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THE SIGNIFICANCE OF THE I. Q.

I have been asked to discuss the significance of the I. Q. — the intelligence quotient -- particularly as it relates to educational planning for our young people. We can begin by asking the following questions:

1. What is the I. Q.? What does it mean? How do you arrive at such a quotient?
2. What uses may be logically and correctly made of the I. Q.?
3. What are the more common abuses?
4. What can we do about it?

The I. Q. is usually arrived at as a result of the administration of an intelligence test. The test may be an individual verbal, individual performance or group test. The most popular is an individual verbal test, the Revised Stanford Binet, which was originally devised by Alfred Binet around the turn of the century. Its questions require the examiner to remember, discriminate, judge and reason. All of these, of course, are typical intellectual tasks. Through experimentation these various test items or questions have been assigned to an age level which identifies the age at which the average individual can answer them correctly. When the individual answers questions at a certain level and fails all above that level, the age which corresponds to the level of success is called the test age or mental age. The extent to which a child's mental age falls above or below the expectation for his age is indicated by his intelligence quotient which is found by dividing his mental age by his chronological, or actual age, and multiplying by 100. We could call the I. Q. the percent of the expected level of function actually demonstrated by the individual. Scores above 100 are above expectation or average, and scores below 100 are below expectation or average. An I. Q. of 50 then means that the mental age is about 50% lower than the individual's actual age, while an I. Q. of 100 means that intellectual functioning is at the level of actual age.

Standardized intelligence tests were developed in response to the need to place children more appropriately in proper school groupings. With the advent of the First and Second World Wars and increasing industrialization in the western world, the need for rapid classification and placement of millions of individuals gave impetus to the development and refinement of intelligence testing. These tests and the quantitative score, the I. Q., are useful tools in predicting and planning for academic and some work experience. They are important tools in the study of personality since intellectual function is one aspect of personality. Their use in quickly classifying with respect to level of intellectual function cannot be denied.

The strong emphasis on verbal and abstract functions makes them reasonably accurate indicators of potential for successful academic experience. The correlation between some patterns of responses and some clinical entities makes them a source of reliable clues in diagnostic formulations. There is no question but that intelligence testing, and psychological testing in general, is an extremely important and significant development in the science of human behavior. But it is not perfect.

The demand for these tests and the findings they provide has frequently brought abuses to the instrument and, more important, abuses to the persons examined. Overlooking the imperfections in the tests and the variables in human behavior, we have sometimes put too much stock in the test scores. As a result of the misuse of these tests children have been labeled and had their entire lives influenced by the incorrect planning and placement resulting therefrom. The more striking examples may be seen in instances where a low score on one of these tests is interpreted to mean low intellectual endowment, despite the fact that in non-academic areas the child may reflect average or better intellectual function. In other

situations it may reflect itself in the less than maximal educational planning for the child who scored in the average range but who has other assets which, under appropriate conditions, would permit superior achievement. We see abuse in the mechanical use of the I. Q. to push a child to continually work on the tip-toe level simply because he showed in one instance of intellectual strain that his maximum capacity was in the superior range. But we know none of us constantly works on tiptoes. The most common abuse of the I. Q., then, is its mechanical application in isolation from other factors and characteristics which may influence intellectual functioning.

A second abuse of the I. Q. arises from a weakness which is basic to the present level of theoretical development in psychological testing. I refer to questions involving the nature of intelligence. What it is that we attempt to measure. A less serious definition of intelligence is that it is that which is measured by intelligence tests. It has been defined as "the capacity for understanding and for other forms of adaptive behavior"; "as the ability to profit by experience." These definitions suggest that intelligence can be considered to develop in response to stimulation. Now a basic question arising out of this concern with the nature of intelligence is:

1. Do these tests actually measure intelligence, or do they measure the results of mental functions from which we infer intelligence exists; or, rephrased,
2. If intelligence is said to develop in response to stimulation, do the tests measure capacity or the extent to which the individual has responded to stimulation.

The fact is these tests measure the results of mental functions -- the extent to which the individual has responded to stimulation. The mental age -- the level of intellectual function -- is determined by inference. We do not measure

intelligence directly. We do not have techniques for determining the basic organic capacity of individuals. What we measure is the product of the organism's response to stimulation.

Now why is this problem important? Simply because it underscores the fact that we can not definitively evaluate intellectual function. We estimate, we predict or make a considered guess about future function based on the past, and we plan.

When this is done intelligently and appropriately, we do not limit ourselves to the I. Q. or the intelligence test data. We look at the total child and his total situation and make our estimate, our prediction and our plan on these findings.

When we approach the evaluation of intelligence from this point of view, the I. Q. has little significance. We are at once more concerned with a qualitative description than a quantitative classification. We want to know strengths, weaknesses, limitations and potentialities and not simply relative position. We want to know the circumstances under which intellectual functioning is retarded and the circumstances under which it is enhanced. The I. Q. does not provide this information and without it true educational and social planning is not possible.

I think I have answered the fourth question -- What can we do about it? We must insist upon qualitative description in the evaluation of intellectual functioning in our children. The intelligence tests appropriately and creatively used can contribute to this process. Careful observation, longitudinal studies, social investigation, pedagogical exploration are all a part of the process.