SOCIETAL IMPLICATIONS OF EDUCATIONAL TESTING[1]

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While public school teachers are almost unanimously opposed to merit rating of themselves, most of them are constantly engaged in merit-rating their pupils. When they go to school themselves they are taught by college teachers who are constantly merit-rated. One of the ways by which college teachers acquire merit is through participation in the activities of professional organizations, including being on programs and giving papers at meetings. Those of you who are in the public schools are condoning a practice you oppose by being here tonight. By practicing academic potlatch, I am adding to my store of merit in our tight little meritocracy back home.

I received two letters from Dr. Kropp on behalf of the program committee, asking that I appear in two different places. He said, ". . . we are acting on the belief that if a person is deserving of being invited to serve at one spot on the program then he ought to be deserving of an invitation to serve at another spot too. We call this 'sticking with quality.' " The invitee calls it "rank imposition." In a more serious vein he stated:

> We believe that it would be timely to consider some of the social and philosophical implications and/or assumptions of testing and the typical actions taken with students on the basis of test results. Textbook treatments of educational testing rarely take these implications into account. For example, if the current testing craze continues, would society tend toward a meritocracy? If so, what good and bad effects might be foreseen by a social philosopher? Will constantly increasing admission standards, i. e. , higher test scores, for colleges and universities lead to an absolutely larger number of people being denied needed education? If so, then what is the consequence in an age when it is probable that no jobs will exist for the uneducated? Is a student, who believes he needs and can benefit from exposure to the content of beginning algebra, denied equal educational opportunity when his algebra aptitude test score causes him helplessly, and against his will, to be shunted down other educational paths?

Many of us read the frightening story of the Puerto Rican girl in the New York City public school, who, although achieving well,

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was placed in a school for mentally retarded because of a score on an English-language intelligence test, over the protests of her teacher and reputable psychologists. Many of us probably saw the Parade item a few Sundays back that 373 of 800 children, supposedly backward, had been found to be superior, normal, or near normal after thorough study at the University of Oklahoma Child Study Center. When I came to the University of Florida in 1947, I found a freshly organized 36-hour M. Ed. program which was intended among other things, to fill some of the gaps in a person's general cultural background. We were permitted to put some freshman and sophomore courses on programs for this purpose. Diagnosis of cultural gaps was made with the old form of the National Teacher's Examination which had at least double the sections of the present version. We also required that all post-master's students take the test, using a seventy-fifth percentile cutting score in the belief that this would give a group superior in its ability to do advanced graduate work. When the length was cut,the test ceased to have much value for diagnosis. We also made a number of correlation studies between part and total scores on both the long and short forms of the NTE and graduate grade point averages. These ran from -.15 to .20 or slightly above. Since it was demonstrated that the NTE served neither of its intended purposes, several of us suggested that we not require it of students. We were outvoted by our colleagues who felt that we should continue to require it until we could find a substitute, even though it was not good for either of our former purposes.

We had an able graduate student about this time from England who had been an exchange teacher. She was in the middle of the top three per cent of a college entrance examination there. This permitted her to attend college, but not to do graduate work--this required being in the top one per cent, she reported.

I am sure that most of you could add to the store of horror stories connected with testing. My own favorite gaffe was almost costing a University of Illinois football player a trip to the Rose Bowl by correcting his form B examination with the form A key.(This was a noncredit course in plane geometry). But these are not necessarily indictments of tests and testing as much as they are of stupid use of tests and test results. Nor do they contribute much to our purpose this evening, which is to consider some questions about the relation of testing to certain views of the nature of man and society and of democracy.

I should like to make the transition with a quotation from Gardner's Excellence.

> It must never be forgotten that a person born to a low status in a rigidly stratified society has a far more acceptable self-image than the person who loses out in our free competition of talent. In an older society, the humble member of society can attribute his lowly status to God's will,to the ancient order of things, or to a corrupt

> and tyrannous government. But if a society sorts people out efficiently and fairly according to their gifts, the loser knows that the true reason for his lowly status is that he is not capable of better. That is a bitter pill for any man. (1)

Gardner names a number of world views and implies or assumes certain beliefs about human nature and human abilities. The older society he talks about represents the conservative view. The efficiently-sorting society represents the classical liberal conception. He does not, in this quotation, consider what I will name the new liberal view. These three positions have earnest, able spokesmen in our own culture. Let us review them, beginning with conservatism which is not synonymous with the radical right which is primarily a collection of "againsterisms." Russell Kirk states the fundamental assumptions of conservatism as:

> (1) society is ruled by Divine intent;
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> (2) affection for the variety and mystery of traditional life as distinguished from uniformity and equalitarianism;
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> (3) civilized society requires orders and classes;
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> (4) property and freedom are inseparable;
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> (5) faith in prescription, distrust of calculators, and a belief that man is governed more by emotion than by reason and hence must be controlled;
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> (6) a conviction that change and reform are not the same, a recognition . . . that innovation is a devouring conflagration more often than it is a torch of progress . . . Providence is the proper instrument for change. (2)

Auerbach, McCloskey, Rossiter, Viereck, Hallowell, Drucker, Newman, and others have written extensively supporting and criticizing today's conservatism. (3) A summary of their main points, perhaps over simplified, would include:[2] Men were created unequal by their Creator and endowed with more duties than rights. The Creator also established orders and classes in society, and the individual should accept the status assigned him. Because of man's sinful nature and because he is a creature of impulse and emotion, he must be directed and controlled. Of three categories in which definitions of freedom can be placed--absence of restraint, especially by government;power of effective choice;and complete submission--the conservative is most comfortable with complete submission. The conservative is opposed to equality, however defined, with the

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[2]This part of the paper is an adaptation from one presented by the writer at the 1963 Chicago meeting of AERA entitled "Development and Factor Analysis of a Scale of Liberalism-Conservatism."

exception of moral equality. Revelation and tradition are the most dependable sources of knowledge. Reason is to be mistrusted, not only as it is applied to building theory,or empirically in science, but to some extent as it is used in deriving conclusions from the first principles of revelation and tradition. Particularly, man should avoid using reason as an instrument of change,either directly when he tries to change institutional arrangements, or indirectly as he tries to apply the methods of science to the solution of his problems. In either case, because of the complexity of society, can he possibly foresee all the consequences, and more often than not more ill than good comes from his efforts. Most men are not capable of ruling themselves wisely and it is foolish to assert that they should rule themselves or that they have a right to rule themselves. Likewise, the conservative does not believe in the perfectability of man. He is not interested in economic progress.

The idealized pre-civil-war plantation society is cherished by some of today's conservatives. In the plantation society, a few were supported in a good life of leisure and contemplation. In return, they ruled wisely and beneficently. Each person knew his place, his relation to those above and below, and to God, just as in thirteenth century Europe. Each person was content in this knowledge.

Today's conservatives, as was pointed out in a paper this morning, generally oppose testing. Test results can rock the boat. Test results may not at all support one's assigned status in society. Tests can identify talent among the less privileged and make them less willing to accept their status. Some of those on the radical right see much of the testing movement as part of a Communist plot to subvert our youth, particularly tests of personality and mental health. By undermining family, church, and tradition, testing helps to prepare our society for an alien takeover.

More seriously, there is a way in which tests can support the status quo, and can hold back change. Several million dollars have gone into the Biological Sciences Curriculum Study designed to prepare and implement a biology curriculum which is consistent with today's best thinking in the field. Perhaps more than in any of the other curriculum projects, efforts have been made to get the new program widely adopted and used in the shortest possible time. Leaders in the Study have reported to me that the most serious obstacle to adoption is that pupils who study the new curriculum do not do quite as well on traditional tests and college entrance tests as do those who study the old curriculum, even though much of the old is considered obsolete by most eminent biologists. If all tests were changed to the new program tomorrow, most schools would probably change to the curriculum in short order.

Classical Liberalism

Classical liberalism was a response to authoritarianism and conservatism. It is exemplified in the political and economic writings of John Locke and Adam Smith. (4)

According to classical liberalism, man was created prior to and independently of society, and was endowed with certain inalienable rights--usually life, liberty, and property. Society is a secondary and contractual mode of existence into which men enter in order better to secure their rights than they might in a state of nature. The functions of government should be limited in the protection of these rights and to the enforcement of contracts voluntarily made. Social, political, and economic relations are governed by inexorable natural laws, and governments should not engage in activities which will interfere with the operation of these natural laws. Man is an intelligent creature and, by using his senses and his power of reason, he can determine or deduce these natural laws. Once he understands the operation of these laws, he will live most successfully by trying to live in harmony with them. He learns what the laws are, not from tradition, revelation, or authority, but by looking at the book of nature.

Under classical liberalism, liberty is viewed as the absence of restraint,particularly restraint by government which goes beyond the social contract. The classical liberal is somewhat ambivalent about equality. As used in discussion,it usually implies identity--that each person has the same wealth and status as every other person. In this sense, he is against equality. In practical matters he tends to think of equality in a negative sense, as the absence of social or legal barriers toward pursuing one's self interest--or, stated positively, each individual has an equal start in the race of life; how he does is up to him. Equality and freedom--as identity and as absence of restraint--are in opposition. Classical liberalism is similar to conservatism in the importance it attaches to the relationship between freedom and the right to be secure in holding property, although the classical liberal would not restrict freedom, as he defines it, to as small an elite as might the conservative.

Economics is viewed under classical liberalism as a deductive science in which a multitude of producers and buyers come together in the free market to bring prices to an appropriate level and to provide the maximum possible production of what people want. Such a system rewards the individual entrepreneur who is intelligent, has initiative, is competitive, and is capable of sustained hard work. Property is individually and privately owned. Ownership and control are vested in the same persons. While, under conservatism, individuals are usually born to a status endowed by a beneficent providence, under classical liberalism, the operation of the principle of automatic adjustment through the free market awards status according to merit.

The classical liberal would tend to support the kind of testing which would stream the more able into educational, governmental, and industrial positions of higher status. This is a dog-eat-dog world in which some succeed but many fail. The way to prepare for failure is to experience it early and often. There should be no social promotion in schools, no grading in terms of ability. High standards should be set, as suggested by Admiral Rickover, and rigidly enforced. Children should shape up or shape out. The sooner one learns how much or little merit he has, bitter pill or no, the better for our society.

New Liberalism

The new liberalism, represented by Dewey in philosophy and social theory and by such leaders as Franklin D. Roosevelt and Adlai Stevenson in politics, has a different world view. (5) According to this view, to assert that the individual preceded society is nonsense. Human beings become fully human only as they participate widely, actively, and meaningfully in an ongoing society. Without the nurture of the culture, they would remain on a subhuman level with no sense of rights, duties, language, selfhood, or anything else which differentiates the human being from other animals. Unless man is a member of a society which supports him and provides automatically for most of his fundamental and derived needs, equality and freedom have no meaning. According to this view, freedom means the power of effective choice--to be educated to choose wisely in terms of consequences and, having made the choice, to have the economic or other means necessary to realize the choice. Equality means that the society acts positively to put a floor under opportunity for all its members, as Florida has done with its Minimum Foundation Program for public education. In some respects, such as suffrage and human dignity, equality becomes identity, for each person counts as one in decisions which affect him and each individual human being is of surpassing worth. The new liberal believes that all men should rule themselves and that they can become able to do this more wisely than the most benevolent despot can do it for them. He believes that the human mind can be trusted and should be set free. He sees regularities in nature, but the explanations of these regularities are inventions of the human mind interacting with its environment. Just as inventions in the physical world have made man's lot easier, so the application of intelligence to political, social, and economic problems is a more certain way of solving these than trusting to the operation of natural law, or of resigning one's self to the situation.

The new liberal, when he is educationally sophisticated, views tests as tools for research and diagnosis, as sources of data on which to evaluate progress toward goals, and as a means, sometimes, of psychological security for teachers, pupils, and parents. He does not view them as infallible or even as satisfactory sole means for making decisions which can affect or thwart an individual's life chances.

Summary of Three Positions--Beliefs and Values

The outlines of these three positions are not the same as scientific descriptions. Science tends to tell us how things are or how things were or how things will be. The methods of science tend to give us beliefs about what the facts are and of generalizations about relations among sets of facts. While there is some factual basis for the positions described, they all include another kind of concept--ideas about values or norms, our notions of how things should be or should have been. As Professor Bode reminded us years ago, statistics on the trends in burglaries in a given town, no matter how accurate or voluminous, do not in and of themselves tell us whether we need more burglars or more police men. We must make a concurrent value judgment as to whether burglary is good or bad, whether it should be encouraged or suppressed.

The positions outlined, plus the statements of the fundamental assumptions of a democractic society which follow, give us value bases for making judgments about our uses of tests. Where we have choices to make about future uses, these value premises can help us in our decisions.

The Democratic Society versus the Meritocracy

The principal assumptions of a democratic society have been given often by political scientists like Merriam, (6) by foreign observers like Myrdal, (7) and by individuals in education like George Counts writing for the Education Policies Commission who listed them:

> First, the individual human being is of surpassing worth
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> Second, the earth and the human culture belong to all men
>
> Third, men can and should rule themselves
>
> Fourth, the human mind can be trusted and should be set free
>
> Fifth, the method of peace is superior to that of war
>
> Sixth, racial, cultural, and political minorities should be tolerated, respected, and valued. (8)

In The Rise of the Meritocracy, British sociologist Michael Young (9) has projected certain trends begun as early as 1870 and apparent in the 1950's, some eight decades into the future. In his

projection, Britain achieves a new class society based upon merit, defined as intelligence plus effort--a society in which the new aristocracy is one of intellect and education. In this society a person has a status based upon periodic IQ and other evaluations. In it, a young man, if he can demonstrate more merit, may be a full professor or a general manager. Without merit seniority earns him nothing, and a more meritorious younger man can bump an older man back to an assistant lecturer at a minor school or laboratory assistant in industry. The labor party has vanished because its leadership has been constantly skimmed off. Comprehensive schools have been abolished. Scientific advances are tending to make the identification and transmission of intelligence hereditary so that the new class may perpetuate itself. With tongue in cheek Young says:

> The last century was still bent upon the conquest of Nature. What vanity this now seems! Science penetrates her secrets not for the sake of human dominance (illusory as this always is) but in order to discover the laws which man must obey. The highest fulfillment lies in submission. Of nothing is this more true than of society; and here no lesson has been more simple and yet more painful to learn than the fact of genetic inequality. The condition of progress is submission to the frugality of Nature. For every man enlivened by excellence, ten are deadened by mediocrity, and the object of good government is to ensure that the latter do not usurp the place in the social order which should belong to their betters. One way to do this is to weaken the power of the family; the other, to enhance the influence of the school. (10)

As Young moves into his chapter "Threat of Comprehensive Schools" he quotes an authority:

> 'When Professor Conant demands "a common core of general education which will unite in one cultural pattern the future carpenter,factory workers, bishop, lawyer, doctor, salesmanager, professor and garage mechanic," he is simply asking for the impossible. The demand for such a common culture rests either on an altogether over-optimistic belief in the educability of the majority that is certainly not justified by experience or on a willingness to surrender the highest standards of taste and judgment to the incessant demands of mediocrity.' (11)

These and other portions of the book draw upon both conservatism and classical liberalism for support. Here and elsewhere in the book are stressed ideas of the differential worth of human beings; that where a reasonable-sized population makes it possible, all human beings get a minimum share of the earth and the human culture, but the more meritorious get a share in proportion to their merit. There is a denial that the majority of men can rule

themselves, and that human minds can be trusted and should be set free. (The House of Lords, an aristocracy of intellect, again becomes dominant, while the House of Commons has only ceremonial functions.)

Toward the end of the book Young suggests that Russian scientists have been able to make genetic changes in experimental animals to increase their intelligence. He has, until this time, made the case that intelligence is fixed, and that while there are some winter-apple types, psychological advances have made the identification of these possible at three years or below. They should be caught and given the best education possible from a very early age for the top minds are like the top musicians--they do not become great unless they start instruction and practice before seven or eight. By virtue of the work of the Russians, the British have come to believe that the stock of human intelligence can be increased by controlled irradiation. There begins to be some question of the advisability of applying the process to all human beings or of limiting it to those who have the most intelligence on the grounds that increasing the intelligence of the lower status groups would unfit them for their work--domestic work has returned--and that the most favorable environment for fostering intelligence is found in the homes of the present intellectual elite.

The rationalization for this position is that by the early identification of talent and the superior education given to it, England has been able to out-produce Russia and the United States, and to maintain this commercial supremacy she must not do anything which would dilute her effective intelligence. This production enables the new elite to live on a scale at or beyond that of the industrial aristocracy of the nineteenth century, or the earlier landed aristocracy.

Let us list and then examine briefly some of the assumptions about human ability which Young--still with tongue in cheek--has his twenty-first century sociologist make. (The first three of these are adapted from a list by J. McV. Hunt. (12).

(1) Intelligence is fixed at birth.

(2) Human development is predetermined.

(3) The human brain functions like a telephone switchboard.

(4) There is a high correlation between IQ and other human abilities and performance--those with the highest IQ are the most able, should rise highest, and should be rewarded with the most merit.

(1) Intelligence is fixed at birth.

There has long been controversy as to how much of intelligence is genetic and how much is environmental. Burt places the genetic

contribution between 77 and 88 per cent. (13) Recently, J. McV. Hunt, Kenneth B. Clark, and others have argued persuasively that a much larger proportion is socially built. In his Arden House paper, Hunt cites both recent and earlier studies, including one made in the thirties in which spectacular increases in IQ were reported for foundlings given to feeble-minded, institutionalized women to foster-mother. These studies were severly criticized at the time. In a recent follow-up of the experimental and control groups, with about three-fourths of the individuals found, all the experimental children were out of institutions and self-supporting. Those in the control group were all institutionalized. (14)

Clark cites the high proportion of children who made gains on IQ among those who participated in the Higher Horizons and similar projects. (15) These were teenagers.

Even adults can increase scores on tests of academic potential by deliberate effort. We have had some striking increases made on GRE scores at the University of Florida by graduate students ranging from the twenties to the above-forty age brackets. By this I mean combined gains through deliberate study of from 200 to more than 500 points.

Hunt suggests that early experience--even pre-language experience--may be much more significant for intellectual development than it has been for emotional development. "It looks now as though early experience may be much more important for the perceptual,cognitive, and intellective functions than it is for the emotional and temperamental functions. (16)

This morning, Dobbins cited Piaget's studies and the work of O. K. Moore. Their findings seem to support the ideas that human development is not completely predetermined as well as that intelligence is socially built.

The self-fulfilling prophecy function of tests and evaluation devices has become more common recently in the literature. A person who repeatedly does poorly on tests comes to perceive himself as a failure and is one. Combs and Soper, in a Cooperative Research Project, have found that there are significant correlations between children's perceptions of themselves and their situations and their behavior and achievement in kindergarten, first, and second grades. (17)

Lamy, studing the same children, found that reading level at the end of first grade correlated as high with perceptual data scores as with individual intelligence test scores. (18)

(2) Human development is predetermined.

We have had a considerable vogue of the developmental-tasks approach to curriculum selection during the last two decades. This approach assumes that, except under the direst compulsion, the things a child will learn are those things which contribute to his developmental tasks. Developmental tasks are determined by social expectations and maturation. The acquisition of these learnings cannot be appreciably speeded before the time at which the organism is ready for them. Studies in different cultures, studies of learning skills and intellectual tasks, including reading, have cast considerable doubt on this assumption. This is also supported with some animal studies. Many of these are reported in the Hunt paper. It may well be that Young was correct in the desirability of starting at nursery school with the education of his elite. But it is even more probable that the average and below average could also profit greatly by appropriate early experiences.

(3) The human brain functions like a telephone switchboard.

It is more probable that the human brain acts like a wonderful programmed computer. The wealth and variety of early visual and auditory experiences tend to supply it with concepts, information, strategies for problem solving and decision making, and retrieval techniques. This analogy seems much more defensible than the telephone switchboard concept.

(4) There is a high correlation between IQ and other human abilities and performance--those with the highest IQ are the most able, should rise highest, and should be rewarded with the most merit.

There are probably floors on performance on IQ and other ability tests below which achievements in different areas are difficult or impossible, but these floors are probably lower than we usually think. Some of the sources of support follow.

> The trend toward separating gifted students into special classes is dangerous both for the students themselves and for society, according to Harvard historian Oscar Handlin. He said that truly accurate techniques for selecting "excellent" students do not exist and even if they did, it might not be wise to use them too much. Bright students chosen to receive scholarships at Harvard over a 25-year period have done as well--but no better--than the rest of the student body, Hanlin noted. He said that despite all the studies of predicted performance and aptitude tests, the admissions office would have done just as well if it had tossed all the names at random into cubbyholes. (19)

Roe's study of the greatest American scientists,including most living Nobel prize winners,indicated that some of the winners probably had childhood IQ's in the 120's and 130's. (20) I know two or three outstanding Florida school administrators who could not get into a State University in Florida with today's standards. Nor could they get into graduate school with the minimum GRE scores established. One of the outstanding United States educators was below the first percentile point on the Teachers College's own examination. We correlated GRE V and Q scores and graduate grade point averages for 330 students with 12 hours or more of graduate work, and also their undergraduate grade-point averages for the last two years in school and their graduate grade-point average. These were all below .20, indicating that whatever makes for success in graduate work has four per cent or less in common with the test scores and undergraduate averages. (21)

A 1956 University of Kansas study indicated that if a 50 percentile cutting point had been used as an admission standard on tests of intelligence and English given to high school seniors in Kansas, 208 of the University of Kansas seniors who graduate that year among the 1,006 graduates would never have been admitted to the University. The 208 included 69 persons below the twenty-fifth percentile. These students were in liberal arts, education, business, engineering, medicine, journalism, fine arts, law, and pharmacy. Of those who graduated, but were below the median on the above tests, or even below the first quartile, there were no significant differences in grade-point averages, in honors, in extracurricular activities, or other kinds of nonacademic participation than those who were above the fiftieth percentile. Just as the original stanine classifications among air force pilots indicated that some survived, even in the bottom stanine, so attrition was greater among those in the lowest and second quarters at Kansas, but the survivors were not different from their supposed intellectual superiors. (22)

Goslin reports little or no relation between either college attended or grades earned and scientific and engineering creativity on the job. "Although these findings need to be examined by the scientific community, they indicate that the "C" student from an average university has as good a statistical chance of becoming a highly productive scientist or engineer as the "A" student from the California Institute of Technology or Massachusetts Institute of Technology." (23)

Perhaps testing, plus appraisal on the job by one's superiors, is a better way of sorting out the meritorious. Not so, says George S. Odiorne, Director of Michigan University's Bureau of Industrial Relations. In an article called "Do the Best Men Get to the Top" in the January, 1964, Challenge, a magazine on economic affairs published by New York University, Odiorne says:

> Millions of individuals employed by the government, the armed forces, corporations, schools and other organizations are annually subjected to appraisal by some superior executive, boss, chief, or manager. The entire system of periodic evaluations was intended to provide an objective criterion by which to select the most able people for advancement. But the system,. . . , is defective, blind and often grossly biased. Instead of facilitating the promotion of the most able, the system reinforces conformity and alikeness within like organizations. The individuals who rise to the top are often those who get along with everyone, most resemble their bosses, or achieve results by any means including dishonesty. (24)

A final point here--there is great variability not only between individuals but within individuals. The Army uses eleven tests to help classify enlisted personnel. These results are combined with eight pairs of tests of the original eleven for eight aptitude areas. Seventy-five per cent of those tested had at least one aptitude area score above average. (25) Were aptitudes being tested in addition to those needed by the Army, it is quite possible that this proportion would go beyond 80 per cent, perhaps approach 90 per cent. (26)

The preceding analysis, both factual and normative, indicates that when we use tests, either as they were used in The Rise of the Meritocracy, or as we often use them to stream out the ones we think are less able, we are giving support to an eventual new conservatism or perhaps to classical liberalism in its more virulent, social-Darwinistic form.

If you would recall the distinction made earlier between factual or descriptive knowledge and normative knowledge, I think that you will agree that even the exciting possibilities outlined by Dobbins in his paper this morning emphasize intellect--as raising the general level of intelligence, increasing ability to cope with higher levels of abstraction--the kinds of things which are thought to give man greater control over his material environment. Almost unconsciously, most of our thinking is geared to the cognitive domain. We stress identifying and fostering the abilities which enable us to solve means problems. By this I mean the following: the goal is known and agreed upon; one or more obstacles prevent reaching the goal; overcoming the obstacles requires manipulation of the environment external to us; the principles used in the solution are capable of verification by the scientific method. A means problem may be getting the car started or it may be finding a preventive for polio. I would suggest that we are perhaps already doing this better than we need to do. I heard Joseph Schwab assert that between 1900 and 1950 and between 1950 and 1960 our store of fundamental knowledge doubled and doubled again. At the same time there has been continued erosion of our basic social and moral norms

so that it becomes more and more difficult for us to resolve value conflicts--to make decisions as to what should be done in particular cases; what our policies should be; or what our basic norms, such as equality, freedom, and the brotherhood of man, mean. The resolution of this kind of conflict requires modification of the value systems held by the individuals involved if the resolution is to be mutually satisfactory. Fundamentally, value conflicts involve disagreement about ends. Usually they cannot be resolved by scientific methods alone. But methods of persuasion have been proposed which give promise of enhancing the possibility of resolving these value clashes. (27, 28)[3]

If we believe that the individual human being is of surpassing worth, if we believe the earth and the human culture belong to all men, if we believe that men can and should rule themselves, if we believe the human mind can be trusted and should be set free, then we will give more emphasis in our testing not to excluding from opportunity,not to promoting self-fulfilling prophecies of failure, but to research,to finding hidden talents and abilities, to finding ways by which we can help all of those with whom we work reach their maximum potentialities, to fostering methodologies of dealing with value conflicts. With the technology we have, with our economic abundance, we will not all starve to death unless we can send at least a third of our wheat to Russia, nor will we necessarily perish if we do not get a man on the moon before they do. Rather than another Meritocracy let us aspire to a society like that implied by the Chelsea Manifesto which 'summarizes the writers' odd views on what a classless society would be like.

> The classless society would be one which both possessed and acted upon plural values. Were we to evaluate people, not only according to their intelligence and their education, their occupation and their power, but according to their kindliness and their courage, their imagination and sensitivity, their sympathy and generosity, there would be no classes. Who would be able to say that the scientist was superior to the porter with admirable qualities as a father, the civil servant with unusual skill at gaining prizes superior to the lorry-driver with unusual skill at growing roses? The classless society would also be the tolerant society, in which individual differences were actively encouraged as well as passively tolerated, in which full meaning was at last given to the dignity of man. Every human being would then have equal opportunity, not to rise up in the world in the light of any mathematical measure, but to develop his own special capacities for leading a rich life." (29)

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[3]The first reference outlines the method and the second reference is a study in social and educational diagnosis and prescription from which many of the ideas in this paper have been abstracted, and which analyzes and endorses the method.

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