This paper discusses the change in educational philosophy and practices in preschool and kindergarten education before and during the "Sputnik" era. Presented are four major factors that have exerted pressure on the schools to change from a developmental to an academic approach in preschool education: (1) the wave of adverse criticism of American education and advocacy of reactionary formal instruction set off by the launching of the Sputnik satellite; (2) the new interest and consequent research in the early learning/teaching process by scientists; (3) the influence of learning theories and the use of behavior modification and motivation techniques in preschool education; (4) the national awareness of the problems of the disadvantaged. These factors encouraged an approach towards education neglectful of humanistic, self-fulfilling goals, resulting in a trend toward formal early education that may involve some risks to the child's development. Several examples of practices that may constitute too much pressure on the child at the preschool level are given along with examples of possible child reactions. (SDH)
Early Formal Instruction: What Constitutes Too Much Pressure?  

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All too often, educational philosophy and practices are but subtle reflections of society's pulse. Depending upon the stresses and thrusts of societal needs, or the absence of such disequilibrium, education becomes self-conscious, excited, and anxious or it goes along at a relaxed pace.

Before Sputnik, the philosophy of nursery school education was pretty well settled. The programs were child-centered, and committed to the purpose of developing the "whole child". The developmental point of view prevailed, and within this atmosphere, the child was encouraged to actualize his potentiality.

It is difficult, even impossible, to attribute the nursery school philosophy to one author or one course. What we recognize is a confluence of ideas from several courses. There is the visible influence of Arnold Gesell with his many years of study of child development at Yale Clinic. From him, we learned to accept certain principles of development that guided our practices in the nursery school and kindergarten. His book, The First Five Years of Life, became a kind of Bible for many pre-school teachers. From Gesell, they learned to expect certain patterns of motor, intellectual, language, and adaptive behavior at successive age levels. But, above all, they learned from him the concepts of "maturation" and his idea of a timetable for the ripening of functional potential. "Readiness" was the watchword. The research of Gesell and his associates underscored the futility of coaching, practicing, or training before the appropriate maturational stages. Moreover, they showed how easy it was to learn certain skills once the
maturational foundation had been developed. "Structure precedes function" became an oft-quoted developmental principle. Although the readiness principle originated to explain the acquisition of neuromuscular skills, it seemed equally acceptable for language development and social-emotional development. Particularly, was it used in planning for the reading skills.

The principle of maturation led to the unproductive attitude of watchful waiting on the part of some teachers. Others created remarkably inventive and challenging programs designed to make certain that the child would not be the victim of one-sided development. Hence a great concern for social development ensued while the child was maturing or "getting ready for" a more formal type of learning experience. Evidence mounted to show that time was not lost: through informal play, the child not only developed strong muscles, but also such important social understandings as living and playing by rules, cooperation and healthy competition—all of which are elements of good citizenship. Here we see the influence of Froebel who is sometimes referred to as the "father" of the kindergarten movement.

Although formal, academic instruction was delayed, the child's school environment included books as well as other instructional materials which the child used to develop his "projects" according to his own interests—as John Dewey's philosophy suggested. Rousseau's belief in the inherent goodness of the child was re-inforced by the Freudian discovery of the potential dangers of repression of childish impulses by a "prudish" society.

Under the influence of these philosophies, pre-school teachers became broadminded, tolerant, and permissive. The mental hygiene point of view was fashionable. Children were not only permitted to express themselves,
they were encouraged to do so. The accepting, understanding, non-directive nursery school teacher became the model for all those who would encourage wholesome personality growth and self-direction. Indeed, the nursery school teacher became the model personality for a Rogerian therapist!

This, then, is a stylized picture, or a schematic description of the pre-Sputnik kindergarten. Perhaps it is a caricature of it. However, the point to be made is that the prevailing philosophy of that time was that the kindergarten was a place where the child found his world miniaturized (cut to size) and where his job was to mature through play and other forms of creative expression. Under the careful guidance of an understanding and accepting teacher, the child learned about his world, developed techniques for living with others, acquired self-help attitudes and skills, and expanded his ego through various creative endeavors. In retrospect, it was a peaceful and idyllic existence.

Then suddenly the "beep-beep" of Sputnik! The entire American society awakened with alarm. What had we been doing? Fiddling? Idling? Playing? Sleeping? Where were our scientists? How would we be able to compete with the Russians? That our schools had failed us was the disquieting possibility lurking in the minds of the majority of Americans, and it was the outspoken accusation of many of them. Down with John Dewey! Down with child's play at school! Bring back homework! Bring back formal discipline and mental exercises. These became familiar slogans.

New books and new teaching materials flooded the market from diverse sources—not merely from professional educators; certainly not from preschool teachers. Rather, they came from politicians, admirals, ivy league presidents, and just plain, everyday citizens. It was a "free-for-all" in which the voice of responsible educators could be only dimly heard. It
was open season for the book market and other firms incorporated to peddle
the latest instructional materials guaranteed to raise your child's I.Q.
in sixteen easy-to-follow steps. Even mothers could do this between chores
at home. To teach your child to read by age three became a commonplace
objective. Programmed instruction in mathematics for the four and five
year-olds promised that they would "be handling algebra and geometry with
practiced ease."

High pressured advertisements such as these kindled exaggerated hope
in the hearts of many parents, and at the same time, launched a new kind
of pre-school program in which formal instruction became the new "thing".

Careful scrutiny usually reveals a grain of truth at the center of
reactionary movements. Perhaps we had waited too long for "readiness".
Perhaps we had emphasized personality development above the development of
the basic structures of academic skills. In addition to Sputnik, several
other factors contributed to experiments in formal instruction at the pre-
school level. Scientists, especially physicists and mathematicians, whose
research efforts had always been far removed from the problems of children's
learning, now turned their attention to learning in young children--learning
mathematics and physics, of course. Moreover, our old "readiness" concepts
were due some serious re-evaluation. The work of Jerome Bruner suggests
that children are capable of mastering cognitive skills previously thought
to be beyond their age and grade levels. He states the hypothesis that
"any subject can be taught effectively in some intellectually honest form
to any child at any stage of development". Thus he sounded the death knell
to the practice of merely sitting around, passively waiting for a child to
show readiness.
A parallel thrust from the academic laboratories was made by the learning theorists. We knew of their success in "shaping" the pecking behavior of pigeons, or modifying the behavior of rats by appropriate reinforcements. But, for the kindergarten teacher, all this was theory of animal behavior. Now we are challenged to try it out on real, live children using M&M candy for reinforcement. Especially might this work with disadvantaged children who "have never had enough M&M candy," and who "need immediate gratification."

This brings us to a fourth factor that has reactivated the mentalistic approach to education. I refer to the Nation's awareness of and concern for the problems of the poor. Although we have had the poor with us always, and although we have been aware of the positive correlation between socio-economic status and academic achievement, it seems that the desirability of changing the status of the poor had not struck the political conscience until now. Research on the effects of poor nutrition, deprivation of sensory stimulation, social isolation, et cetera, had implications for academic achievement. Early deprivation was found to be more damaging than later. Moreover, deprivation at an early age seems to be a significant factor in the continuously expanding achievement gap between the "haves" and the "have nots". How can this social dilemma be resolved? One proposal is compensatory education, the chief example of which is the head start program. It aims to give the deprived child an early start in enriched educational environment, in the hope that he will overcome his short-term deprivations, catch up with his more advantaged peers, and keep up with them in coping with academic standards. Recent research on the effectiveness of the head start programs points up the need to reconsider and sharpen up the program if it is to achieve its stated objectives.
We need not go into an evaluation of this endeavor except to point out that when the objectives of the pre-school program are defined as providing preparatory experiences for successful academic work, then the schedule, the activities, and the goals of kindergarten tend to become more closely akin to formalized, primary work. If the pre-school experience must make up for developmental loss and develop readiness skills to cope with an increasingly demanding curriculum—all within a very short time—then formality is inevitable. It is the only way to deal efficiently with specific academic objectives. Order, drill, habit formation become central. Is it too much? Does it work? Bereiter and Engelmann report a high degree of success in employing formal instruction with disadvantaged children by "focusing upon academic objectives and relegating all nonacademic objectives to a secondary position."

I have listed four major factors that have, in recent years, exerted pressure on the schools to change from a developmental to an academic approach in pre-school education. First, there was the wave of adverse criticism of American education following the shock of Sputnik, which set off a rash of extremely reactionary practices, including a return to formal discipline. Secondly, there was a new interest on the part of certain natural and social scientists in the learning-teaching process which led to research that compelled a re-examination of our old pedagogical principles, to the end that abstract disciplines are taught at ever lower age and grade levels. Thirdly, the new interest in testing out on children the learning theories that have been found successful in the animal laboratories had led to innovative teaching and motivational techniques. And finally, efforts on behalf of the disadvantaged constitute a fourth factor exerting pressure toward formal instruction at an early age. What is the risk? What price do we pay for young academicians?
The risk is that in our efforts to develop good competitors among ourselves as well as with other nations, we set priorities on areas of development, and by so doing, restrict development in other areas. At present, cognitive development has top priority. Jean Piaget, whose theories of child development are weighted toward the cognitive, is the most popular theorist today. Also, scientific talents and interests have priority over humanistic interests. Federal grants are a strong indicator of this fact. Among the sciences, physics and mathematics have priority though there are recent signs of shifts toward the social sciences. Society reinforces this through high monetary rewards. Space flights and undersea adventures dramatize these values. Thus, a child is pressured in the direction of the greater social rewards. In a broader sense, the thrust toward higher levels of terminal education for the general public has made college-bound youngsters out of many who, a few years ago, would have been content as high school graduates. However, tests of various sorts continue to block the doorways of opportunity and personal advancement. Therefore, parents and teachers start early, trying to give children a headstart in coping with these barriers. In their zeal to produce an academically competent person, who can adequately cope with a computerized society, they are inadvertently, sometimes deliberately, neglecting to foster the humanizing aspects of living that had a more central place in education in pre-Sputnik days.

The principles of child development which state that: (1), every child develops at his own rate; (2), all aspects of development are interrelated; (3), children develop according to their own style which is determined by internal as well as external factors--and so on--these principles are not really forgotten; neither are they less tenable today
than yesterday. It is just that we seem not to have time for their implementation. Consequently, we seek the short-cuts, and our methodology becomes restricted, operational, and expedient. Broader, humanistic, self-fulfilling goals require more leisure and a climate of less urgency.

This historical background has been given in an attempt to highlight a few sources of pressure upon the American people as a whole, and to suggest that such generalized pressure, in turn, was bound to be exerted upon the school. The immediate response was to become anxious, reactionary, and formal. As time goes on, and educational perspective emerges, we will be forced to deal with the question of too much pressure. How formal should instruction be at the pre-school level?

Let us consider some examples of practices that are illustrative of too much pressure, and also some reactions of the child to such pressure.

The following practices and conditions may constitute too much pressure at the preschool level:

1. Too frequent correction of immature speech patterns.
2. Threats of failure by a grading system or testing practices improperly used.
3. Rote Memorization of abstract concepts without prerequisite experiences for understanding them--the short-cut method.
4. Success in school as the price tag for love.
5. Using other children as pace-setters instead of permitting the child to set his own pace.
6. Insistance upon conformity to the more prevalent social trait (e.g., right handedness) without sufficient regard for the child's own proclivities.
7. Insistence upon continual performance at the child's peak level, without permitting the respite of regressive behavior— the principle of spiral development.

8. Overvaluation of cognitive development at the expense of other areas— all head-no hand-and no heart.

9. Fostering a competitive climate in which some children can never win.

10. Use of adult behavioral norms for evaluating the child's behavior.

In response to this pressure, the child may act in one or several of the following ways:

1. Increasing incidence of nervous behavior including facial tics, excessive crying, and various psychosomatic reactions including vomiting, asthma, etc.

2. Persistent, negative attitudes toward school— school phobia.

3. Inordinate stubbornness— a preferred coping technique.


5. Rigid, mechanical responses (lack of spontaneity).

6. Self-depreciatory remarks. "I'm dumb"

7. Cheating and lying.

8. Resistance to trying new skills. "I might reveal my weaknesses"

9. Excessive anxiety over mistakes. "Parents and teachers won't love me"

10. Stuttering and stammering.

Of course, the child's experience of pressure is an individual matter. Children differ in their levels of pressure tolerance and in the experiences that constitute pressure. Teachers must know their children and the kind and degree of pressure that each can tolerate without disintegrating. It is extremely important to be alert to the signs of pressure when formal instruction is begun in the preschool years. Better still, let the child
lead the way to academic skills. If he has been encouraged to try out new skills, to inquire, and to discover, he will inquire about reading, writing and arithmetic and he will discover the wonders of their mastery.

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