Previous approaches to the learning problems of American Indian children are viewed as inadequate. An alternative is suggested which emphasizes the problem-solving strategies which these children bring to the school situation. Solutions were analyzed in terms of: (1) their probability; (2) their efficiency at permitting a present problem to be solved; and (3) their usefulness as building blocks for future solutions. It is suggested that Indian children, like all children, have a range of problem-solving skills, but that they do not meet these three criteria for the learning which is expected of them when they enter school. What happens to these children, confronted with such a situation, is described. The paper concludes that teachers of children whose solution strategies are inadequate for learning as it is currently structured must focus more on "how" they learn and less on "what" they learn. A balance must be established between changing their solution strategies and changing the schools to permit success for children with currently divergent strategies. (TL)
PROBLEMS OF INDIAN CHILDREN

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One of the problems of Indian children is that everyone talks about their problems but no one does anything about them. I am more than a little uneasy that my comments make me a part of the "problem."

Let me focus on another of the problems of American Indian children. It is known by a variety of names, but let me label it for the moment as cognitive disabilities. I shall not document the learning problems of American Indian youth, first because we have already heard a partial account of these problems and second because these difficulties do not differ, except in detail, from those of other groups.

Typically we observe that Indian children, as well as children from some other groups, enter school without the skills necessary for adequate achievement. [That there are a wide variety of other difficulties cannot be denied, but I shall leave those for others to consider.] There are a number of approaches taken by psychologists and educators to these apparent differences. Let me identify a few of these: (1) we may measure the ability of the children (and while we discover a range of abilities, we generally find that the IQs of Indians are lower than those of normative groups); (2) we may focus on the hereditary and environmental components of these differences; (3) we may decide to establish "enrichment" programs, and so on.

It has become apparent that an alternate approach is necessary. I think we must ask what these children can do, that is, we must measure

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their specific, not their general skills; we must ask what we, either their specific or the more general community, want them to be able to do, and finally we must inquire into the appropriate techniques for bridging the gap between the present and the desired skills.

This approach is not new, but these ideas and their implications have not been thoroughly explored in the context of Indian or minority group education. What I shall say, unfortunately, is only a reminder of the problem, not a complete or adequate exploration of it. I am going to suggest a model of "ability" that involves a compounding of simple skills. The notion is a relatively simple one. It suggests that given a naive organism confronted with a set of problems that there are a variety of "solutions" to these problems. One would suspect that since many, if not most, behaviors approximate a normally distributed function that the kinds of solutions that are adopted approach a normal distribution. Precisely what the underlying continuum may be I can only guess, but we can look at the solutions from at least three points of view: first, how probable the solutions are; second, how efficient they are at permitting solution of the present problem; and third, how useful they are as building blocks for future solutions. The choice of first sets of solutions should depend importantly upon the nature of the problem, characteristics of the problem solving situation, earlier solutions, and chance -- that is, other factors that we do not understand. Once a set of solutions are adopted, these determine to a greater and greater extent the kind of solution that will be adopted when the individual is confronted by a new problem. There must be sets of
solutions which follow each other with high probability, there must be other solutions whose occurrence in sequence has low probability. The probabilities of solutions may be assumed to depend upon the community in which the child grows up. Solutions may also be viewed in terms of their relationship to solutions to future problems and their efficiency in solving the present problems. The child with learning problems, then, is viewed as one whose solutions have relatively low probability and whose solutions to present problems are inefficient and whose solutions will not lead to useful solutions to future problems.

Since there are many ways of solving any single problem, it is likely that there are almost limitless combinations of solutions into patterns of skills. One can guess that the solutions adopted by American Indian children are relevant to problems in the native American community. They may be less relevant to and less efficient in solving school, educational, or dominant society problems.

We may be confident that no child grows up without skills. Some may have a smaller variety of experiences and may have acquired fewer skills. But all have a variety of skills. School presents an often novel series of specific and general problems for the child. He may, on the basis of the skills he has, solve the problems easily, with some difficulty, or not at all. If the problems may be easily solved presumably the child has relevant skills which may be easily transferred to the present situation; if he solves the problems, but with difficulty, presumably his skills are less relevant, and if he cannot solve the problems, his skills may be irrelevant to, or may be incompatible with
the solution of the problems.

Minority learning problems have not been carefully assessed with respect to cross-over phenomena nor have psychologists been concerned with the implications of these phenomena for minority learning problems. [For example, urban slum children are initially more likely to give the "mature" paradigmatic associative responses than suburban white children, however, during the first few years of school the suburban white children surpass them on these responses.] I am now deliberately using the term minority learning problems to refer to the class of solutions to problems used by a minority of people entering learning situations. Minority groups will be somewhat more likely to use "minority solutions" and this is part of their problem. Many other children, however, may be burdened with minority solutions. Since schools are unprepared to cope with these minority learning sets all these children may be handicapped.

In general, what happens descriptively is that the child enters school, for a while he appears to do well--then a pattern of failure begins. After a number of grades his performance falls below average, he begins to fail, and often he drops out of school.

It is popular to say that the child is suffering from alienation and that the teachers discriminate overtly and covertly. This is probably true in many cases but the kind of discrimination that is suggested by these rubrics can be distinguished from the problem of cognitive disability of the sort I'm describing. Here we must suspect blindness to differences in learning style, and prejudice against styles of learning that occur among Indian children.
Let me be more explicit about the model I am suggesting. The Indian child (or the other minority learning problem child) enters school with a variety of general solutions to problems. The relatively simple, or general problems of grade school may be solved in a variety of ways. Teachers and institutions tend not to look at the kinds of solutions that are employed. Their major concern is with the solution per se. The Indian child looks bright and capable because his low probability solutions are just as adequate for these simple problems as the majority solutions. A mismatch of strategies of teacher and student may well not be immediately evident. But the underlying assumption of the educator is that all of the children are doing pretty much the same thing. They are not, and unfortunately, acquisition of some solutions does not permit ready solutions to new problems—and some solutions diverge ever more from the dominant (high probability) solutions required in the schools. Eventually the minority learner or the child who is solving problems using infrequent and inadequate (for this situation) strategies will arrive at a problem which cannot be solved using his solutions. At this point the child generally has two choices. He may persist in his well learned, and previously adequate solution. This pattern almost surely leads to failure, especially if the old solutions are truly irrelevant to or incompatible with the new learning. Or the child may try to adopt a new solution. This is probably more likely if the appropriate new solution is closely related to his old solutions, or if he has not had a strong history of success with his old strategy. This pattern should lead to scholastic retardation—since changing strategies is considerably more difficult than simply developing further a strategy which is already being used successfully. If the child begins with improbable solutions, which he must
modify, the probability of his adopting a second, and third, and fourth set of minority solutions would seem relatively high. This means that a single child may go through the experience of failure and frustration many different times. The more divergent his initial solutions, the more likely he will experience this failure. Each time he comes up with a set of solutions which lead to further frustration, he is more likely to give up and retreat to a situation in which his solutions are adequate—most likely a non-school situation.

I am often distressed, as many of you are who teach in college, to discover that my students at that level have adopted strategies to "beat the class" which are totally irrelevant to the objectives I have set. Those whose strategies are totally inadequate generally fail. Moderately adequate strategies lead to some degree of success. It is extraordinarily difficult to get learners to change strategies at the college level if their present strategies earn them even minimal success. I am not sure that, at this level, I have ever gotten anyone to change a strategy. I have succeeded in doing two things, however, one is to make sure that only a narrow band of strategies will serve to get you through the class (the old distinction that you really "know" the material and not just have memorized it). If I ever figure out how to get students to "really know" material, I shall quit a success. The second thing I have succeeded in doing is to make the material somewhat comprehensive given students with some peculiar strategies which I only partially understand.

But let us return to the young child. Here I think we must spend more time learning how the child is learning, and less on what the child is learning. Let us identify the kinds of strategies which will lead
failure, and attempt to shape our learners away from unsuccessful strategies. I think we must do this with caution since we have little reason to believe that our schools provide an optimal environment for learning—and there must be room for a variety of minority learning strategies which have some possibility for success. Let us identify probable and improbable solutions to problems and attempt to understand the developmental relationship between sets of solutions and strategies. On the other hand we must recognize that there are minority learners and that many have adopted strategies which, although they are different, do lead to adequate solutions. We must make it possible for these minority learners to experience success in our schools as well.