problems wish to learn, want to grow, seek to find out, hope to master, desire to create.

Rogers, 1961, p. 289

Rogerians and Skinnerians select different parameters on which to apply the methods of science and to gather "relevant" evidence.

Whereas Skinnerians prefer to study changes in the latency, rate, or strength of responses in relation to specific reinforcement contingencies, Rogerians prefer to study self-direction, feelings, attitudes, and evaluations of the self in relation to others. For instance, in assessing outcomes of a given type of educational program, Skinnerians are concerned with specific behaviors that have been "shaped"; Rogerians, in contrast, are concerned with changes in self-initiated learning, creativity, or in attitudes toward oneself and toward others. The two schools adopt different presuppositions, attend to different parameters, and obtain different kinds of evidence. Each school assesses quite differently the relevance of and weight to be assigned to the same empirical "fact." A significant finding for one position is easily dismissed as irrelevant or uninterpretable by the other.

We suggest that the association we have found between Skinner's and Rogers' positions on the presuppositions, on the one hand, and the contents of their two theories, on the other hand, arises because these presuppositions are fundamentally a part of the logic and reasoning by which they reach their position. Among the many factors influencing these positions, presuppositions, strategies of research, and interpretations of evidence are interacting components in the processes of logical thinking. Each component influences and is influenced by the others, and any one of these may change through transactions with the others.

## CONCLUSIONS

It will come as no surprise to most psychologists that Skinner and Rogers represent different "schools" of thought. Indeed, it is fashionable today to talk about "paradigm clashes." What, then, is new about our approach to this issue?

Most comparisons of schools and paradigms stop at description of differences in content, concepts, or method. Our effort has been directed not only toward describing such differences but toward analyzing and explaining them in relation to a standard set of eleven presuppositions. This set of dimensions was developed in other contexts, for purposes quite remote from this analysis of disagreements between "schools" in psychology. These dimensions have been used in analyzing writings in intellectual history (Jones et al., 1980b), artistic products (in preparation) and public policy issues (Jones et al., 1980a).

What is novel about our approach, then, is that (1) we have defined a set of presuppositions that are intelligible enough and unambiguous enough for an intelligent reader -- even one unacquainted with the particular subject area -- to use the definitions as an assessment tool, (2) we have developed an empirical method in which the rater who analyzes the works does not know the hypotheses that are being tested; therefore data and hypotheses are not confounded, (3) we have derived the presuppositions from controversies in diverse subject areas; the dimensions, therefore, are not ad hoc with respect to the Skinner-Rogers controversy or, for that matter, to any specific controversy.

What we have done in this paper is to test our beliefs about the underlying presuppositions of two psychological "schools," or "paradigms." Our empirical test of these beliefs has provided a method that is relatively independent of our mere "think-so," to use Kaplan's (1964) apt phrase.

## FOOTNOTES

1. The authors gratefully acknowledge the help of Laurel Gray in the collection of data.

## REFERENCES

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TABLE 1

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THE SET OF 11 IMPLICIT PRESUPPOSITIONS,  
OR "DIMENSIONS," USED IN THIS STUDY

Skinner, B. F., "The Science of Learning and the Art of Teaching,"

Harvard Educational Review, 25, (1954), pp. 86-97.

DIMENSION 1

- one end - Emphasis on external aspects of the subject - for example, on social or economic status, external appearance, observable behavior, interactions with others which depend upon relative status, role or position.
- other end - Emphasis on the inner life of the subject - for example, on mood, feeling, attitude, belief, desire, interactions with others which arise from personal or emotional concern.

DIMENSION 2

- one end - Emphasis on depth of interpretation: the subject may be treated by indirect allusion, figures of speech; meaning may be implied or suggested in symbols, metaphors, allegories so that, beyond the obvious surface meaning, there seems to be a "deeper" meaning that yields only to analysis; several alternative meanings may be possible, among which it may be difficult to decide.
- other end - Emphasis on literal, surface meaning: the subject may be treated in precisely defined and relatively unambiguous terms; meaning may be expressed in relatively explicit form and requires less interpretation to be understood.

DIMENSION 3

- one end - Emphasis on parts or elements of a whole, rather than on the whole itself. These parts are (or may be considered) independent of other parts. Parts themselves may be analyzed into constituent parts.
- other end - Emphasis on the whole, rather than on parts. The parts themselves may not be clearly distinguished; if they are, relations among them are emphasized, not their independence.

DIMENSION 4

- one end - Emphasis on states of rest or of stable equilibrium.
- other end - Emphasis on change, motion or transitional states.

DIMENSION 5

- one end - Emphasis on self-determination in the choices that a person makes that affect his/her own life; on the individual's power to change the course of events - a power that is attributable to qualities of the individual himself/herself.
- other end - Emphasis on the powerlessness of the individual to make the choices that affect his/her life; on the individual's lack of power to change the course of events - a lack of power that may be attributable either to qualities of the individual himself/herself, or to outer circumstances, or to both.

DIMENSION 6

- one end - Emphasis on the general, rather than on the particular; on what holds true for many individuals or for many cases; on what is not tied down to a particular person, place or date.
- other end - Emphasis on what is specific or particular; on the unique characteristics of some person, place or date.

DIMENSION 7

- one end - Emphasis on the point of view of an observer, of one who is uninvolved in, detached from, the subject matter.
- other end - Emphasis on the point of view of a participant, of one who feels involved in or concerned (positively or negatively) with the subject matter.

DIMENSION 8

- one end - Emphasis on alternative or multiple means.
- other end - Emphasis on limited or specifiable means.

DIMENSION 9

- one end - Emphasis on open or evolving ends.
- other end - Emphasis on fixed or given ends.

DIMENSION 10

- one end - Emphasis on the position that the world seems fundamentally simple.
- other end - Emphasis on the position that the world seems fundamentally complex.

DIMENSION 11

- one end - Emphasis on the position that the world seems intelligible.
- other end - Emphasis on the position that the world seems only partially intelligible or perhaps unintelligible.

TABLE 2

PREDICTED DIRECTION OF DIFFERENCE IN RATINGS OF THE TWO ESSAYS

	Skinner	Rogers
D-1	Outer (A-E)	Inner (V-Z)
D-2	Surface (V-Z)	Depth (A-E)
D-3	Parts (A-E)	Wholes (V-Z)
D-4	Static (A-E)	Dynamic (V-Z)
D-5	Powerlessness (V-Z)	Self-determination (A-E)
D-6	The general (A-E)	The particular (V-Z)
D-7	Observer's perspective (A-E)	Participant's perspective (V-Z)
D-8	Limited means (V-Z)	Alternative means (A-E)
D-9	Fixed, given ends (V-Z)	Open, evolving ends (A-E)
D-10	Relatively simple world (A-E)	Relatively complex world (V-Z)
D-11	Intelligible world (A-E)	Only partially intelligible world (V-Z)

TABLE 3

NUMBER OF SUBJECTS WHO RATED THE SKINNER AND ROGERS POSITIONS IN THE DIRECTION PREDICTED, AS EQUIVALENT, OR IN THE DIRECTION CONTRARY TO THAT PREDICTED (N = 19)

	Predicted direction	Equal	Opposite direction	p
D-1	19	0	0	*
D-2	19	0	0	*
D-3	13	0	6	n.s.
D-4	14	2	3	*
D-5	18	1	0	*
D-6	15	1	3	*
D-7	19	0	0	*
D-8	17	0	2	*
D-9	19	0	0	*
D-10	16	2	1	*
D-11	13	2	4	*

\*Significant at  $p < .05$  by the Sign Test (Marascuilo, 1971, p. 523).

FIGURE 1

A SAMPLE RATING SHEET

D-1

Ratings at positions toward this end represent increasingly greater degrees of this characteristic:

Emphasis on external aspects of the subject - for example, on social or economic status, external appearance, observable behavior, interactions with others which depend upon relative status, role or position.

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

E \_\_\_\_\_

V \_\_\_\_\_

W \_\_\_\_\_

X \_\_\_\_\_

Y \_\_\_\_\_

Z \_\_\_\_\_

Emphasis on the inner life of the subject - for example, on mood, feeling, attitude, belief, desire, interactions with others which arise from personal or emotional concern.

Ratings at positions toward this end represent increasingly greater degrees of this characteristic.

FIGURE 2

MEDIAN, Q<sub>1</sub> AND Q<sub>3</sub> SCALE VALUES FOR RATINGS OF ESSAYS BY SKINNER AND ROGERS

