Problems which will affect reading teachers in the future are discussed, and innovative possibilities are described. The following conclusions are reached. Varying environments create greater differences in children than existed previously, making individualized instruction necessary. Technological progress has opened new fields to education which should be explored. Early observation and inventory of children's abilities can lead to formal instruction at early ages, provided such instruction involves new ideas and methods. The many unsolved problems of the past and of the present may be resolved through greater attention to the study of cognitive processes, differences in environment, and teacher ideas for influencing development of students. It is increasingly important to be bold in proposing new educational plans and new research. (MD)
When our dauntless President asked me to discuss this difficult topic, I recalled a policy adopted recently by The New York Times. For many years The Times has been provoking many caustic comments for publishing so many faulty predictions of the following day's weather. Recently the paper added a statement of yesterday's weather. It has been remarkably accurate.

As is true of The Times, I can report the past better than the future. I should tell you, however, that I have reached the conclusion that deciding present or future policies in our field on the basis of past experience alone is exceedingly risky business. My reconsiderations of the past have convinced me that the environment in which a child has lived and which he occupies now is a most potent teacher, more inescapable, more insistent, even than teachers and schools. The child's reading abilities and activities are largely an expression of the kind of life which his environment, broadly speaking, has initiated and nourished.

The world of today is very different even from that of a recent yesterday, and more dramatic changes will probably appear tomorrow. We should now recognize, as the scientists and engineers who developed space flight did, that many old policies and practices must be brushed aside if we are to realize achievements that are now possible. And so today I
speak not to glorify the Good Old Days. The Good Old Days are too often
the embellishment of bad old memories and prejudices. I urge you rather
to glory in the bright promises of tomorrow.

We are, however, still following many practices that were shown to
be faulty even in 1920, and are even more inappropriate today. Consider,
for example, the practice of depending upon mass methods of teaching
reading. School programs based on basal readers and workbooks, upon
whole group demonstrations and instruction, never have been sufficiently
adaptable to meet individual differences. The task is being made steadily
more difficult by powerful environmental factors which result in our
youngsters becoming more, not less, different. They are now so unlike
that clusters within a typical schoolroom are often finding each other
intolerable. Although today's teachers are better equipped and more
adaptable than ever before, I have never seen them so bewildered by the
many racial, national, economic, and social differences as they are today.
I think there are really no sound reasons, theoretical or practical, why
we should not teach reading individually, as far as needed, tomorrow.
We can afford it. Despite the incredible cost of several recent wars,
we pay relatively less in taxes now than all but two or three modern
industrial nations. We are truly penny-wise and pound-foolish in
failing to meet individual needs in our schools, especially in the teaching
of reading.

I feel that we in education have been slow compared to several other
professions to capitalize upon the products of technology. We seem almost
to prefer to wash our dishes and diapers by hand. Such a reluctant
attitude did not lead to the discovery of aspirin or antibiotics, or to
the development of computers or space ships. Progress in these areas resulted not from dodging but taking command of these developments of technology and science. I feel that we should without further delay explore the possibilities of cybernetics and electronic operations, teaching machines, programmed and practice materials, and the other promising teaching and learning aids. I see no reason why they cannot be made as useful to us as their equivalents have been to doctors, farmers, engineers, and housewives.

Although I have said that the most powerful educational influence is the environment, meaning by that the social as well as the physical features, the school teacher will continue to play an increasingly indispensable role. It is unlikely that computers, electronic devices, teaching machines and materials will ever become sufficiently adaptable to meet all the demands of optimum education. Only a teacher can do that. But he can do that only by achieving a higher level of insight and skill and a better opportunity to apply them than is customary now.

To promote reading and other language arts, we should take vigorous steps to provide more sagacious management of children during the period the late Leta Hollingworth called "The Golden Age of the Intellect," the years from one to seven, when intellectual eagerness and capacity for learning are sharpest and purest. Reading is largely learned at mother's knee. Most fundamental patterns of life are probably mainly formed then. For this reason we should exercise extreme care to avoid unfavorable influences, such as the increasingly common practice of leading the child from mother's knee to the television screen, where he may spend many hours
every day hearing atrocious cowboy English and seeing fraudulent frontier fights and foolishness. Both linguists and psychologists see this practice resulting in a neglect of learning to speak and converse, and to many more seriously misleading habits and attitudes. On the other hand, television offers marvelous opportunities for encouraging the very young child's efforts to learn many useful educational skills and numberless true and important things about the world. We should investigate every possibility of promoting better "cognitive" and character development during these crucial years. I trust that this statement will not lead any of you to think that I am recommending anything so simple as merely introducing our familiar reading program or other forms of conventional elementary or preschool education earlier than is now customary. For many of today's children, that would be a disastrous mistake. Some recent reports on the results of some Head Start types of programs should alert us to the need of new insights and new methods here.

A number of practices are now available which will make this period more fruitful, such as a comprehensive case study, involving an array of tests and observation of psychological aptitudes and intellectual and related social abilities and limitations. We should launch a drive to provide a thorough inventory no later than the second birthday and repeat it yearly until the sixth, on the basis of which a program could be tailored to suit each family situation. This practice could save untold frustrations and failures in home and school with enormous savings in dollars otherwise spent, often futilely in later remedial or rehabilitation work.

For such case studies, a number of very promising types of new insights will probably be made possible in the near future. For example, two Columbia sociologists (1) found evidence recently in a study conducted
in New York ghettos that certain attitudes and habits formed in the home and community during the preschool years may completely defeat all conventional methods of teaching some youngsters to read. They insist moreover that the typical teacher has neither the background, training, nor time essential for discovering these conditions and that specialists with a specific equipment are needed to advise her. A similar claim can now be made for several other quite different types of special services. As you know, specialized advice and technical laboratory and other services are now available to physicians. They may often mean the difference between life and death in educational care as they now do in medical diagnosis and treatment. I think we should move more rapidly in this direction.

Another promising example (5) is the product of investigations now being launched by a number of persons who refer to themselves rather mystifyingly as "Third Force Psychologists" or "Humanistic Psychologists." These investigators think that a child's and adult's life is motivated and controlled not primarily by steady growth or accumulations of interests and abilities, and not by hidden instincts or by devious mechanisms of the Freudian type, but by a relatively few "peak experiences" which may speedily shape one's whole orientation toward life. Perhaps you will forgive me if I report a personal example for the reason that I know it better than others.

My earliest years were spent on a six-acre plot of land a mile and a half from the nearest village, a quarter of a mile from the nearest family of children, and on the edge of a vast redwood forest which seemed almost continuously to be sighing with some unknown woe. Since my
father's work took him out of the home most of the time, I lived alone with my mother. During my earliest years I often suffered from loneliness. At about the time of my third birthday, my busy mother encouraged me to try to learn to read. She said she did this largely in self-defense, to keep me from following her about all day with ceaseless questions, and perhaps to make me less susceptible to the mysterious moods of the redwoods forest. Her homespun method worked. One day I discovered that I could read, even if laboriously, a little booklet she gave me. From that day I began to fly on winds of printed pages to all the magic lands of earth and the heavens.

To be sure reading got me into temporary difficulty when I went to school as a result of my shocking discovery that the first grade had nothing to read. My first teacher broke the rules by maneuvering all kinds of devious opportunities for me to read on my own. This led me to conclude that school teachers were wonderfully kind and understanding people, and that going to school was life's most rewarding adventure. Indeed the crucial decision I had to make on graduating from high school, namely whether to accept either of a couple of tempting local careers or to undertake the considerable hazard of making my way through college, and subsequent decisions to spend the remainder of my life with schools and teachers, were probably determined by acts of my mother and my first teacher before I finished the first grade. The search for this kind of "elan vital" to use Bergson's phrase is one of several new lines of psychological research that I urge you experts in reading to explore tomorrow for its promise to enlighten your future case studies and teaching.
We should tomorrow take a quite different attitude toward many of today's practices and method of research about them. For example, consider the enormous amount of time and money that has been spent in search of a single best method of teaching reading - the alphabet, phonic or look-and-say, or a kinesthetic or visual or augmented alphabet method. I feel that the past century has demonstrated thoroughly that no single device or gadget or procedure is best for all children, for all conditions or communities or for all teachers or all times. To investigate such methods to find the one better on the average is both futile and misleading - misleading because these methods of research will not reveal what we should really be trying to find out, namely what procedure is best for those many individuals, both superior and inferior, whose needs are demonstrably different from those clustering in the middle of the group. I feel confident that we can, within a few years, develop diagnostic methods combined with short-run learning test periods which will enable us to determine reliably which one or combination of initial approaches will be best for each child.

We still face a number of unsolved majorproblems involved in teaching reading. One of these was portrayed in a cartoon in a recent issue of Punch. It shows a child answering his mother's question, "What did you learn in school today?" The child replied, "Well, I didn't learn anything, but I was busy all day trying to acquire some cognitive skills." This is usually regarded as a funny or sarcastic reflection on the goings-on in school, but it really portrays a profoundly important problem in learning and a vital issue in the teaching of
reading - an issue which will soon, I think, become one of the hottest in the field of the general psychology of learning.

In the course of his evolution, man has developed at least three major techniques of dealing with any problem - an effort in primitive life to capture a fish or fowl, or today to recognize an unfamiliar printed word. He may merely memorize the details such as letter sounds or a formula such as the rule for \( ei \) and \( ie \), or habituate the steps or units which compose each operation, such as operating a car. This is often called "associative learning" by psychologists. A man may resort to verbalization - that is to talking or thinking about it with little or no understanding. Verbalism is both one of man's supreme achievements and one of his major substitutes for real understanding and learning. Verbalizing is so easy, so seductive and deceiving, it often becomes a major cause of evading real learning and what has been called the "illiteracy of the literate." A person may adopt a third method. He may tackle the task primarily for the purpose of achieving insight and understanding of it and especially to discover how to deal with that type of problem, how to learn in that medium. This third method (at least a form of it) is often called "cognitive learning."

It has I think been amply demonstrated that ability to learn by insight, by understanding, that is "cognitive learning," is based on an array of innumerable detailed techniques and resulting generalized attitudes and habits which we can develop gradually from our earliest years - a process which psychologist William James (2) described in 1890 when he wrote, "All our life...is but a mass of habits...developing from our childhood and bearing us irresistably toward our destiny....every good
that is worth possessing must be paid for in strokes of daily effort.... By neglecting the necessary concrete labor, by sparing ourselves the little daily tax, we are positively digging the graves of our possibilities.... As we become permanent drunkards by so many separate drinks, so we become saints in the moral, and experts in the practical and scientific spheres, by so many separate acts.... Silently, between all the details of his business, the power of judging in all that class of matter will have built itself up within one as a possession that will never pass away."

Unfortunately many persons have interpreted James' statement to be an endorsement of the Formal Discipline doctrine, the idea that all one needs to develop high excellences is to grit his teeth and work hard. But alas, research has shown that when the task becomes difficult and perplexing we mortals tend to resort to rote learning, to "associative learning," or verbal repetition or perfunctory "trial and error" maneuvers. We learn to spell cat by repeating c-a-t, to run the typewriter with one finger only, to fool our teachers by talking all around the subject, or by repeating statements that we never understood. The simple rote methods are easier for both teacher and pupil - at least at the moment. Both the rote and the "cognitive" tasks can be put into workbooks, or assigned for study or arranged for teaching machines. I think it quite likely that a major fault in teaching now is that we too often set up learning situations which require "cognitive" learning without being able to tell pupils much about how to do it. We lead them to struggle, sometimes to strangle, in a pool of trial and error. The best intellectual skills and self-learning techniques are extremely
subtle. They require in addition to James' "dint of daily effort" a great deal of insight and skill on the part of teachers. These are skills and insights which you teachers do not now possess - nor do I. We psychologists and educators have, in fact, learned pathetically little about them during my professional lifetime. We must master them tomorrow.

Fortunately a number of psychologists, biologists, and statistical analysts are now investigating different approaches such as these. For example, psychologist Arthur Jensen (2) believes, on the basis of extensive studies, that a typical classroom will include a number of children whose native or acquired neural organization makes them largely limited to "associative learning," whereas others are able to employ a "cognitive approach," and that a reading program which requires mainly a "cognitive approach" will lead to happy results for the latter group but to certain "frustration and defeat" for the former.

Interestingly and significantly certain teachers in their schoolrooms in a small community in Alaska found that a method recommended for general use in primary reading similarly worked very well for many children, but for others - to quote Mary Hocker who reported the study - it was found to be "a laborious task for both teacher and pupils" who "lost interest before they broke the code."(1) The best psychological explanation might be the same in these two cases, one based on observations in a school classroom, the other on a different activity conducted in a psychological laboratory. We need both types. We should arrange for them to get together. And what offers a better opportunity than this big friendly organization, the International Reading Association?
If I should select the half-dozen most helpful reports I have read or heard during (say) the last two years, I would pass up a few three hundred or more page books, but I should certainly include several articles prepared by teachers such as you. Among these would be some which glowed with fresh, ingenious practical ideas and inventions or sagacious observations. This is the line in which most of you teachers shine. At this point I feel the urge to give you a bit of fatherly advice. Stick to this kind of work. Don't waste your time on setting up "control group" classroom experiments; those that you are in a position to do are usually quite faulty as experiments. Don't worry about being "scientific." Avoid as you would the plague trying to write or talk like a college professor who on occasion may be generating a cloud of professional jargon to conceal the fact that he doesn't have anything very new or very important to say. Be your own sweet, sensible, practical self and try to write and speak in simple sanitary English.

When I think that I may be destined to spend my eternity in the fiery regions below, only one consolation occurs to me. It is the thought that should the flood of articles written in fuzzy educational jargon be forwarded to me there it will probably be burned up before it reaches me!

Another bit of advice. All of us, administrators, professors, and teachers of reading, should rid ourselves of our customary caution and timidity, our habitual disposition to move slowly, to ask for only the little inexpensive changes in classroom practices. This is the Doctrine of Defeat. This is a policy that will starve to death any adventure aimed at our equivalent of transplanting kidneys or guiding astronauts on a flight among the stars.
We must not join hands and stand still with the status quo, or our fate may be that of the man who shouted, "Officer, can you tell me the quickest way to get to the hospital?" To which the policeman replied, "Why yes, just keep standing right where you are now!" And this reminds me that if I stand here much longer I may get a similar warning from our chairman.

Never before have we had so much money or so much encouragement to do something. Never before have we had such shining possibilities for improvement. Of these, I have been able to give you only a few examples today. We can make enormous progress tomorrow if - if we organize and launch a comprehensive and coordinated program. To accomplish this, I think, should be the major responsibility of this huge International Reading Association, that is to say, of you people who have patiently listened to me here today.