THREE fundamental questions to be dealt with in planning to promote any learning are: Can it be induced? Should it be induced? How is it best induced? Answering these questions calls for analysis of and speculation about the species *homo sapiens*, the systems through which the species cluster and communicate, and the human personalities representing consistent and variable expression of the species. The learner, then, as representative of a class of creatures, as member of various groupings, and as unique individual, is a data-source to be examined and consulted in making educational decisions.

The above might be reduced to the simplest of platitudes: we must take the learner into account in teaching and planning for teaching. The platitude covers up the complexity of the problems involved, however. The learner, obviously, is not the only data-source to which one turns in making curricular decisions. Awareness of this fact, when coupled with an inadequate conception of the total context of educational decision-making, leads us to scream, "You’ve forgotten the children!" when someone attempts to analyze the place of subject matter, and "You’ve forgotten the subject matter!" when someone seeks to analyze the place of the learner. Thus, a sterile debate arises out of our inability to see two quite different parts as essential to a larger whole as well as unique within themselves.

A much more complex problem in considering the place of the learner in the total school program arises out of seeking to determine the application of specific knowledge about learners to the decisions for which data about learners are appropriate, while remembering that knowledge about subject matter also is appropriate to aspects of the same decisions. Now we find ourselves not simply in the midst of a sterile debate over the importance of learners as contrasted with the importance of subject matter but in a chaotic no man’s land where curricular and instructional decisions often are made in response to political pressure, the drift of the tide, or personal whim and bias.

In seeking to make complex decisions rationally, one identifies the category of knowledge or experience within which appropriate data, if available at all, might be found. This category is the data-source. Thus, the behavioral sciences constitute a broad data-source bringing together knowledge, principles and theories pertaining to human reproduction, individual differences, patterns of learning, and so on.
In the realm of educational decisions, however, the data-sources and the lines separating them are dimly defined. The data presumed to lie within them are transitory or, at best, timidly endorsed. Educators must base their decisions upon the evidence of experience and the analysis of that experience, until such time as the necessary theory and scientific studies are available.¹

### Basic Questions

In the early conduct of practical arts which have now become applied sciences, the absence of a theoretical base from which to predict the consequence of choice probably was not unduly frustrating to the artisan. The scope of his operations was relatively limited; the range of alternatives appeared finite and manageable. Today’s educator, however, embraces, in one sense, the whole of human experience. The array of decisions to be made appears endless; the alternatives infinite. At the same time, the educator is aware of what appear to be relatively sophisticated inquiries into human behavior. Surely, somehow and somewhere, these inquiries pertain to him and his work! Blindly, he may reach out for them, unaware that the findings are themselves significant for a developing fabric of knowledge but often inappropriate to the task for which he seeks help. Little wonder that he often turns away from knowledge that seems to serve him ill... and hardly fair to call him anti-intellectual for so doing! Why not bite the hand that fails to feed you?

Education, as a field of inquiry, is now able to offer at least simple formulations to assist the practitioner in sorting out the general kinds of questions with which he must deal, the broad categories of knowledge pertinent to such questions, and scatterings of data within these categories. Let me illustrate by turning to the three questions of planning with which I began—can you? should you? how best to?—and apply these to just two problems of planning the school program. The problems are in the realm of nursery school education and education of the gifted.

Inquiry into the nature of the young human being suggests a natural pacing in what appear to be certain essential learnings. One set of such learnings involves establishing at least a self-preserving relationship with adults. The general category of the behavioral sciences appears to be an appropriate data-source within which to hunt for data about what young children do and, therefore, might be taught to do well.² We examine the data and conclude that two-year-old children evidence little discomfort in relating themselves both to their parents and to a variety of other adults—baby sitters, uncles, neighbors. In other words, they can do it; this behavior appears to be educable.

It follows, then, that we might be able to direct this kind of childhood behavior in a variety of directions. Why not create nursery schools in order to educate the two-year-old in social directions we choose to call desirable? But should we? Now we have a decision that is quite different from the preceding one, calling also for data from the behavioral


²The illustration is to be considered hypothetical in that my purpose is to illustrate the kind of inquiries that might provide rational approaches to educational decisions and thus to avoid the fruitless either/or debates which now consume so much of our valuable energy.

October 1961
sciences but perhaps from other realms within this general category. On examining pertinent evidence, we discover that young children are preoccupied with the task of relating themselves to their parents. We discover, further, that youngsters who seem still to be struggling unduly with this task at the age of six or seven often appear to be handicapped in seeking to devote themselves profitably to tasks, such as learning to read, posed by the school.

We now turn back to re-examine our proposed creation of nursery schools and ask ourselves whether these young children should be separated from their parents at this early age in order to struggle with a variety of adult relationships when the parental relationship is of such fundamental importance. Perhaps, we conclude, admission to nursery schools should be delayed until the necessary parent-child relationships are established.

My third question of how best to conduct the nursery school program now evaporates. If the child's task of relating himself effectively to his parents is so important that it must not be interfered with through the interposition of nursery school teachers, then we refute the previous justification for such schools and, consequently, eliminate the question of how best to conduct them. (Again, I remind you that the specifics of the illustration are hypothetical, even though some specialists in child psychology seriously question the wisdom of nursery schools for two-year-olds, except where there are no parents.)

There are, of course, alternative answers to the three questions, arising out of the application of different values than those guiding me. Nonetheless, the rational procedures that would be applied in getting to other answers would be comparable. Some people might say that childhood struggles toward satisfactory parent relationships are debilitating, often resulting in unsatisfactory compromise and, in fact, inadequate self-realization. The answer, therefore, is to remove the child from the parents at birth, placing him with a dozen other infants in a nursery-school situation. Then, however, if these children simply placed the teacher in the parent role and competed with one another in seeking a parent-child relationship, we might have additional evidence to question the desirability of this alternative line of reasoning and so strengthen the first.

Let us turn to the second example. It has been amply proven that gifted high school students are capable of grasping advanced mathematical concepts. It becomes clear that the answer to the "can" question is "yes." Since they can, we tend to assume that the answer to the "should" question likewise is yes. But the should question is a different order of question than the can question; the answer to the former cannot be deduced from the answer to the latter, present practices to the contrary.

Examination of how best to promote rapid advancement of the gifted through advanced courses reveals some of the limitations of attempting to deduce answers to should questions from answers to can questions. Recently, an exponent of automated teaching observed that, with improved programming of teaching machines, some high school students of algebra will be able to cover in a few weeks what formerly took years. "What will the poor teachers do then?" he inquired. In posing this question, he may have revealed present-day rigidity (often sterility!) in thinking about what schools are for.

Some recent studies of adolescent (Continued on page 54)
problem of child molestation. This publication is a unique service feature for a school system, but one that surely will reap great rewards—for increased child safety, and as a public relations gesture. It also should be noted that many of the items included in the bulletin are really a summer continuation of some phases of the regular curriculum.

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The Learner

(Continued from page 10)

values reveal infinitesimal changes over the four years of high school. Does this mean that adolescent values cannot be changed? Or does it mean that inadequate emphasis is given to value formation as end and to appropriate techniques of value change as means? Or are there other alternatives?

Let us assume the second, hypothetically, as the most plausible assumption: inadequate attention is given to value development in today's high school. We conclude that more time and new measures are needed for producing deliberate change in affective behavior among high school students. But we observe that high school students, using machines, are now able to learn in a half-hour of daily self-instruction twice as much algebra as they did a few years ago. The state then places a programmed machine in every home and the home takes over responsibility for education in algebra. The high school now uses this time for education in human values and valuing. (Or is abolished if the only function of the secondary school is to teach algebra.)

It becomes clear that evidence to the effect that adolescents can learn advanced algebra at amazing rates of speed does not necessarily lead to the conclusion that high schools should teach algebra. On deciding that high schools should not teach algebra, according to the line of reasoning outlined, the question of how best to teach algebra in high school now evaporates, although the question of how best to teach adolescents algebra at home remains.¹

My total analysis reveals, I think, that consideration of learners in planning the school program is not merely desirable; it is inescapable. The analysis reveals also, I believe, that a more systematic identification and treatment of the questions inherent in program planning, together with identification of valid data sources and data appropriate to each specific question would eliminate the empty subject/child dichotomy. Such analyses might even reveal that current defensive attitudes toward subject-matter organization and programmed learning on the part of some members of our profession are misplaced. Perhaps, instead, we should be viewing with keen anticipation the prospects of automated learnings removing entirely from the realm of human interaction—and thus from schools as we now know them—many subjects now constituting a subject-centered curriculum. And, then, individual pupil interests, needs and purposes might well become the catch-hold points for developing through our schools ideal men and ideal societies of the sort speculated upon in man's best dreams.

³ Again the reader is reminded of my purpose in seeking to separate several of the different kinds of educational decisions to be made. It should not be assumed that the field of algebra has no place in seeking to achieve a broad set of educational goals. Nor should it be assumed that whenever teaching machines are employed the teacher must be a supervisor of these machines or that the machine is to be used only if it can be encompassed within the span of control of the classroom teacher as conventionally perceived.