Behaviorism and Humanism: A Synthesis?

Arthur W. Combs, W. James Popham, and Philip L. Hosford

Prologue

Philip L. Hosford

One highlight of the ASCD 1977 Annual Conference in Houston was Phil Hosford's presentation of the Combs-Popham debate entitled, "Behaviorism and Humanism: A Synthesis?"

Educational Leadership reproduces here the papers given by these three scholars in preparation for the session. The entire session, including spontaneous interactions, may be heard on the cassette tapes available through the ASCD Publications Office.*

"There are two giant forces in education building in our country today—the first driving toward accountability and the second toward a humaneness in education."

So I spoke in 1972—five years ago. I went on to say that the accountability people, mostly comprised of what we call scientific behaviorist types, have large amounts of data accumulating that seem incontestable. Their procedures, statistical designs, and findings are difficult to discredit. On the other hand, and just as incontestable, are the number and popularity of books currently on the market that deplore the irrelevance of the scholastic achievement pressures and announce a crisis in education because of the lack of humaneness therein.[1]

That was all five years ago.

Since that time, and up to and including today, I have been expressing my belief that both systems of thought have much to offer all of us in the profession of education. Whether we think in terms of behaviorism and humanism; or in terms of an objective-based system vs. a subjective-based system; or in terms of learning theories based on different premises—any way we view it, the marriage of the two systems is the helpful, responsible, profitable way for us to go. The purists in both camps have clarified the basic tenets for us. Their followers, perhaps being less well informed, have often overdrawn the conflict and engaged in much finger-pointing debate that has only served to create an either/or stance that must be recognized as patently ridiculous. We are on the verge of a major breakthrough in American education based on taking the best from each of these two theories and breaking free of past conflicts.

The majority of us in ASCD like to be viewed as humanists. But this should not mean that we are ignorant of the principles of behavor-

[1] Philip L. Hosford. *An Instructional Theory: A Beginning*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973. p. 163.

* Arthur Combs, James Popham, and Philip Hosford. "Behaviorism and Humanism: A Synthesis?" Cassette tape. 1977. 95 min. (Stock number 612-20163) $9.00. All orders must be prepaid.

ism, nor that we view achievement of a "conditioned response" as an unacceptable goal, nor that we refuse to utilize learnings from the behaviorists just because they are not labeled humanists. One thing anyone donning the mantle of "humanist" must do is listen—listen openly and with an inquiring attitude. The behaviorists offer us many techniques and methods that can and are being used today without modification and in a humanistic way. Many in our ranks are well on their way toward using the best from both systems at appropriate times. They ignore old debates and proceed with their work. They are the true linkers of theory to practice and have brought us to the verge of the breakthrough.

So I have spoken during the past five years. And now today, you are about to hear from two nationally known scholars on the subject. Let me say a word about the procedures we are about to follow.

First, neither of the two speakers has seen the paper prepared by the other for this session. Each, in turn, will speak to you for about 15 minutes to clarify positions. Following their presentations, I will render my attempted synthesis of their remarks in as brief a fashion as I can manage. From that point on until the appointed hour, our discussion will be spontaneous.

A Humanist's View

Arthur W. Combs

For a long time I have been deeply concerned about the so-called behaviorism-humanism debate. When I was asked to represent the humanistic view in this session, I, therefore, welcomed the opportunity, not to demolish the opposition, but to contribute to a greater understanding of what the humanistic view can offer toward the solution of educational problems. Whenever a new idea appears on the horizon, people generally push it into a dichotomy of either/or as a way of understanding its implications. I guess that is sometimes necessary, but as Earl Kelley once said, "Whenever an idea can be put into a dichotomy and expressed as either/or, it is almost certain they are both wrong!" If looking at things in dichotomous terms is a necessary step in understanding, then I hope this session may help us get over that phase and on to something more productive.

Behaviorism and humanism are two theoretical approaches for dealing with human events. To really understand them it is necessary first to understand that theories are never right or wrong. A theory is only a way of organizing data in such fashion as to make it useful for dealing with problems. Just so, behaviorism and humanism are not right or wrong. They are alternate ways of looking at human problems. Each is useful and efficient for dealing with the kinds of problems it was constructed to confront.

It may be helpful to draw an analogy with theories in the field of mathematics. In the course of human development it became necessary for people to deal with numbers of things. To meet this problem they developed arithmetic, a system for dealing with concrete, observable, countable units. Such a system was useful for a long time and made it possible for human beings to deal more effectively with the problems they confronted. As time went on, they began to confront problems that could not be dealt with arithmetically. They needed a system which would make it possible to deal with unknown numbers, events which could not be precisely observed and counted.

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To meet this need they developed a new theory called algebra. Now algebra does not deny arithmetic. Quite the contrary; it *includes* arithmetic and extends beyond it to deal with problems arithmetic could not handle by itself. Later on even algebra was not enough. It was necessary to find a system to deal with the question of

infinity, and mathematicians invented the system called calculus. In similar fashion, behaviorism is a frame of reference for dealing with precisely defined objectives. It is a useful system for dealing with events which can be clearly defined and managed. In education it has proven immensely useful as an approach to the teaching of skills like reading, writing, arithmetic, laboratory procedures, and situations which lend themselves to precisely defined behavioral outcomes.

Understanding Humanism

Humanism is like algebra. It is especially useful for working with broader, holistic objectives which do not lend themselves to precisely defined behavioral outcomes. Like algebra, it is a system designed to deal with events in which unknown or unobservable factors are involved. As such, it does not deny behaviorism. It extends beyond behaviorism to deal with matters more efficiently approached from a humanistic orientation. These matters are of two sorts: (a) humanistic objectives and (b) the internal life of persons, the things that make us human.

1. What are humanistic objectives? Generally speaking humanistic objectives are broad, holistic goals of education. They have to do with such objectives as self-understanding, self fulfillment, good citizenship, responsibility, emotional well being, worthy home membership, creativity, commitment to democratic ideals, adaptability to change, and intelligent behavior. These are *general* objectives of education which have always been hoped-for outcomes of teaching. You will find them appearing over and over again in every list of objectives for public education from the very beginning down to the last White House Conference. Such broad, general objectives, having to do with the growth of people as persons, do not lend themselves to description as precisely defined behaviors. If creativity and intelligence could be defined in precise behavioral outcomes, they would not be creative or intelligent. Creativity and intelligent behavior are outcomes which cannot be foreseen. They are unique human qualities resulting from highly personal, individual interactions between a person and the world in which he or she lives. To foster such objectives efficiently requires humanistic theory and practice.

2. Humanism is concerned with the internal life of persons, those aspects of human experience we often call the affective domain. They have to do with the things that make us truly human, our feelings, attitudes, beliefs, loves, hates, hopes, dreams, aspirations, values, and especially our perceptions of ourselves and the world. These qualities go on inside of people and cannot be dealt with in strictly behavioral terms. They are much more efficiently approached from a humanistic orientation.

Workers in the humanist movement call themselves by many names. Among these are: existentialists, self-psychologists, phenomenologists, perceptualists, personalists, and many more. By whatever name, they are united in the belief that adequate understanding of persons can only be achieved by attending to what is going on inside the person as well as his or her behavior.

Humanism regards behavior as the outcome of forces going on inside the person. It sees behavior as only a symptom, the outward expression of a person's perceptions of self and the world. Few of us would be content with a doctor who confined himself or herself to treating our symptoms. Just so, humanism holds that we are more likely to solve education's problems if we deal with causes as well as symptoms. Paying attention to a child's self-concept as well as teaching him or her skills will increase the likelihood of success in whatever behavior we hope to produce.

To accomplish its goals our educational system must achieve both behavioral and humanistic objectives or fail us all—society, parents, and students alike. The problem we face is not either/or, behaviorism or humanism. There are two broad ways we can approach human problems. We can attempt to *manage* people's behavior through various forms of control and direction, or we can use a process orientation focusing our efforts on the creation of processes which will assist people in the discovery of effective personal solutions.

The proper question is, "What is the proper tool or frame of reference most appropriate for accomplishing the objectives we have in mind?"

We need both systems of thinking. When a student comes to my office to ask, "What must I do to register for your course?" I deal with the problem in behavioral terms. I tell him straightforwardly what the requirements are, how they must be met, how he will be judged, and what the outcome will be. If the same student comes to my office to say, "Art, I am having trouble with my wife," my approach would be quite different. I would deal with him humanistically saying, "I am sorry to hear that, Ed. Would you like to talk about it?" So together we may both explore his situation, his feelings, attitudes, beliefs, and the ways he sees himself, his wife, and the world he is living in. Neither of us knows at the beginning what the eventual outcome will be.

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Behaviorism and humanism cannot be synthesized. The goal we seek is not to erase or ignore their differences. On the contrary their special values lie precisely in the fact of their difference. What is needed is not synthesis, but synchronization. There is not much sense in trying to dig a ditch with a teaspoon or trying to stir your coffee with a steam shovel. Different tools have different purposes and different uses. They work most effectively when applied to problems they were designed for. Persons with two tools, furthermore, are always far better off than persons who must work with only one. Since educational objectives are both humanistic and behavioral, to achieve them effectively, we need both frames of reference. What is needed is persons who understand both viewpoints sufficiently well to know when and how to use them.

Therein lies the real problem. We are currently so preoccupied with one way of looking at our educational objectives that we run grave danger of distorting the entire process. We are trying to solve our problems everywhere almost exclusively from a behavioristic orientation. In our headlong search for accountability we have gone overboard for behavioral objectives. We are attempting to apply the industrial model to practically all educational processes in the blind faith that because behavioral objectives have worked so well in industry and management, they will work equally well to accomplish the objectives of education. The hope is a pipe dream. Behavioral approaches have the illusion of being so straightforward, so business-like, so logical, that it seems surely such management systems will do as much for education as they have done for industry. However, there is nothing inherently good in a system. A system or theory is only a device for making sure we achieve our objectives. Applying a system to the wrong objectives will only guarantee that our errors will be colossal! There can be no doubt that behavioral approaches will help us solve some of the objectives of education; others call for humanistic thinking if they are to be efficiently achieved.

A Newer Frame of Reference

Humanism is a much newer frame of reference than behaviorism, about 30 years old as a formal discipline. Its theory is less clear and precise. It is an open system of thinking concentrating on persons and processes and holistic objectives. It is less well-known and less understood than behaviorism. Nevertheless, it is here to stay. If it did not exist, we would have to invent it to provide the guidelines for the achievement of the educational goals of this and future generations.

Behavioral approaches alone are simply inadequate to deal effectively with the broader humanistic objectives required to live effectively in a complex modern society. I am not a humanist simply because I want to go around being nice to other people. I am a humanist because I know that when I approach the human problems of teaching and learning from a humanistic orientation as well as a behavioristic one, I get better results. It is a better road to excellence. People learn to read better, write better, are better in math, chemistry, poetry or business. Children learn better when we pay attention to their self-

concepts. Teachers teach better when they are aware of how things seem from the point of view of their students. People behave or misbehave as a consequence of their feelings, attitudes, beliefs, values, emotions, and personal understandings about themselves and the world in which they live. Such humanistic factors in learning cannot be ignored because they are inconvenient. That is like saying, "I know my car needs a carburetor, but I'm going to drive without one!"

We are currently preoccupied with behavioral approaches. Hundreds of millions of person hours and hundreds of millions of dollars have been poured into efforts to apply its thinking to every aspect of education with only partial results, because it is only a partial solution. As my good friend Don Snygg used to say, "Sometimes you can sell more papers by shouting louder on the same corner, but sometimes you'll do much better by moving to another corner." We have lived a long time with behavioral approaches. It is time we gave humanism equal opportunity and support.

Behaviorism As A Bugbear

W. James Popham

A *bugbear*, according to the *Oxford English Dictionary*,[2] is "a sort of hobgoblin (presumably in the shape of a bear) supposed to devour naughty children; hence, generally, any imaginary being invoked by nurses to frighten children." The transferred meaning of bugbear, used in that sense as early as 1580, is "an object of dread, especially of needless dread."

Surprisingly, however, the term *behaviorism* is nowhere defined in all 15,500 pages of the *Oxford English Dictionary*. Yet, the creators of that definitive word bank could have attended to this omission by simply listing behaviorism as a synonym for bugbear. During the past decade or so, any nurses in need of an expression to frighten naughty educationists had no further to search than that sure-fire emotion arouser—*Behaviorism*.

1984 Draws Nigh

What kinds of images are conjured when we label an educator as a behaviorist or an educational program as behavioristic? Well, for most people, thoughts arise of dehumanized mind control—replete with just the wrong admixture of deceit and degradation. In contrast, when we utter the term humanism, we instantly conceive of a warm, wise, and genuinely wonderful human being whose values and virtues are beyond reproach.

But the connotations of both terms, behaviorism and humanism, are typically way out of line with reality. There is no single mold for those with behaviorist leanings. Humanists, too, vary in all sorts of ways. Attempts to categorize people too quickly into unidimensional camps typically distort the world.

The danger in unsoundly labeling educational programs, of course, is that the positive or negative loadings of our labels may inaccurately color our perceptions of a program's worth. An instructional program that is humanistically oriented may, in spite of its praiseworthy intentions, turn out to be a colossal disaster. A behavioristically oriented instructional program might not be run by malevolent demons and just might provide a truly fine educational experience for children.

Some behavioristic educational programs are every bit as bad as most people think—hence are prime targets for censure. Similarly, some humanistic programs are truly functioning as the utopias we fancy them to be. Merely judging by the labels doesn't give you the picture.

At its least defensible extreme, behaviorism represents a dictatorial approach to controlling human actions via a host of effective yet repugnant practices drawn from the animal laboratory. It relies on unbridled operant conditioning to manipulate human beings toward goals they have not chosen. Relatively few of us would, or should, support an educational program of this sort. But, it must be noted, there are relatively few in-

[2] *The Oxford English Dictionary*. London: Oxford University Press, 1971.

stances of such rampant behaviorism in our schools. Other than a few pockets of behavior modification where some teachers have tried M & M's or similar rewards to nudge pupils toward learning, we really don't have any instances of full-blown behaviorism in our public schools.

Attention to Consequences

Very few educators want to be labeled as out-and-out behaviorists, just as very few people want to be labeled as fascists, voyeurs, or trolls under the bridge. But an increasing number of us will proclaim our willingness to judge the quality of an instructional endeavor according to its effects on the behaviors of learners.

For far too many years, some teachers have dodged their proper instructional responsibilities by dishing out lessons, then failing to follow up to see what the effects of those lessons were. Such teachers are unwilling to verify whether their teaching actually brings about worthwhile changes in pupils. The focus of these teachers typically is on improving the intellectual skills or attitudes of their pupils. Such teachers frequently argue that the mental or emotional status of a student is not directly discernible. And since their aim is, thus, to affect the undetectable, such teachers never need trot out any evidence that their efforts are effective. They are, in short, *mentalists* who consider themselves largely unaccountable for the effects of their instruction.

During the past decade or so, however, a growing number of educators have been espousing the position that the quality of an instructional effort should be judged largely on the basis of the consequences it yields. And those consequences are identifiable chiefly in the post-instruction behaviors of learners. For it is through the actual behaviors of students that we can infer what their mental or emotional status is. Granted, an inference is less definitive than getting a direct measurement of, for example, one's body temperature. But many of the behavior-based inferences we must make are quite comfortable.

If, for instance, at the start of the school year a child cannot read aloud previously unseen storybooks, but after a year's schooling can perform such a task with ease, we can reasonably infer something about the child's increased reading capability. Although less direct, we can also make defensible inferences about a pupil's affective status on the basis of the pupil's behavior. For example, a child who continually gravitates toward mathematically oriented activities during free study time, in all probability, has a positive attitude toward mathematics—or else strong masochistic tendencies.

Educators who are willing to subject their instructional efforts to scrutiny based on the subsequent behaviors of pupils could be said to endorse a form of behaviorism. Their stance is certainly more behavioristic than mentalistic. Yet, are we to castigate those who want to see what kind of a difference their teaching makes?

This kind of behaviorism should be applauded, not rebuked. This kind of behaviorism will prove beneficial to pupils and to the society at large. This kind of behaviorism must be accepted by more educators if we are to make genuine improvements in the quality of schooling.

Mentalism as a Dodge

Educators have it easy when they contend that behavioral evidence is inadequate for their purposes, since it will never "capture the richness of a human being's intellectual or emotional makeup." Such educators never really have to put their effectiveness on the line. Since they function in ethereal realms, no one can tie them down. Instructional travesties will prosper alongside instructional triumphs. We can't tell which is which.

However well-intentioned its proponents, a humanistic position of this sort is untenable. If children are being instructionally shortchanged, they and their parents have the right to know. On the other hand, if certain instructional approaches are effective, we ought to identify them so they can be emulated. Teachers who run from behaviorial evidence rob us of these opportunities.

It is not surprising, of course, that many educators opt for the no-fault stance implied by mentalism. If there is real evidence at hand, that is, evidence in the form of pupil behavior, then one's instructional efforts can be evaluated. And evaluation is a threatening enterprise. Very few

of us, except perhaps the perverse, joyfully submit ourselves to judgment. We might be found wanting.

But those who reject behavioral evidence never have to run this risk. They can always mask their abilities behind the argument that their teaching is directed at undetectable targets, or at behaviors that will not be manifest until decades have elapsed. Oh yes, humanism can offer a truly riskless position for the teacher who does not wish to be appraised.

But do we run our schools for the teachers or for the tykes? In my judgment, it is as unprofessional to allow teachers to instruct without evaluation as it would be to let physicians practice without monitoring what happens to their patients. And at the moment our best vehicle for evaluating a teacher's efforts involves an assessment of the post-instruction behaviors of pupils. For each year we permit a teacher to function without gauging the consequences of that teacher's efforts on youngsters, we run the risk that another group of pupils has been swindled. This kind of unaccountable teaching must cease.

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Behavioral Objectives as an Object Lesson

In the early 60's a number of us began to urge educators to formulate their objectives in terms of measurable pupil behaviors rather than the traditionally vague goal-statements previously employed. We can draw an instructive lesson from educators' reactions to the advocacy of behavioral objectives.

First off, a good many teachers saw the value of such more lucid statements of instructional intent. But there were the dissenters, of course. Some of these critics assailed behavioral objectives because they were thought to reflect the most aversive form of mechanistic and dehumanized behaviorism. Little cognizance was taken of the fact that most proponents of behavioral objectives rarely endorsed a particular school of psychology or a particular instructional strategy. All they wanted educators to do was to think more carefully about intended consequences of instruction in a way that would permit one to discern whether those intentions had been achieved. There was no exclusive advocacy of the Skinnerian road to scholastic salvation. And yet more than a few critics took out after behavioral objectives themselves because they were supposed to represent free-wheeling behaviorism in its most repellent form.

There was, to be sure, a serious problem with the efforts of the early behavioral objectives enthusiasts. Most of their objectives were lucidly stated, yet dealt with pretty trivial kinds of learner outcomes. For all the good his little booklet on behavioral objectives actually accomplished, Bob Mager's 1962 publication[3] contained too many clearly stated but trifling instructional objectives. And many educators, unable to separate clarity from significance, churned out a litany of objectives that far out-trifled Mager's.

But how should educators greet an emerging craft such as the framing of instructional objectives? Well, reasonably, we might have imputed decent intentions to the behavioral objectives proponents, recognizing that they were really novices at the game who would take time to shape up their act. Nonetheless, having encountered some trivial behavioral objectives, a number of critics sprayed their attacks on every such effort to sharpen goal-statements. Too many educators, distressed with first-edition behavioral objectives, have dismissed the entire objective-setting enterprise as unworthy.

Too often, educators disguise trivial intentions behind the facade of profundity presented by nonbehavioral objectives. A really compelling advantage of behaviorally stated objectives is that they permit us to spot and dismiss truly cruddy objectives. Yet, when some educators tossed out the whole behavioral objectives bundle, they lost this important advantage.

Retrospect reveals quite clearly that a good

[3] Robert F. Mager. *Preparing Instructional Objectives.* Belmont, California: Fearon Press, 1962.

deal of the hostility toward behavioral objectives arose because many people associated advocacy of behavioral goals with advocacy of full-blown behaviorism. We can, unfortunately, expect any educational strategies which focus on behavioral outcomes to suffer a similar guilt-by-association fate.

Hiding Behind Humanism

As indicated earlier, when we think about humanism the vibrations are invariably positive. The majority of humanists endorse the kinds of values that most of us praise. And it is difficult to think ill of those who defend such praiseworthy, if ill-defined, intentions as "helping students achieve their full human and social potentials."

But there are a good many abysmally weak educational programs now comfortably nestled behind such humanistic slogans. For example, some humanistic teachers create such an anarchical classroom milieu that the only thing a child learns is patience with incompetence. In other cases, humanistic teachers subtly impose their own value systems on pupils without ever giving the pupils a chance to appraise the merits of those values. Perhaps most disturbing, because many humanistic teachers decline to permit the gathering of behaviorally oriented evidence, there are only very indirect ways of discovering whether their pupils are being benefited or exploited.

There are, of course, many humanistic teachers who are doing a superlative job. Their pupils are turning out just the way we would like, even though there is scant evidence that such is the case. Without behavioral evidence, unfortunately, we can't distinguish winners from losers.

Clarity as the Key

Not too long ago I was evaluating the merits of an instructional program that set forth its objectives in behavioral terms, attempted to accomplish them via an almost eclectic string of instructional activities, then gathered evidence of the program's success by administering both cognitive and affective criterion-referenced assessment devices. An opponent of the program was contending that it represented a factory-line mentality in which efficiency of instruction was being worshipped. The more I listened to that critic's harangue, the more I realized that what he was chiefly criticizing was the *rational approach to instructional decision making* embodied in the program. He argued that by clarifying what they were attempting to accomplish, the program's educators failed to represent the educational act in the full richness that it warrants.

Well, perhaps when we apply our intellects to describing what we are about, our enterprise does turn out to look less grand than our romantic illusions of it. That which we cannot see typically seems more profound than the reality before us. But do we not delude ourselves by imagining that there are magical, but unseen, accomplishments taking place in an educational setting? Surely there are worthwhile things that students learn which we can't measure. But just as surely, the bulk of what pupils learn will be reflected in their behavior. We must be clever enough and clear-headed enough to devise more suitable behavioral indicators of the kinds of outcomes in which we are interested.

"For each year we permit a teacher to function without gauging the consequences of that teacher's efforts on youngsters, we run the risk that another group of pupils has been swindled. This kind of unaccountable teaching must cease."

I am not ashamed of applying an unremitting rational analysis to what should and does go in a classroom, using the behavior of learners —prior to, during, and after instruction—as my major ally.

Labels and Fables

The thrust of the foregoing remarks was intended not to defend malevolent behaviorism, but to support those who rivet on behavioral evidence as an index of instructional outcomes. Do I think that humanistically oriented educators can attend to such behavioral indicators? You bet

I do. But then we would probably have to call such persons behavioral humanists or humane behaviorists. Such hybrid labels can also be misleading. Such labeling distorts the merits of the person or program we are appraising. Single-meaning labels are serviceable. Multiple-meaning labels are not.

I really don't care what you call educators as long as you discover what good or harm they are doing to children. And for my money, I want to measure that impact via the post-instruction behaviors—cognitive, psychomotor, and affective—which students display. If that's behaviorism, then count me in.

Epilogue

Philip L. Hosford

Combs says: We need both systems—both behaviorism and humanism. And we need to *use* them at appropriate times for appropriate goals. Criticism of either system comes from those among us who try to use only one system for all instructional activities.

Combs' example of his behavioral response to the student needing to know how to register in his class, as opposed to his response to the same student's concern over a family problem is a most helpful and clarifying example.

Popham says: Both behaviorism and humanism are *tools* and we should all be skilled in using either as needed. He states that behaviorism can help identify objectives and demonstrate improvement through evaluation. I have heard agreements mostly.

I have observed that thoughtful educators such as Combs and Popham seek admirable goals in education. We *all* wish to improve instruction, improve skills in the basics, improve human relationships, citizenship behaviors, self-concept, respect for others, and a desire for learning. We want to make a difference, and we want our instructional programs to make a difference for the good of our society. And we would like to *demonstrate* that they do so. However, we have measured only a small segment of those goals because of the limited types of instruments available, such as achievement tests. Further, we have then failed to ensure that the results were published within the clear context that what had been measured was only one small part of the program—as if we reported a car to be a good used car simply because we had tested its radio and published the results.

Our instructional programs include human interaction processes which affect learners in important ways. Much of this curriculum influence is created in the process of instruction and as such, must be included as a dominant element in any program. *How* teachers do what they do is the heart of what I call the silent curriculum and it is created only as teachers teach. It is often omitted in our evaluations because it can seldom be defined in advance. However, many of the results of the silent curriculum can be defined in advance and are highly valued by all of us. In short, we must learn to assess all the areas in which we affect learners during the periods of time they live with us in our schools. And to do this in a reasonable fashion we must use both tools, or systems, of behaviorism and humanism intelligently.

Lately, I have been finding leaders in behaviorism eager and willing to help design measurements of humanistic goals. I find humanists willing and eager to apply behavioristic principles in appropriate ways and times. Specifically, and as an example of a practical application, I view Glasser's ten steps to classroom management as an intelligent marriage of the two systems.

Both systems have much to offer teachers, supervisors, curriculum workers, administrators, and educational evaluators. If we want to play the piano well, we need to learn to play with both hands. When we learn to coordinate the left with the right, striking precisely the right notes with each hand at precisely the right time with precisely the right force, then we are ready to become accomplished pianists. So too with Behaviorism and Humanism. When we learn to coordinate them, using each in a knowledgeable way, at precisely the right times, and to the appropriate degree, then we will be accomplished curriculum workers. But, more than that, we will be in the very best sense of the words truly professional educators.

We have found much agreement in these two papers. Substantive agreement on the need, value, and importance of both behaviorism and humanism in our work. Substantive agreement to reject discussions or arguments based on an "either/or" attitude. Our disagreements, as I see them appearing in the future, will not center on whether we should be playing the piano with our right hand or with our left, but rather will attend to the more sophisticated aspects of determining the appropriate emphasis given to either hand in a particular passage.

Theories Have Had Impact

I would like to close these comments with a final word about the value of theory, both in general and in practice. Fifteen years ago when I was hard at work on the front lines of public school curriculum development, I viewed anything labeled as "theory" with what might at best be called constructive skepticism. Today, as I look back over the curriculum changes of our past 50 years, I note that the significant changes have resulted from the applications of theory. I then think of people like Dewey, Piaget, Bruner, Brandwein, Skinner, Rogers, Combs, Popham, and others whose theories have had an impact on our curriculum.

Even an inanimate object comes to mind; I am thinking of Sputnik which seemed to land right in the middle of our curriculum and shake it up so dramatically. I realize that even that little "beep-beep" of an object was but an application of several theories of physics and it caused us to react. Our reactions were demonstrated through significant curriculum changes, and, as I recall, some of them were prompted by members of Congress operating from a political theoretical base not an educational one.

So if we have helped to bring together the two powerful theories of behaviorism and humanism and to focus their light on our common problems, then perhaps we will see more proactive types of changes taking place in our curricula rather than reactive types of changes. And because such changes will be made on sound theoretical understandings, the changes will be more significant and lasting ones. FL

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