EDUCATING FOR LIFE:
A PUBLIC PRESCHOOL PROGRAM AND ITS PLACE IN SOCIETY

By
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STATEMENT BY AUTHOR

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>viii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ix</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>2. LITERATURE REVIEW</td>
<td>7</td>
</tr>
<tr>
<td>On Evolution and the Pace of Change</td>
<td>7</td>
</tr>
<tr>
<td>Future Shock</td>
<td>7</td>
</tr>
<tr>
<td>Two Worlds of Childhood: U. S. and U. S. R.</td>
<td>10</td>
</tr>
<tr>
<td>Teaching as a Subversive Activity</td>
<td>12</td>
</tr>
<tr>
<td>The Revolution of Hope</td>
<td>13</td>
</tr>
<tr>
<td>Contingencies of Reinforcement; and</td>
<td>15</td>
</tr>
<tr>
<td>Beyond Freedom and Dignity</td>
<td></td>
</tr>
<tr>
<td>On the History of the Theory and Practice of Education</td>
<td>18</td>
</tr>
<tr>
<td>On the Failure of Traditional Education</td>
<td>28</td>
</tr>
<tr>
<td>General Background</td>
<td>29</td>
</tr>
<tr>
<td>Intelligence and Experience</td>
<td>31</td>
</tr>
<tr>
<td>Who Can Be Educated?</td>
<td>31</td>
</tr>
<tr>
<td>School Is Dead: On Failure</td>
<td>33</td>
</tr>
<tr>
<td>Teaching as a Subversive Activity</td>
<td>35</td>
</tr>
<tr>
<td>Crisis in the Classroom</td>
<td>38</td>
</tr>
<tr>
<td>Beyond Freedom and Dignity; The Technology of Teaching; Walden Two</td>
<td>39</td>
</tr>
<tr>
<td>Fantasy and Feeling in Education</td>
<td>41</td>
</tr>
<tr>
<td>School Is Dead: On Socialization</td>
<td>44</td>
</tr>
<tr>
<td>Two Worlds of Childhood: U. S. and U. S. R.</td>
<td>45</td>
</tr>
<tr>
<td>The Children of the Dream</td>
<td>45</td>
</tr>
<tr>
<td>Summary and Conclusion to the Literature</td>
<td>47</td>
</tr>
<tr>
<td>3. EDUCATING FOR LIFE</td>
<td>53</td>
</tr>
<tr>
<td>The Problem of Competency</td>
<td>54</td>
</tr>
<tr>
<td>The Nature of Competency</td>
<td>55</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>The Nature of Incompetency</td>
<td>61</td>
</tr>
<tr>
<td>Poverty, Child-Rearing, and Achievement</td>
<td>69</td>
</tr>
<tr>
<td>The Determinants of Competency</td>
<td>79</td>
</tr>
<tr>
<td>Summary</td>
<td>87</td>
</tr>
<tr>
<td>The Well-developed Human Being</td>
<td>87</td>
</tr>
<tr>
<td>Erik H. Erikson</td>
<td>88</td>
</tr>
<tr>
<td>Abraham H. Maslow</td>
<td>98</td>
</tr>
<tr>
<td>Jean Piaget</td>
<td>105</td>
</tr>
<tr>
<td>B. F. Skinner</td>
<td>116</td>
</tr>
<tr>
<td>Synthesis and Foundation</td>
<td>122</td>
</tr>
<tr>
<td>4. A PRESCHOOL PROGRAM</td>
<td>130</td>
</tr>
<tr>
<td>The Need for Early Childhood Education</td>
<td>130</td>
</tr>
<tr>
<td>The Community Preschool</td>
<td>133</td>
</tr>
<tr>
<td>Organization</td>
<td>133</td>
</tr>
<tr>
<td>Philosophy and Practice</td>
<td>134</td>
</tr>
<tr>
<td>Resources</td>
<td>141</td>
</tr>
<tr>
<td>Staff</td>
<td>143</td>
</tr>
<tr>
<td>Extension</td>
<td>144</td>
</tr>
<tr>
<td>5. IMPLICATIONS FOR SOCIETY AND ITS INSTITUTIONS</td>
<td>148</td>
</tr>
<tr>
<td>Problems</td>
<td>148</td>
</tr>
<tr>
<td>Education</td>
<td>148</td>
</tr>
<tr>
<td>Employment</td>
<td>149</td>
</tr>
<tr>
<td>Politics</td>
<td>150</td>
</tr>
<tr>
<td>The Family</td>
<td>150</td>
</tr>
<tr>
<td>Housing</td>
<td>151</td>
</tr>
<tr>
<td>6. CONCLUSION AND PROSPECT</td>
<td>152</td>
</tr>
<tr>
<td>Suggestions for Further Research</td>
<td>153</td>
</tr>
<tr>
<td>Prospect</td>
<td>155</td>
</tr>
<tr>
<td>APPENDIX A: ALTERNATIVES IN EDUCATION</td>
<td>156</td>
</tr>
<tr>
<td>Summerhill</td>
<td>156</td>
</tr>
<tr>
<td>British Infant Schools</td>
<td>160</td>
</tr>
<tr>
<td>Head Start</td>
<td>163</td>
</tr>
<tr>
<td>Parent Education Project</td>
<td>165</td>
</tr>
<tr>
<td>Nurseries in Cross-cultural Education</td>
<td>168</td>
</tr>
<tr>
<td>Experimental Schools Corporation of Arizona</td>
<td>171</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS—Continued

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Street</td>
<td>175</td>
</tr>
<tr>
<td>The New Nursery School</td>
<td>176</td>
</tr>
<tr>
<td>Return to Structure: The Bereiter-Engelmann Approach</td>
<td>178</td>
</tr>
<tr>
<td>U. S. S. R.</td>
<td>180</td>
</tr>
<tr>
<td>The Israeli Kibbutz</td>
<td>183</td>
</tr>
<tr>
<td>Walden Two</td>
<td>185</td>
</tr>
<tr>
<td>APPENDIX B: RAISING THE GENERAL INTELLIGENCE LEVEL</td>
<td>191</td>
</tr>
<tr>
<td>APPENDIX C: CRITIQUE OF REIMER'S SCHOOL IS DEAD</td>
<td>193</td>
</tr>
<tr>
<td>APPENDIX D: PROPOSALS FOR CHANGING THE SCHOOLS</td>
<td>196</td>
</tr>
<tr>
<td>APPENDIX E: SAMPLE FLOOR PLAN</td>
<td>198</td>
</tr>
<tr>
<td>APPENDIX F: CLUSTER HOUSING</td>
<td>199</td>
</tr>
<tr>
<td>LIST OF REFERENCES</td>
<td>200</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Percentage of Non-white Minority and White Majority 12th Graders Holding Certain Attitudes</td>
<td>74</td>
</tr>
<tr>
<td>2. Competency Characteristics for Intellectual Ability Interpreted in Terms of Control</td>
<td>84</td>
</tr>
<tr>
<td>3. Competency Characteristics for Social Interaction Interpreted in Terms of Control</td>
<td>85</td>
</tr>
<tr>
<td>4. Competency Characteristics for Autonomy/Self-image Interpreted in Terms of Control</td>
<td>86</td>
</tr>
<tr>
<td>5. Behaviors of the Well-developed Man Common to Four Theorists</td>
<td>124</td>
</tr>
</tbody>
</table>
# LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maslow's Prepotency Hierarchy of Needs</td>
<td>100</td>
</tr>
<tr>
<td>2. Possible Increases in IQ Scores</td>
<td>192</td>
</tr>
</tbody>
</table>
ABSTRACT

The pace of change in Western culture is too rapid for evolution to affect man's behavior, and so education must take its place. Education, however, has been shown to be inadequate to the task; on the whole, its "graduates" do not behave in ways productive of solutions to pressing world problems. Furthermore, a large proportion of them are incompetent to tackle such problems anyway.

In this study the sources of incompetence are found to be a function of the degree to which a child fails to experience environmental changes and personal rewards as the result of his own behavior. That failure begins in the context of lower-class child-rearing practices, and is confirmed and extended in the public school system.

In search of a goal for programs of change, the theories of Erikson, Maslow, Piaget, and Skinner were analyzed for their descriptions of a well-developed individual. Ten characteristics of such a person were found to be common to the four theories. Agreement was also found on certain kinds of desirable early experiences.

The results of the foregoing analyses were translated into a public preschool program, dependent on
community involvement, whose structure and operation should promote "developing well."
CHAPTER 1

INTRODUCTION

In the course of evolution, many species rise up, flourish for a time, then wither and die out. Species which persist are those whose characteristics contribute to survival in the changing environment. The environment, in fact, may be said to consist of a set of conditions of survival. The species which can meet those conditions survive; otherwise they pass on.

The environment changes. Ice ages warm, and the glaciers recede towards the poles as they melt. The land rises, and what were variations in the depths of the sea become oceans and continents. These events, and innumerable others not so spectacular, change what species must do to survive; or put another way, they change the survival value of current characteristics of the species. In the course of generations the process of evolution eliminates characteristics with negative survival value in the new environment, and selects those better suited to survive.

And so it is with cultures. They too rise up, flourish, wither and die out. In that sense they are like species; they too must meet certain conditions in order to survive. But in another, more important sense, they are
like the environment. They supply conditions of survival to be met by their members. They too change, which changes the conditions of survival within them. The catch is that, as Skinner (1971) says, Man's "...is an environment which is almost wholly of his own making" (p. 205).

The time scales of the changes wrought by nature and by man are vastly different. From the appearance of the first opposable thumb to an entire species, with opposable thumbs took thousands of generations (Dobzhansky, 1964). In the time scale of man's effect on his environment, evolution has little influence. The conditions of survival are changing much more rapidly than "natural" evolution can select new genetic qualities to meet them. Species characteristics may thus lose their survival value, even become lethal, when man causes his world to change too fast.

For the evolutionary process may suddenly "catch up." The intelligence which has raised civilizations and conquered disease may eventually pollute the environment to the point where humans can no longer live in it; the heightened sensitivity to sexual stimuli which helped the race "multiply and be fruitful" may lead to overpopulation and subsequent famine.

In such circumstance explicit use must be made of a genetic characteristic whose survival value is not likely
to diminish: man's ability to perceive the relation between events and consequences. This is especially impor-
tant in a cause-effect relationship where man himself is the cause, and same cultural change the effect. This means that each man must "evolve" in his own lifetime, such that none of his behaviors have negative survival value. Thus men must learn to take account of the deferred consequences of the changes they make in the environment, and to make only those changes which have minimal or no detrimental effects.

Why, if intelligence has survival value, has it allowed the human race to produce such problems as pollution, overpopulation, the threat of nuclear war, world-wide poverty, and so on? As stated above, naturally selected characteristics can lose their viability "suddenly" (from the perspective of evolution) when the contingencies of survival change rapidly. Human learning is a phylogenetic capacity the final form of which is ontogenically deter-
mmed (Hunt, 1961). Thus its survival value is also ontogenic -- that is, dependent on its course of develop-
ment in the individual. Learning is defined by the effect on the individual of his interaction with his environment. If the environment "goes wrong," then in a sense the nat-
urally selected capacity to learn will also. Intelligence, man's greatest strength, becomes his greatest weakness.
The environment with which man interacts in the learning process has not evolved naturally, however; it was created by man. It is called "culture," and the areas of experience which are systematized within it are called "cultural institutions." An institution whose influence touches nearly all members of our culture directly, for the greater period of each day, and for an ever-increasing number of years, is education. Schools are thus a tremendous factor, perhaps a determining factor, in the development of individual potential and the uses to which it is put.

Education is the institution which man has created to systematize that part of the environment which enters into "learning," or "intelligence," or "cognitive development." There is ample evidence (e.g. Postman and Weingartner, 1969; Reimer, 1971; Schwebel, 1968) that that system, and the structure it imposes on experience, is inappropriate; that it has caused man's phylogenic capacity to "go wrong," both for the individual and for the species. Those who emerge from the institution have not, on the whole, acquired the intellectual (e.g. Postman and Weingartner, 1969) or emotional (e.g. Jones, 1968) "equipment" which would fulfill them as individuals and predispose them to behavior with survival value. The catalogue of disturbing problems bears witness to that
failure: poverty, overpopulation, rising crime rates, the threat of nuclear war, alienation in industrial society, the disaffection of youth, a growing proportion of unhappy marriages, and so on (Skinner, 1971). Further, education has not achieved the aims that its cultures have set for it: the constant chipping away at the "chains of ignorance," allowing each generation to be less encumbered by them than its parents (Reimer, 1971).

Education needs changing. The goals of such change are easier to define than the changes themselves. Each individual must early on be provided with experiences which enable two things: the realization of individual potential, and behavior conducive to survival of the culture. It is not clear at this point what such people would be like. What characteristics would they have? What early experiences are conducive to the development of such characteristics? How could the culture assure the exposure of its members to those experiences? What constitutes "fulfillment of individual potential?"

It will be the purpose of this thesis to describe one possible answer to some of these questions. In the process four major steps will be taken.

(1) An attempt will be made to determine what leads to the difference in achievement between children of the so-called lower and middle classes.
(2) An analysis will be made of some of the currently most influential theorists on "human nature" and its development, for the purpose of (a) distilling or extrapolating from the works of each what he feels a "well-developed" human being does, feels, values, and so on; (b) demonstrating the basic similarity of these characteristics amongst the theorists, and generalizing a description of this "well-developed" human being.

(3) Through analysis of the results of (1) and (2) above, a description of the early experiences which lead to optimum individual development and to behavior with survival value will be sought.

(4) A complete preschool program will be designed to provide those experiences, considering its place in the larger education system and in society at large.
CHAPTER 2

LITERATURE REVIEW

The profound significance of the subject of this review requires that the references be outlined in sufficient detail, to do justice to the authors' positions. For clarity, then, the discussion of each reference will be preceded by its title as a subheading. Except when noted, the positions, statements, and analyses which follow are those of the authors cited.

On Evolution and the Pace of Change

The first group of references deals, in different ways, with the relationship between evolution and the pace of environmental change.

Future Shock

Toffler's Future Shock (1970) is one of the most popular works on the pace of change itself. He provides a sociologist's point of view, and his use of statistics emphasizes the startling nature of accelerating man-made change. The existence of man, for example, has covered about 800 "lifetimes" of 62 years each. Six lifetimes ago the printed word began reaching a significant number of people. Two lifetimes ago the electric motor was invented.
And virtually all of the material things which make up our everyday world were developed in this, the 800th lifetime.

Some examples may illustrate the significance of such change. (1) In 1850 four of the world's cities had a population of a million or more; in 1900, 19; in 1960, 141. (2) From the birth of Christ to 1850, man used energy equivalent to the burning of less than 300 billion tons of coal. He used the same amount again during the next century. (3) At present the world's total output of goods and services doubles every 15 years. (For the present the fact that the rate of doubling increases will be ignored. Naively put, this means that today's fifteen-year old is surrounded by twice as much man-made novelty as his parents were when he was born. By the time he's 75 it will be 32 times as much. (4) About 1880, man cracked the 100 mile per hour barrier in the locomotive. Fifty years later (1931) he quadrupled that speed in the airplane; twenty years later (1951) he doubled that 400-mile per hour limit; ten years later (1961) he was circling the earth at 18,000 miles per hour -- 45 times his 1951 limit.

The reason for all this is that technology begets technology in such a way as to increasingly reduce the time lag from the emergence of a feasible idea to diffusion of its application throughout society. It took 65 years for the electric motor to be applied, 33 years for the vacuum
tube, 18 years for the X-ray tube, 10 for the nuclear reactor, 5 for radar, and 3 for the transistor. Further, such inventions change the total environment — its social, ethical, intellectual, political and other aspects — through the interrelationships of its institutions. The whole thing is a chain reaction which feeds upon itself to produce an accelerating rate of contextual change that Toffler regards as almost incomprehensible, and absolutely irreversible.

The psychological concomitant of all this is a pervasive sense of transience in all areas of life — family, job, art, politics, values, morals, the physical props of our lives, interpersonal relationships, knowledge. People are not prepared, says Toffler, by education, experience, or biology, to cope with it. The shock of encountering the future without having yet adapted to the present results in rapid, erratic swings in interest and life style, a sense of increasing loss of control, and social, intellectual, and emotional withdrawal. As a result, people try to reduce the number and significance of choices and decisions to be made. They retreat into islands of stability — mental fictions that "the more things change, the more they stay the same," or that "history repeats itself;" a hobby, a job; behavioral coping techniques formerly successful but currently irrelevant.
Toffler suggests some strategies to facilitate individual coping with change and avoiding some of the maladaptive reactions. These involve providing "cul-de-sacs" of stability of one kind or another to which people can turn for a security "re-charge" in time of need. His solutions are of less interest at this point, however, than the urgency with which he poses the problem. If experience is a potent determiner of the characteristics of human beings, the picture of change that Toffler has painted must cause concern. The remainder of this section will describe some of the major attempts to understand and deal with the effects of change on human life.

Two Worlds of Childhood: U. S. and U. S. S. R.

Bronfenbrenner (1970), comparing Russian and American child-rearing and education, feels that while the U. S. S. R. intentionally produces conformists, the U. S. produces no intentional effect at all. He interprets the trend toward increasing permissiveness in child-rearing practice as a result of a decrease in the amount of time parents and children spend together. In a typical weekend, for example, a sixth-grader spends between two and three hours of his waking time with his parents. The rest is about evenly divided between peers and television -- both of which are virtually devoid of any systematic adult influence. The school, which might fill the void, is
prevented from it by parents who refuse to abdicate their power even though they abdicate its responsibility. The conclusion is inescapable: "Children used to be brought up by their parents" (p. 95); now they are raised by TV and other children. In such circumstances the survival of American culture must be questioned in two ways. First, can a society which leaves the development of its next generation to chance survive? And second, does it deserve to?

Bronfenbrenner attributes the above problems to cultural changes which tend to reduce the time shared by parents and children: urbanization, child labor laws, commuting, zoning ordinances, the working mother, permissiveness supposedly advised by experts, TV as a baby sitter, the delegation and professionalization of child care, centralization of schools, homogeneous grouping by age and ability within schools, and so on. These changes all lead to "...a society that is segregated not only by race and class, but also by age" (p. 200). And more important, most of them are beyond our control. It will not do, then, to bemoan "the disintegration of the family" and demand a return to old values.

What is needed is to admit the changes, accept them, and invent new techniques of getting adult influence back into child-rearing and education -- back into socialization.
Teaching as a Subversive Activity

Two educators, Neil Postman and Charles Weingartner (1969), feel that the real danger is not in change itself, but in the power of a misguided few to prevent recognition of and reaction to it by the majority. Such people "venerate crap" in their own interests; that is, they desire and have the power to insure that fixed, tried-and-true ideas, concepts, skills, and solutions be maintained so that their intellectual, political, and economic interests remain undisturbed. Most of man's progress, in fact, can be viewed as a series of victories over the maintenance of crap. But the maintenance of crap has become institutionalized in society, especially in education, and is now capable of sustaining itself without the selfish machinations of individuals.

The prime function of education, broadly defined, is to provide the new generation with culturally defined and acceptable solutions to problems. Education is thus a bureaucratic repository for the exaltation and maintenance of crap. For in a world whose primary characteristic is constant, pervasive, accelerating change, those solutions will probably no longer work, and education acts as a counterforce to vital adaptive ability.
The Revolution of Hope

Erich Fromm (1968) suggests that there are processes characteristic of human nature that are capable of coping with change unless frustrated or blocked. "Human nature" is not infinitely malleable. From two evolutionary changes can be deduced several general characteristics of human existence. The first change is the decrease in instinctually determined behavior in man; the second is a parallel increase in the size and complexity of the human brain, which has taken place in the cerebral cortex. The latter provides the capacities for awareness, imagination, speech, symbol-making — which can fill the void left by the former. It is the combination of these two factors which defines the essential need of human beings: without instincts, man must continually make decisions about how to behave; he does not infallibly know, as the animals, what course to take. Awareness of this fallibility generates a need for certainty of the validity of his decision-making technique.

In the past, this certainty has for many been provided by religion, God having made the world and the rules for living in it. When science and technology began, in the last few centuries, to remake the world before men's eyes, the tenets of most religions were called into question, and with them the validity of the decision-making
framework they provided. Man has, as a result, begun to turn to the alternative framework offered by science itself -- the scientific "certainty" of control and predictability, a faith in the validity of plans and decisions made on the basis of facts. Both religious and this computer-based certainty are alienated forms of faith; "Man surrenders his own insight, knowledge, inquiry, and responsibility to an idol ..." (p. 49) The saving quality of religion is the humanistic values bound up with it. There is no such inherent value orientation in science, and its use as a framework for decision-making is therefore dehumanizing. Fromm also points out that a fact -- even a scientific one -- means nothing without evaluation of its role in the total system, of which man is a subsystem.

Fromm envisions "...a completely mechanized society, devoted to maximal material output and consumption, directed by computers; ...man himself is being transformed into a part of the total machine, well fed and entertained, yet passive, unalive, and with little feeling" (p. 39). Man merely executes the decisions of "scientific logic," having given over responsibility for his destiny to science. To reverse this trend, Fromm advocates returning decision-making power directly to men at all levels -- social systems, broad economic policy, laws, national and international politics. This cannot be done, however,
until all men are re-educated into awareness of and commitment to the human needs of survival, awareness, self-expression, and control of one's own life. Further, new systems must be developed for the organization, verification, and communication of information necessary for confident decision-making, else any gains will easily be lost.

Contingencies of Reinforcement; and Beyond Freedom and Dignity

B. F. Skinner (1969, 1971) provides a viewpoint which is at first glance antithetical to Fromm's. Fromm stresses the importance of freedom, faith, hope; Skinner insists that not until such notions are discarded can man make progress in solving major problems like pollution, overpopulation, the threat of nuclear war, and so on. Such problems, he contends, are the direct result of the inadequacy of evolutionary change in the face of man-made change. Overpopulation results from the various manifestations of man's extremely high sensitivity to a great variety of sexual stimuli. Formerly of survival value to the human species, this characteristic now threatens its extermination by overcrowding. Pollution is an indirect result of the tendency, universal among all animals, to avoid aversive stimulation. In men one form this takes is the avoidance of unpleasant labor, and it is facilitated by
man's great capacity to acquire new forms of behavior -- such as inventing mechanical devices which can perform such labor for him. The devices require power for their production, and power pollutes. The threat of nuclear war is a result of the capacity to be positively reinforced by evidence of damage to others -- formerly of value in responding to danger to self, family group, or tribe.

All of these problems arose because some type of behavior which contributed to the survival of individual men early in the species' history, no longer does so. What is required for survival is now different, and the change has come about so rapidly that evolution has had no chance to eliminate those formerly beneficial characteristics and replace them with new, more appropriate ones. It has happened because man's environment -- which, since it supplies the contingencies of survival, is the agent of evolutionary change -- is now almost entirely of his own making. The products of his own behavior supply the contingencies which determine the value of that behavior. In a world which changes those contingencies at such a rapid pace, evolution simply does not operate. The capacity to be reinforced by evidence of damage to others, for example, is not only of reduced survival value, but may actually be lethal in a world which is more or less regulated by governments and legal systems. Those systems have reached
their present form in but a hundred generations; evolution would require hundreds more to remove this "aggressive" characteristic genetically. It is inadequate to the task.

Skinner's solution is to use knowledge of the learning process to design a new culture and mechanisms for change within it. In this view, behavior is a function of its consequences; that is, we behave the way we do because of what happens to us afterwards. Behaviors that remain in the person's repertoire are said to have been positively reinforced by their consequences. Behaviors which appear to increase in frequency when some consequence is removed are said to have been negatively reinforced by it. This capacity to perceive the relationship between behavior and subsequent events is an evolutionary one whose survival value remains valid if it is used to explicitly design the events -- reinforcements -- which are contingent upon behavior.

It is not enough to leave things to chance or to "free will." The former leaves room for individual superstition: attributing a given consequence to the wrong element of a behavioral sequence; and for "timing problems:" if the behavior has deferred consequences the individual may be affected by them too late or not at all. The latter denies the consequences of behavior by attributing it to some inner agent who weighs choices, makes decisions,
causes behavior, and so on. To Skinner this is a major obstacle. "Autonomous man," free will, the self -- such concepts must be cast out before proper attention can be turned to the environment.

In the colonial period education was not even considered of public interest; it was a family matter, and families educated according to their needs -- primarily agricultural and self-protective. Thus the family was at once the social, economic, and educational unit. The first inkling of a philosophy of education in colonial America may have been the advice of Ben Franklin in his "Poor Richard's Almanac": "Make your child obey, and you can teach him anything" (Rippa, 1967, p. 26).

The wealthier families sent their children to schools patterned after the English system; others needed their children's labor at home, and educated them there.
"Town schools" dominated, in which a teacher was hired by the community and the parents paid tuition or a tax to support the school.

There was a welter of religious sects in the colonies of the late 17th -- early 18th centuries, and as civilization spread, all sought to control the schools to their own advantage (Rippa, 1967). Mostly these schools used the "discipline-and-deliver" technique, suggested by "Poor Richard" above. Thus teaching requires that delivery of course material (by lecture and drill) cannot occur until the children are disciplined into receptivity. The need for discipline was an outgrowth of the view of children, held by most religions of the time, as miniature adults, full of the usual sinful urges and degenerate desires. These tendencies must of course be controlled before constructive learning can occur.

The scion of the elite were in better case. They attended the so-called Latin Grammar Schools, which taught the "classics" in Greek and (primarily) Latin. The goal was preparation for the entrance requirements at Harvard (for boys; girls seldom attended grammar school and never Harvard), the first post-secondary institution in America (founded 1636).

It seems, then, that until the time of the Revolution three factors, emerging in roughly chronological
order, determined the nature of education. First the exigencies of a frontier existence, leading to education at home in practical skills; then the religious view of man as basically sinful, requiring external control of his urges before he can be taught; and third, the socio-economic class of his parents. (The latter actually operated from the beginning, of course; the political and economic leaders of the new country tended to have private "live-in" tutors for their children.)

John Locke's *Essay Concerning Human Understanding* (in Burtt, 1939), published in the late 1600's, rejected the religious notion of innate depravity. He argued that the infant's mind is a *tabula rosa* (blank tablet) at birth. Not until a century later, however, when Rousseau published *Social Contract* (in Beardsley, 1960), did these ideas begin to have influence — so much that they were largely responsible for the French Revolution (see Durant, 1961; Ferguson and Bruun, 1962). Rousseau reasoned that if each child is a blank tablet at birth, it follows that all men are born equal, and their differences are due to their environments. Hence a new philosophy of education: each man has a right to it. (Rousseau's view of education was actually of the "back-to-nature" variety, but it never had as much influence as his philosophy of equality.)
Within the same half-century (about 1775 to 1825) the so-called Industrial Revolution spread to America. The changes that began to occur are well-known: increased requirements for mobility, urbanization, division of labor, and so on. The important factor with respect to education was urbanization. From it grew concentrations of poverty in inner cities, the exploitation of children and women—and the desire of parents for something better for their children (Ferguson and Bruun, 1962).

These forces, combined with the Locke-Rousseau view of man, as molded by experience, generated an increasing demand for universal public education and restrictions on the use of child labor. The primary spokesmen for this movement were Horace Mann in Massachusetts and Henry Barnard in Connecticut and Rhode Island (Rippa, 1967, pp. 109-118). Their influence, after making their respective states leaders in free public education, spread quickly to nearby eastern states and then west. By the time of the War Between the States free public education, largely tax-supported, was common in the United States.

Throughout this transformation of the structure and funding of the schools two qualities evolved, the first by survival and the second by inertia. Urbanization and Rousseauian philosophy did away with the family-as-educator and with the "innately sinful" child, leaving the Latin
Grammar School as the only survivor of the 18th century. This was basically an education "for the sake of the mind," as opposed to what is now called vocational education. The curriculum expanded to include such formerly peripheral studies as arithmetic, geometry, and so on (Rippa, 1967). A child was to be provided with "enriching" or "uplifting" subject material; since his mind was a blank tablet, only the best things should be written upon it. The inertia of the Puritanical influence, however, remained in educational techniques. Discipline was still the watchword. So while the new view of man led to more universal and more liberal education, it led to little innovation in technique.

Business and industry were in their capitalistic heydey in the early 1900's (Hamberg, 1961, pp. 14-16). According to Rippa (1967) a business "ground swell" began to object to the "liberal" education of public schools on the grounds that the needs of the burgeoning economy were not being served. They needed people to dig ditches and build buildings and railroads, not who could parse in Latin. At the same time, immigrants were pouring into America from all parts of the world, generating a movement to Americanize their children, to assimilate them into American culture. The obvious vehicle for this was the public school system, since by the end of World War I attendance was compulsory in every state.
These two forces were the major ones shaping a movement for a more "practical" education. Reinforcing this demand was the black population of the south, who were beginning to turn to education as the vehicle of social and economic mobility. The demands of business for concrete results from the investment in public education, plus the purely logistical problem resulting from too few schools with too few teachers with too many students, led also to a concern for efficiency — the most useful education per student per dollar. New administrative practices, tests, and evaluative procedures sought to determine and increase the dollar value of the education provided by the public schools.

To the classroom, given the legacy of its past and the pressure of the times, "practicality" and "efficiency" could mean only one thing: more discipline, more structure, more organization of the content and presentation of material. A flurry of such testing, organizing, structuring characterized American education at the turn of the century. But not exclusively, and not for long (Rippa, 1967).

Darwin's *Origin of Species* was published in 1859. His theory of evolution was to have a profound effect on education, though not directly and not for some time. Biological evolution provided a new view of man from "both
ends: first, individual differences at birth were emphasized, and second, the perfectibility of man became possible. The first made it seem futile to try to pound knowledge into heads that were already genetically either empty or "ready to flower." The second allowed for a scientifically based cultural superiority complex called "social Darwinism," in which society must necessarily evolve to its best, most perfect form (Boring, 1950). The combined result was the notion that if knowledge were made available in appropriate form, those children genetically capable of soaking it up would do so. The others would be made visible to the teacher, the school, the parents, so that they might be dealt with in terms appropriate to their state.

These notions were not immediately effective, but were filtered through several spokesmen over more than half a century, eventually finding its most influential "translator" in John Dewey. "Progressive" education was launched rather suddenly in the second decade of the twentieth century, when his work became popular. He sought an education which was more compatible with democracy. In his view the traditional structure of education, with its emphasis on discipline; its rigid organization of content into subjects, courses, and so on; its view of the student as a passive organism into which
knowledge is to be fed in measured quantities at a measured rate — was antithetical to the nature of children, experience, and growth. He felt that children grow through experience; that the quality of experience determines the quality of the product of that growth; that the best-quality experience was that to which his natural curiosity and disposition to endless experimenting led him; that to attempt to fit the child into the traditional school milieu was to stifle those natural tendencies.

One view of the failure of the progressive movement (e.g. Rippa, 1967) is that its cause was a misinterpretation of Dewey's thinking by some of his followers (p. 205-206). A parallel development in psychology may also have had an effect, however. In the early 1900's the ideas of Freud (see Hall, 1954) were beginning to be widely discussed. Chief among these was the assertion that early experience played a profound role in personality development; that, for example, overly restrictive parenting could leave many emotional scars. Hence the exaggerated notion, distorted through popularization, that imposition and enforcement of rules per se would stunt a child's emotional growth.

In this light the "permissive" school of thought, which holds that the child learns and grows best when he is simply allowed to "flower," without restrictions or
artificially contrived educational situations, can be seen as the product of two misinterpretations: of Dewey's progressivism and of Freud's psychoanalytic theory. Permissiveness was strongest just prior to World War I, and lost ground slowly thereafter (Rippa, 1967). It didn't work well despite the appeal of its basically humanistic viewpoint (see, for example, Hechinger and Hechinger, 1962).

The forces for change since the progressive era have not been spectacular. There was an emerging school of thought which might be termed "empirical" — learning theory (Thorndike, 1932), behaviorism (Skinner, 1938), intelligence testing (see Boring, 1950, pp. 572-576) — which seemed to suggest more structure and objectivity in the educative process, at a time when science was acquiring a new respect. Fromm (1968) has pointed out that as science explains more and more of the mysteries formerly accounted for in religious dogma, people turn to science itself with the faith that was religion's. The effect was a kind of counterrevolution, a turning toward more structured and disciplined classroom environments. In addition to this it must be remembered that even at the height of progressivism, the majority of public schools changed little in overall philosophy or practice. Innovations in education, as Schwebel (1968) has shown, usually occur first and primarily in suburban schools.
The net result is that schools have changed little in atmosphere, milieu, or general approach to education in about a century. Most remained -- and still remain -- in the "discipline and deliver" mold. To reiterate, this approach breaks knowledge up into "subjects" and "course sequences," and children into age and ability groupings. In the educative process the first order of business is getting the students "in order" so that they may receive the material delivered by the teacher. The process has been graphically described by Holt (1964, 1967, 1969), Herndon (1968, 1971), Kozol (1967), and others.

In the early sixties, however, the winds of change began to come up. Born partly in a new "humanism" in the social sciences (e.g. Rogers, 1961; Maslow, 1968); partly by some as yet inadequately analyzed combination of the civil rights movement, women's liberation, resentment and disillusionment over the Vietnam war, the disaffection of youth (e.g. Reich, 1970); partly by scholarly new analyses of the role of education in society (e.g. Hunt, 1961; Schwebel, 1968), a new question was being asked. Has society been holding out education to the poor as a ladder to equality, and to the world as the answer to its problems, while systematically preventing access to both ladder and answers?
The U. S. Department of Health, Education, and Welfare commissioned James S. Coleman to assess how well the schools accomplished their goal of equipping children from every class and ethnic group with basic academic skills. Coleman's group administered achievement tests on a massive scale, sampling representatively from all groups in question. The results (Coleman et al., 1966) were startling. No, children from the lower socio-economic classes do not get the "basic skills" in school -- but not because their schools are of poorer quality. The factor which correlated positively with achievement was social class: lower class children do not achieve in school because "...the inequalities imposed on children by their home, neighborhood and peer environment are carried along to become the inequalities with which they confront adult life at the end of school" (p. 325).

On the Failure of Traditional Education

Traditional education has been under a resurgence of criticism in recent years. Questions are being raised about all of its roles and functions. Should its main function be to educate children, or to socialize them, or to provide day care, or perhaps all three? Should its goal be to provide children with "basic knowledge," or to prepare them to "cope with life," or to prepare citizens for adult work? Should its process be lecture, or "discovery," or
"inquiry?" How should it be structured, if at all, in terms of compulsory attendance, subjects, age-grades, tests and grades, ability groupings, and so on? The questions are virtually endless, and they are all interrelated.

This section will discuss some of the most serious criticisms of traditional education; and in some cases the changes suggested by the critics. More systematic alternatives to the traditional approach presently being tried are presented in Appendix A.

General Background

The initial academic thrust of criticism began in the early sixties. Hunt in 1961 made a scholarly case for a substantial role of experience in the development of intelligence. (A number of studies have become classics for the dramatic way in which they demonstrate this; e.g. Rosenthal and Jacobsen, 1968; Skeels, 1966.) He also showed that many schools, psychologists, and parents behave toward children as if just the opposite were true. Traditional authoritarian classrooms, intelligence testing, teacher training, the financing of education -- all point to the practical, though perhaps not philosophical, commitment to the principle that intelligence "unfolds" at a predetermined rate to a predetermined level. To Hunt this means that "It is highly unlikely that any society has developed a system of child-rearing and education that
maximizes the potential of the individuals that compose it" (1961, p. 346).

In the mid- and late sixties, a number of "anecdotal" books written by teachers in public school systems appeared (e.g., Holt, 1964, 1967, 1969; Herndon, 1968, 1971; Fader, 1971; Kozol, 1967). They chronicled the experiences of their authors in contexts which appeared to systematically suppress and oppress public school children in the name of education. The subtitle of Kozol's entry is indicative of the theme of these books: "The Destruction of the Hearts and Minds of Negro Children in the Boston Public Schools." Such books served primarily to focus attention on the supposed faults of the public school system, and to stir up popular mistrust of it. They were probably also a factor in the launching of the "Carnegie Study of the Education of Educators," the book form of which (Silberman, 1970) exploded into the public eye in 1970 under the title Crisis in the Classroom. It seemed a catalyst, and was quickly featured by Newsweek magazine (June 14, 1970), giving the problems it exposed a new and wider audience than before. It is probably safe to assume that a greater proportion of "average" parents are now aware that some professionals question the ability of traditional schools to accomplish even part of what they claim as their goals.
Intelligence and Experience

Hunt's early (1961) contribution has already been mentioned; but it deserves elaboration. If, as Hunt tried to show, (1) experience determines the attained level of intellectual functioning; and if (2) education systems -- and especially teachers -- behave towards children in schools as if that level were genetic and predetermined; then (3) the experience the child has of being regarded as unchangably stupid, or average, or bright, is part of that determining experience. Point (2) above then becomes a self-fulfilling prophecy. For the young child of poverty, this has particularly appalling implications: we may have in effect been manufacturing a class of intellectual incompetents.

Who Can Be Educated?

Hunt attributes this belief in genetically determined intelligence to historically significant and influential concepts and to misinterpretations of evidence. Milton Schwebel (1968) sees a more sinister reason, lying in an unhealthy alliance of politics and psychometrics. The former springs from the desire of the middle and upper classes to preserve their power and privilege, which is best done by denying the lower classes adequate education. How useful, then, the idea that the lower classes are constitutionally -- and, it follows, unalterably -- unable to
benefit from "higher education," and therefore to qualify for positions of higher status and power. Hence the American development of "vocational" curricula for lower class children (recall the turn-of-the-century influence of business and industry on the content of educational programs), and of "college preparatory" curricula for children of the upper classes. Hence also the disproportionately greater funds given to already good suburban schools — out of a tax structure which requires the poor to pay more for an education designed to keep them poor. In these ways the lower classes are defined as "uneducable."

The most widely used intelligence tests — the Stanford-Binet and the Wechsler Scales — are designed on the basis of the assumption that intelligence is normally distributed, like height or weight, in the population. Test items are explicitly selected for conformity to this assumption, and the distribution of test results is — of course — normal. It is — again of course — the lower classes who make up the low-scoring tail.

To compound the situation, the educational system places children among their intellectual peers on the basis of differential scores on such "IQ" tests. The function of this respected and almost universal practice of "ability grouping" is to allow the victims' educational experience to be tailored to their abilities so that they will not be
frustrated by failure. Such experiences can be seen as devices for providing the low-ability children with inferior -- "vocational" -- education. If Hunt is right, and experience determines final intelligence, this whole process becomes another self-fulfilling prophecy.

Schwebel believes that there are several "determinants of educability" which can be categorized as biological, psychological, social, and educational. All of them he considers manipulable -- even the biological, by improved medical care during pregnancy and birth through early childhood. He further suggests using the theoretical frameworks of Maslow and Piaget to determine the specific manipulations to be made. It should, he feels, be possible to eliminate class discrimination in education and raise the general level of intelligence dramatically (see Appendix B).

School Is Dead: On Failure

In a vein similar to Schwebel's, though without the Machiavellian implications, Reimer (1970) asserts that to hold out education to lower class parents as the vehicle for their children's movement up the socio-economic scale, is to cruelly delude them. He cites statistics which indicate that education as presently organized -- that is into schools -- can never, for the masses, roll back the tide of ignorance, and for a simple reason: it's too expensive.
In every nation in the world, the cost per pupil rises faster than national income. In the U. S. a child of the richest tenth of the population goes through all the grades, four years of college, and one year of graduate school. It costs $35,000; $2500 sends a child of the poorest tenth through the fifth grade, when he drops out. To correct these ills, to meet current needs for adequate education through schooling, would cost eighty billion dollars. If the costs of the Indochina war were suddenly diverted entirely to schooling, it would amount to a fraction of the need.

Reimer's solution is drastic: eliminate schooling as the vehicle of education. He would replace schools with "networks." Networks are organizations -- his example is the telephone system -- which are democratic, in the sense that they provide their service equally to all subscribers. The cost of a telephone is the same for everybody (except for luxury options such as color); its repair costs the subscriber nothing extra; it requires no insurance; it's not liable to theft; it has no value except utility when it's in use, and that utility has nothing to do with who the user is, how much he earns, or where he lives.

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1. Reimer cites the example of Puerto Rico, where from 1940 to 1965, school enrollment doubled, national income multiplied 10 times, and school costs multiplied 25 times; and still, in 1965 less than half the territory's children finished nine years of school.
Reimer wants networks of things: books, tapes, films — any and all types of records or information — and the devices that produce and interpret them. Public libraries are a woefully inadequate prototype of such records-networks. The technology is available to bring them together, organize them, and put them at the disposal of all. The computer, for example, could revolutionize the availability of records.

He wants networks of people: craftsmen, factory workers, lawyers, businessmen, scientists, to serve as "skill models" for the student. Teachers, educators, and pedagogues are to have a new function: the design of both kinds of networks, in addition to serving as skill models. A student should be allowed access to any skill model he wishes to investigate. Thus education is acquired not through school attendance but through resource networks available equally to all who wish to use them. (Reimer's view is naive in many respects; see Appendix C for critique.)

Teaching as a Subversive Activity

The position of Postman and Weingartner (1969) on education was introduced earlier (see "On Evolution and the Pace of Change," this chapter), in connection with the pace of change. Their criticism goes deeper than discussed there, however. The products of schooling, as they see it,
are not two classes of people, one of which insists on maintaining its advantage over the other. They are one class of people, all of whom have been indoctrinated into the veneration of crap. The coercive atmosphere and de-meaning methodology of schools (testing, discipline, grades, etc.) teaches them that their curiosity is a detriment to learning; that their own interests, likes and dislikes, are unimportant; that to every question there is One Right Answer; that life is a "zero-sum" game in which nobody wins without somebody else losing.

To alter the situation requires changing the function of schools to that of producing "crap detectors" -- individuals who are "actively inquiring, flexible, creative, innovative, tolerant, liberal, ...(able to) face uncertainty and ambiguity without disorientation" (p. 218). Such people will recognize crap when they see it, and sound the alarms for the rest of society so that it cannot be maintained. Then men will be able to cope with change, and society will survive because it deserves to.

"Crap-detecting" is a process of knowing what questions to ask of a society, and then asking them. Presently, significant question-asking not only is not taught in schools, it is suppressed. The solution that Postman and Weingartner offer lies in an established characteristic of human psychology: a forced change in behavior may be
followed by an attitude change in the same direction (Kretch, Crutchfield, and Ballachey, 1962, pp. 253-261; Bonner, 1959, pp. 156-157; Deutsch and Collins, 1951; Siegel and Siegel, 1960. The principle is an explicit part of Festinger's (1957) "Cognitive Dissonance" theory.) They propose that 16 specific behaviors be forced on teachers and schools and predict that effective "inquiry classrooms" will result (see Appendix D).

Postman and Weingartner thus see schools, with drastic changes in organization and philosophy, becoming the crucible for producing a society of "actively inquiring, flexible, creative, innovative, tolerant, liberal" individuals. They do not deal with the problem of financing, feeling perhaps that schools can do a good job for all children, since the factor which makes children into "crap-detectors" or "crap-acceptors" is the process of education, not its props (visual aids, teaching plans, teaching machines, and other gimmicks). Their ideas can be extrapolated to the problems dealt with by Schwebel and Reimer: class distinctions in education certainly exist, but they are due to a more or less universal crap-accepting process. It is not more money (though that's necessary too) that will solve the problem, it is teachers who generate an open, "inquiry" classroom. Given such teachers, the inquiry classroom can exist as easily in a slum as a suburb.
Crisis in the Classroom

Silberman (1970), as mentioned earlier, has published the most widely known critique of American schools. Very comprehensive, the value of its contribution comes from its organization of other efforts into cogent and convincing evidence for the failure of schools, and into a program for change. With regard to the performance of schools he reaches conclusions similar to those outlined above: they are not providing the lower classes with the means of bettering their positions. They do not equip them with the skills necessary for success in American society.

Of particular significance is his assessment of one of the frequently suggested reasons for this failure. It seems, contrary to popular myth, that (1) there is very little difference in quality of materials and facilities between schools of the lower and middle classes. Lower class schools "...do not spend significantly less money per pupil ..., do not have substantially larger classes, do not operate in older and more crowded buildings, do not have fewer and less adequate testbooks, and so on" (p. 70). (2) He cites other evidence that school achievement remains unchanged by changes in class size, administrative organization of the school, teaching methods, homogeneous or heterogeneous grouping, etc. (3) The obvious causal factor
has gone unnoticed: lower class children do worse in school because they are lower class children (pp. 70-80).

Silberman attributes this general result to two processes. First, class differences in achievement are demonstrable when children enter school; therefore they arise before school -- in the environment of early childhood. Second, the schools fail to alter the progress of such differences; if anything they widen the gap (pp. 64-65). Thus, because they are lower class children, their experience before school predisposes them to poor academic performance; because they are lower class children, schools -- especially and most importantly teachers -- expect poorer academic performance. What might be reversed, counteracted, compensated for, is instead accepted as a basis for expectation and curriculum-making. The prophecy does indeed fulfill itself.

Beyond Freedom and Dignity; The Technology of Teaching; Walden Two

Skinner (1948, 1968, 1971) also has something to say on the shortcomings of education. His criticisms spring from his belief that all organisms act to obtain positive reinforcement and to escape or avoid aversive stimulation, and that all behavior can be understood in these terms. Schools are a coercive system, in which students perform -- achieve -- primarily in order to avoid the
consequences of not doing so. Grades in particular are aversively based. Many things are associated with bad grades: disapproval of teachers and family, poor prospects for jobs and college, extra work to "make up" poor performance, and so on.

What's wrong with this is that one doesn't learn "to behave" under punishment -- he learns "not to display" some behavior, which is an entirely different matter. Two possible consequences exist: first, if punishment is used only to suppress a current behavior, then when punishment stops the behavior is likely to resume. Second, if punishment is the whole system, then desirable behaviors will not be learned at all (except by chance). In practical terms this means that students learn not "to succeed," but "not to fail;" not "to learn," but "not to deviate from curricula;" not "to value learning," but "not to be without it." (Alternatively, he may learn to avoid the whole situation -- that is, drop out.) The behaviors of each pair may look the same, but their difference becomes obvious when the punishment is removed; that is the student graduates: he does not continue to read, study, learn for the reinforcement that learning itself may afford him.

Because it doesn't afford him any; it was never positively reinforced. A's do not reinforce learning, they reinforce avoiding failure. Education should proceed under
positive reinforcement, step by step. Successful behavior should be reinforced, at first every time a desirable response occurs, and then less frequently as success itself becomes a conditioned reinforcer. In this way learning becomes a behavior which is itself reinforcing. Machines can do this very well, much better than teachers, in fact. Skinner estimates that "efficient mathematical behavior" at fourth grade level requires something on the order of 50,000 reinforcements by the end of the fourth school year. The average teacher can arrange only a few thousand. He concludes that "(it) is surprising that this system has any effect whatsoever" (1968, p. 17).

Skinner (1948, 1968) suggests an interesting structure for education. It is interesting because it closely resembles that endorsed by such people as John Holt (1969) and Postman and Weingartner (1969): voluntary attendance, self-selected programs and progress, informal classroom situations, and so on. (See Appendix A for a detailed description of the educational setup of Walden Two.)

Fantasy and Feeling in Education

Significantly, none of the authors discussed above mention emotion except incidentally. Jones (1968) contends that emotions in the classroom are of more importance than is usually recognized; that innovations in educational techniques and processes are exclusively cognitive in
focus. While most psychological theories assert that the "heart and mind" are inextricably related, most educational theories at best concentrate on intellectual spheres, and at worst explicitly exclude emotional spheres as actually interfering with the learning process.

It is true, asserts Jones, that uncontrolled emotion can obstruct learning. The fact is, however, that in a setting in which history, with its wars, plagues, assassinations, revolutions, and so on; or literature, with the drama of loves, hates, joys and griefs; or biology, with its sex, dissections, and death -- is taught, the feelings and imaginations of children will be aroused. If ignored, the child may become indifferent to the joys and tragedies of life. That should be sufficient motivation to accept the emotional involvement of children, and deal with it openly and honestly. There is, however, an even better reason.

Imagination and emotion are ubiquitous in life: human beings perceive the world through their filtering effects. Jones quotes Lawrence Kubie: "'Unwittingly we distort what we perceive, and then learn what we have distorted'" (p. 240). This is no more than saying that experience is given meaning by the quality of its effect on the individual, which in turn is determined by the nature of the perceiver -- the whole person; his experience, his
intellect, his personality, his current physical and emotional state. That nature is largely determined by the person's early experience. How much better to manage the emotional and imaginal aspects of education -- attend them, focus on them, explore them, enlist them in the service of learning -- than to suppress or ignore them.

Further, it is not the contact with emotional, violent, provocatively stimulating situations which "threatens" children or does them lasting harm, nor is it the resulting fantasy or emotional arousal. Says Jones: "One state of mind does psychological harm to children: anxiety. Or, more precisely, the defensive excesses of thought, feeling, and behavior which we tend to develop against chronic expectations of anxiety" (p. 70). Avoiding psychological harm thus amounts to avoiding anxiety, which in turn amounts to helping children to face and handle emotions in the normal course of educational events. If this can be done, children will not only be more emotionally competent and healthy, they will be better for their involvement as "whole persons" in the learning process. Jones puts it this way: "...if it could not threaten the children, it will not stimulate them" (p. 245).

The criticisms of education discussed thus far have dealt with schools' failures and shortcomings as primarily educational institutions. They also, of course, inevitably
act as socializing agents. How extensive and formally designated should that function be?

School Is Dead: On Socialization

Reimer (1970) feels that one of the problems of educating with schools is precisely that they try to serve a two-fold socializing function, consisting of "social-role selection" and "indoctrination." The former is accomplished by a "survival" process, in which lower class children tend to drop out earlier, leaving middle and upper class children to enter colleges, graduate schools, and professions. Indoctrination occurs almost automatically, in the sense of McLuhan's dictum that "the medium is the message." The "medium" of schooling is competition, conformity, hierarchization, dependency -- values that set children against each other, teach them that learning is a passive process, that within each set of differences is the Right and everything else, which is wrong; and so on. All this perpetuates the necessity of schools themselves, which, says Reimer, is a myth. But all of it will continue as long as children are students in schools. Remove schools and you remove the medium that is guilty of communicating this message. Remove schools and socialization falls to its proper place, the home, where the medium is conducive to more desirable values.
Bronfenbrenner (1970) would not agree with Reimer. As discussed earlier, he feels that the forces which have led the family to abdicate its responsibilities for socialization are largely beyond reversal. The proper strategy would not be to replace schools — that would only enlarge the vacuum — but to explicitly turn specific portions of the socialization function over to the schools, as has the U. S. S. R. The values and behaviors acquired by children would then be recognized and deliberate, rather than unknown and fortuitous; the socializing forces systematic rather than operating by default. Russian parents, in fact, are responsible to the school for their part in the child's social development, while in America the reverse is true. Bronfenbrenner suggests that some of the Russians' techniques might, suitably adapted, serve American society well (see Appendix A). He remarks that "...the streets of Moscow and other Soviet cities (are) reasonably safe for women and children, by night as well as by day."

"They say New York was that way once ..." (p. 91)

The Children of the Dream

The Israeli Kibbutz, an almost self-sustaining economic and social commune, provides another example of the deliberate use of schools as a socializing agent.
Since actual practices vary amongst the 200 or so Kibbutzim, Bettelheim (1970) chose one, called Atid," which he considered typical or "middle-of-the-road." At Atid the children do not live with the family after the first months of life; they live in "children's houses," which in early childhood function as schools as well as living quarters. Group functions and activities are pervasive, but the most time-consuming and formally structured is probably the school. Within it formal peer groups are formed for the purpose of periodic evaluation and criticism of individual compliance with Kibbutz policies and behavior (see Appendix A).

Like Bronfenbrenner (see above), Bettelheim suggests that there may be value in adapting similar practices to American needs. He points out two features of the Kibbutz environment. (1) In the Kibbutz there is almost no crime, no juvenile delinquency, no mental illness, no illiteracy. (2) "...the Kibbutz example has shown that it is possible to create a viable new personality type wholly different from that of the parents, in a single generation" (p. 72). These two facts make it possible to envision an American preschool program based on communal processes (suitably adapted, of course) which is capable of breaking the "poverty cycle" in one generation.
Summary and Conclusion to the Literature

With regard to evolution and the pace of change, there is a relation between the several points of view presented. All speak of rapid change as having maladaptive effects on the individual and on the culture as a whole, when behavior appropriate to situations which no longer exist continues unchanged. Of the two categories of possible solutions -- (1) to eliminate change, or (2) to change people so that their behavior is both currently appropriate and amenable to future change -- they all choose the latter. They do differ, of course, on how are to be changed.

And yet there is a common thread even in their methods. The sociologist (Toffler), the educators (Postman and Weingartner), the child psychologist (Bronfenbrenner), the humanistic psychologist (Fromm), the reinforcement theorist (Skinner) -- all agree that some form of education must play a role. This indicates the importance of the section on the failure of traditional education. It is possible to isolate some common themes and draw some conclusions from the points discussed there. What follows is this writer's attempt to do so.

(1) The structure and climate of traditional education do not, with occasional exceptions, produce people who attain something like their intellectual
potential; who behave in ways productive of solutions to pressing world problems rather than of the problems themselves; who enjoy learning for its own sake; who are flexible and competent in the face of change; who function in life with zest, enjoyment enthusiasm, and concern.

(2) Almost universally, these writers have focused not on schools' facilities, materials, and money as the targets for change, but on teachers. It is they who convey the "medium" of education to children. Their view of the educative process, their attitudes and expectations with respect to their students' abilities, seem to predetermine behaviors which somehow cause children to live up -- or down -- to those expectations.

There is evidence to support this conclusion. Rosenthal and Jacobson (1968), for example, whose results have become so well known that they are called "The Rosenthal Effect" (e.g. Bruner, 1971, p. 155), told several teachers in a California school that certain of their students, actually a random sample, were "fast learners." At the end of the school year, the "fast learners" had gained an average of 27 points in IQ, while a control group averaged a 12-point gain. The only difference between the two groups was in the teachers' "knowledge" of their "potential," which Rosenthal believes influenced their behavior
towards the experimental children, which in turn influenced their performance.

Skeels' (1966) study was just as striking. He transferred mentally retarded children to the custody of institutionalized mentally retarded adults. The children became the focus of much attention and affection in the wards hosting them, and of competition to see whose could perform best. The results were remarkable: none of the children failed to show IQ gains — some as much as 30 points — in a fairly short period of time. Most of these children became normal adults, leading normal lives; two even graduated from college. The specific causal factors cannot be isolated — the experiment was uncontrolled in that sense — but the author suggests that they must be related somehow to attention, affection, expectations, encouragement, and the like.

(3) "Reforming" schools is not enough, if all that means is the invention of new "teaching techniques," visual aids, architecture, student-teacher ratios, "learning kits," and so on. The evidence is that such things make little or no difference in the long run (see Silberman, 1970, pp. 70-80).

(4) The schools remain the only resource capable of performing the functions in which they heretofore have failed. (Reimer (1971) is the only dissenter among those
references cited. See Appendix C for a detailed critique of his position on this point.) The increasing proportion of working mothers (see Peterson, 1965) and the trends discussed by Bronfenbrenner (1970; see above) support this conclusion. What is necessary is a revolution -- not reform -- of the traditional notions of what schools are supposed to do.

(5) Education in schools alone is, however, too limited. It needs to be expanded to include acquaintance with people working in various vocations and professions, at their place of work. Suggestions range from simple visits to such individuals (Bronfenbrenner) to apprenticeship programs for most jobs (Reimer).

(6) Schools have different effects on children of different socio-economic classes. For the lower class child the effect is to be found in the process of "minimal demand" (Fader, 1971). Seen as an incorrigible underachiever, a perception backed up by statistically lower IQ scores (see Jensen, 1969), the demands made upon him to succeed are minimal. He meets them, "living down" to his teachers' expectations of him. The child, confronted with a world which systematically denies his potential and his

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2. It is significant that ten years after Hunt (1961), a psychologist, published Intelligence and Experience, Fader (1971), an English professor, finds evidence of unshaken acceptance of the belief in predetermined intelligence in public school classrooms.
ability to cope, develops defensive strategies of behavior which result in poor achievement regardless of ability.

For the middle class child the expectations are simply higher. The degree of the depressive effect is unknown; it is problematic how much greater these children's intelligence might be (though it is possible to speculate; see Chapter 3 and Appendix B). That they are not for the most part "problem-solvers" in Skinner's sense, nor "crap detectors" in Postman and Weingartner's sense, is asserted by them and by others discussed above.

(7) This is important: whatever the effect of schooling on lower class children, it does not begin their poor intellectual achievement, it confirms and strengthens it. Whatever does begin the process starts before school. It is certainly reasonable to wonder whether something similar is going on in the preschool years of middle class children, limiting their potential in the same way though less severely.

In conclusion, special attention must be paid to points (4) and (7) above. Together they form a major point (yet to be demonstrated) of this thesis. Thus if socio-economic class differences in achievement and intelligences get their start during what is now called the preschool period -- or perhaps earlier? -- and if schools are the
only institution in a position to attempt the elimination of such differences, then schools must commonly begin years earlier than is presently the case.
CHAPTER 3

EDUCATING FOR LIFE

The review of literature pointed out that school "graduates" (by dropout or diploma) from lower and from middle/upper classes are different. The former achieve at a considerably lower level in all academic areas (Coleman et al., 1966); they average lower scores on standard intelligence tests (Jensen, 1969); they appear to have a totally different outlook on life (Irelan and Besner, 1969). They encounter drastically different environments both outside (Gottlieb and Ramsey, 1967; Becker, 1964; Hess and Shipman, 1968; Borow, 1966; Short, 1966) and inside (Kozol, 1967; Herndon, 1968; Schwebel, 1968; Fader, 1971; Silberman, 1970) school.

There are also those who feel that even for the middle class child, schools do much less than they could (Holt, 1969; Herndon, 1971; Kohl, 1969; Bronfenbrenner, 1970; Bruner, 1971; Skinner, 1968, 1971; Postman and Weingartner, 1969): If proper changes were made, they contend, schools could produce a generation of people more intelligent, responsible, aware; more fully human, actualizing, problem-solving, free; more loving, open,
tolerant, respecting, caring — than has ever before been the case.

These two streams of thought suggest two problems. (1) Why do lower-class children perform so poorly in comparison to upper-class children, and can the difference be eliminated? (2) What is the human being capable of becoming? Is the middle-class standard a maximum "order of magnitude," or does something of much greater scope lie potential in human nature? If so, what is it? How can it be liberated? In what follows, (1) will be called "the problem of competency," and (2) the problem of the well-developed human being.

There is another important question. Will the same solutions apply to both problems? That is, is there some process or practice which could be integrated into child-rearing and education, that would make well-developed persons of the dwellers of both slum and suburbia?

The Problem of Competency

Competency, for purposes of this discussion, is defined as whatever it is that children of the middle socio-economic classes have (or know, or do, or feel), and lower class children don't, that underlies the difference in their achievement. Competency may be defined differently at different "ages and stages," as Erikson (1960), Havighurst (1952), Piaget (see Flavell, 1964) and others
have done. All of these theorists, however, assert that a major precondition for competency at later stages is competency at earlier stages. In other words, development is cumulative, and an early deficit or inadequacy will also be cumulative, since the foundations upon which later stages build will be incomplete or inappropriate (Anastasi, 1958; Ausubel, 1965). Further, the Coleman Report (Coleman, 1966), and more recent analyses by Silberman (1970) and by Bruner (1971), indicate that the trend is set early; lower class children enter school with low competency. Taken with the conclusion to the literature survey (Chapter 2 above), these points are grounds for focusing the following discussion on infancy and early childhood (0-5 years).

The Nature of Competency

It is necessary to know what specific behaviors characterize competency. Despite the abundance of theories which prescribe health or competence, they are just that -- theories. White (1971a) notes that nowhere in the literature is there a good empirical description of competent preschool children. He is perhaps too harsh. Baumrind (1967) looked for what she called "maturity" in 100 nursery school children, and was able to distinguish mature children from "immature" and from "controlled but inhibited" children within the same sample.
White used a similar approach, though he sought more extensive variation within his sample. From 400 children, his staff and the children's teachers eventually chose 13 of clearly high competency -- "able to cope consistently in superior fashion with anything they met" (White, 1971a, p. 3) -- and 13 of very low competency. They then observed the children for a period of eight months, gathering some 1100 protocols on their day-to-day activities, and at the end of that time generated a list of characteristics which distinguished the two groups of children.

From these two sources, and from some less comprehensive ones, a verbal picture may be drawn of the competent child, and by implicit contrast of the incompetent child. For the sake of clarity the behaviors have been organized into the three areas of social interaction, intellectual ability, and autonomy and self-image.

Social Interaction. Behaviors in this category are usually productive, appropriate to the situation, and indicate the capacity to express emotion in socially acceptable ways.

(1) Uses adults as resources, e.g. asks questions, seeks necessary help (White, 1971a; Baumrind, 1967).

(2) Gets and maintains attention of adults in socially acceptable ways (White, 1971a; Baumrind, 1967).
(3) Able to express affection and hostility toward adults and peers in socially acceptable ways (White, 1971a; Baumrind, 1967; Baldwin, 1949).

(4) Appropriately sex-typed (Baumrind, 1967).

(5) Able to take or understand another's perspective (Flavell, 1964; White, 1971a).

(6) Directs more affiliative behavior toward peers than adults (Baumrind, 1967); i.e. when given a choice, would more often associate with peers than with adults.

Intellectual Ability. Competency in this area, reflected in the following types of activities, indicates the presence of the cognitive skills necessary to deal effectively with day-to-day experience.

(1) Uses language which is increasingly "decontextualized," (detached, symbolic), objective, questioning, categorizing, hypothesizing (White, 1971a; Bruner, 1971; Hess and Shipman, 1968; Bee et al., 1969).

(2) Recognizes incompatibilities and discrepancies (White, 1971).

(3) Anticipates consequences (White, 1971a; Bruner, 1971).


(5) Can concentrate on task at hand while monitoring "peripheral" events (White, 1971a).
(6) Has many and varied associations to verbal and perceptual stimuli (White, 1971a; Werner and Kaplan, 1963; Church, 1961).

Autonomy/self-image. Behaviors indicating a positive self-image and independence of inappropriate external control are summarized by the following characteristics.

(1) Self-reliant and self-controlled (White, 1971a; Bruner, 1971; Ferguson, 1970; Sontag, Baker, and Nelson, 1958), rather than requiring control and direction from others.

(2) Plays adult roles (White, 1971a; Baumrind, 1967), and chooses those which do not have destructive or antisocial component behaviors. This indicates a willingness to abandon the props of childhood in the risky process of growing up.

(3) Able to both lead and follow his peers (White, 1971a; Baumrind, 1967); others accept his lead, but he is not threatened by relinquishing it.

(4) Willing to compete with peers (White, 1971a; Sontag, Baker, and Nelson, 1958); places himself in situations in which comparisons of his performance with others', and therefore labelling of the results as success or failure, may occur.

(5) Shows pride in accomplishments (White, 1971a), e.g. by smiles of agreement when complimented, by getting
the attention of adults for the examination of art work or
the witnessing of an acrobatic trick, and so on.

(6) Aggressive in socially acceptable ways
(Baumrind, 1967; Baldwin, 1949; Sontag, Baker, and Nelson,
1958); asserts himself when his rights are trod upon,
initiates new activities.

There is an obvious flaw in the technique which
yields up such a list. It necessarily reflects a value
judgment by the person who selects "examples" of children
who are competent or incompetent, mature or immature. Thus
many of these characteristics of competency can be seen as
reflecting middle-class values. There are some who object
to the notion of cultural "deprivation" or "disadvantage"
for just such reasons, saying that the subculture of
poverty has a value all its own, to be found in such
qualities as richness of affective language (Riessman,
1962); or that "true" disadvantage extends into all classes
and ethnic groups (Fantini and Weinstein, 1968); or that
intervention for the purpose of relieving deprivation is
tantamount to racism (Baratz and Baratz, 1970). These
points deserve comment.

It is certainly true that all features of the
"culture of poverty" should not be condemned a priori. The
usual policy is to assess the effect of such features in
terms of their congruence with corresponding features of
the dominant culture. In fairness, each feature ought also to be
evaluated in terms of its function in the subculture, which may have
value regardless of congruence. Behavior patterns seen as incongruent may actually represent strategies of adaptation to externally imposed life conditions. Language without a future tense, for example, may actually serve to protect the individual from depressing concern with a future of continued poverty. The very fact that such adaptation is necessary means that some of the options which might have served the realization of the individual's full potential are closed to him. As Bruner says,

...insofar as a subculture represents a reaction to defeat and insofar as it is caught by a sense of powerlessness, it suppresses the potential of those who grow up under its sway by discouraging problem-solving. The source of powerlessness that such a subculture generates, no matter how moving its byproducts, produces instability in the society and unfulfilled promise in human beings (p. 152f.).

Thus if incongruent skills replace those required for "middle class success," and the alternative is not only (for example) rich affective language but also murderous housing, poor nutrition, inferior education, and a dead-end job, then incongruence is a handicap. The behaviors described as characteristic of the competent child appear to be those conducive to the development of adult skills which would enable reasonable access to the alternative goods, services, life styles, and so on present in
the culture at large (Veroff et al., 1960; Feld, 1965). It is incumbent on those interested in facilitating the realization of individual potential to determine whether such behaviors can be taught to all children. A prerequisite to that is understanding what makes for competency or incompetency.

The Nature of Incompetency

Who are the incompetent, and how many of them are there? Despite the objections mentioned earlier, there is a good case for the position that incompetence is a characteristic of the lower socioeconomic classes (Schwebel, 1968; Reimer, 1971; Hunt, 1969). If competence is defined as that which enables success and avoids or prevents failure — in school or in society at large — then the lower class is by definition without it. That others are also without it, as Fantini and Weinstein (1968) point out, or that there are moving and valuable elements of the lower class existence, as Riessman (1962) points out, may be true, but they do not balance the scales where sheer figures are concerned.

In 1960 one in ten American adults had less than five years' education; 30 per cent of American families had below-poverty ($3000, as defined by federal guides) incomes (Gottlieb and Ramsey, 1967). They are the same people (Sexton, 1961). The poor feel powerless, ineffective, at
the mercy of fate (Irelan and Besner, 1969; Coles, 1970). Their language use is concrete and subjective (Bruner, 1971; Hess and Shipman, 1968). They avoid planning, they seek activities with immediate reward or satisfaction (Irelan and Besner, 1969; Clarizio and McCoy, 1970; Coles, 1970). All of these characteristics can be seen as adult outcomes of the opposites of many of the characteristics of competent children discussed above.

How does it come about?

There is considerable research demonstrating that the early childhood experiences which set styles of interaction with the world are different for different socio-economic classes (e.g. Rosen, 1956; Winterbottom, 1958; Crandall, Preston, and Rabson, 1960; Hess and Shipman, 1968). Those experiences are not usually considered primarily cognitive in nature — dependency, motivation, and self-image, for example — yet, since they affect the quality of the child's characteristic approach to experience, they profoundly influence cognitive development.

Baumrind (1967) was able to distinguish amongst 100 nursery school children those who were "mature" (independent, appropriately aggressive, self-reliant, self-confident) those who were immature (dependent, lacking in self-direction and self-control), and those who were controlled, but in an inhibited, withdrawn, and asocial way.
She then assessed the child-rearing patterns in the children's families.

The mature children's parents were "authoritative." They expected and demanded more mature behavior, but tempered their demands with explanation, reason, and open consideration of the child's point of view. Their disciplinary methods were consistent and not overly restrictive. The immature children's parents were warm, indulgent and permissive, making few demands of any kind. The parents of the controlled/inhibited group were found to be classically authoritarian, i.e. strict, regulating, making demands on the basis of power rather than right or justice, and so on.

That such differences fall among socioeconomic class lines is shown in the study by Hess and Shipman (1968). They taught about 40 lower-class (LC) and 40 upper-middle class (UMC) mothers three different copying or sorting type tasks, and asked them to teach these skills to their children. They also used the "Etch-a-sketch," a popular toy which draws figures in magnetic "dust" when two knobs (one controlling horizontal motion and the other vertical) are manipulated. Mothers were given a sample figure to copy in cooperation with her child, the mother controlling one knob and the child the other. Measures taken were (1) the Stanford-Binet IQ (form LM), (2)
performance in maternal teaching sessions, (3) concept attainment on a sorting task, (4) behavior in the test situation as rated on the face sheet of the binet. Results show that UMC children are consistently very much more successful than LC children at the taught tasks, in competency, and in IQ.

Hess and Shipman's results showed quite distinct differences, for both mothers and children, between the two classes. (1) "The cognitive environment of the culturally disadvantaged child is one in which behavior is controlled by maternal imperatives" (p. 103) rather than by verbal cues for manipulation of the environment, or by reference to sequential events or future consequences. They characterize the mother-child interaction as "imperative-normative," in which the mother's demands are explicit, brief, imperative. The child is told exactly what to do. The behavior demanded is normative, and the sanctions authoritarian (i.e. by virtue of the authority and not of right or reason). Derision and verbal punishment follow mistakes, and success is mostly "taken for granted."

(2) UMC mothers, on the other hand, engage in "cognitive-reational" interactions while teaching and cooperating with their children. The appeal is to logical sequences of events, to long-term results, to underlying principles. Much higher in sheer verbal output, the
interactions are future-oriented, laden with symbolic manipulations of the elements of the task at hand. Success is followed by praise, failure by encouragement.

(3) There were language differences also. LC mothers used restricted language: stereotyped, condensed, generalized; short, simple sentences; "a language of implicit meaning, easily understood and commonly shared" (p. 94); using a limited range and depth of concept and detail. UMC mothers' language was elaborated: individuated, situation-specific, differentiated, precise; tending toward wider "scope of thought," requiring more and finer discriminations.

The accuracy of this picture was confirmed by Bee et al. (1969) who obtained remarkably similar results with a comparable design, and reached the same conclusions. Apparently the lower-class mother assumes control in teaching and cooperation situations, telling her child specifically what to do, which moves to make, blaming him (rather than her directions or technique) for mistakes or poor performance. She makes all the decisions, and directs the child in action necessary to carry them out. The middle class mother, by contrast, directs her child's attention to underlying principles, possible outcomes, alternative perspectives, and so on. If (as Bee et al. and Hess and Shipman believe) these modes of interaction extend to
normal, day-to-day situations, it is not difficult to see how the child would infrequently, at home at least, experience reward, satisfaction of needs, gratification -- the specific terms are not relevant to this point -- as a consequence of his own behavior.

Burton L. White (1971a; Pines, 1971) has done the most recent work which bears on competence. When he and his staff began looking at a cross-section of children by age, to see when the divergence between competence and incompetence began, they found that the three-year old competent children (A's) were more like six-year old A's, than were six-year old incompetent children (C's). White concluded that the search must begin in the home, since the divergence began before most children enter nursery school.

They employed the "ecological" technique of Barker (1968), and tape-recorded observers' continuous descriptions of brief "chunks" of mother-child interaction in the normal course of a day at home. The descriptions were analyzed in search of the point of divergence of A and C children, and of differences in experience which might account for it. The most striking finding was that the earliest age at which differences in competence were not

3. The two references cited are incomplete. The book in which complete results and conclusions appear is to be published by Prentice-Hall late this year (private communication with Burton L. White).
found was ten months. White sees the period of 10-18 months as critical for the beginning development of competence.

What makes the difference? Again, an unexpected finding: A mothers do not take much concentrated time with their children; they rarely spend even five minutes at any one time teaching them or playing with them. Their interactions are brief (10-30 seconds) but of high frequency, usually initiated by the child, and concerning his interest of the moment. She serves as a sort of consultant, responding to the child's requests for information, approval, and guidance, encouraging and facilitating most of his explorations.

She's also a good "designer" of the toddler's environment. Her home is

...beautifully suited to nurturing the burgeoning curiosity of the one-to-three year old. It is full of small, manipulable, visually-detailed objects ... (toys ..., plastic refrigerator containers, baby food jars and covers, shoes, magazines, television and radio knobs, etc.) It contains things to climb such as chairs, benches, sofas, stairs, etc. It has available materials to nurture more mature motor behavior such as tricycles, scooters, and structures ...(for) elementary gymnastics. It includes a rich variety of interesting things to look at such as television, people, and the aforementioned physical objects (p. 31f.).

The A mother seems also to be happy about life in general, to enjoy her children, to be unmeticulous about housekeep-
ing, and to tolerate more risk with regard to the child's safety, than do C mothers.

White does not provide as clear a picture of C mothers, but if the opposites of the A mothers' characteristics are taken to be descriptive of C mothers, such a picture may be inferred. She would be (1) either over-indulgent, spending large blocks of concentrated time meeting her child's needs and demands; or (2) neglectful, paying little attention, and that authoritarian and restrictive. She would (3) speak little to her child; (4) be quite concerned about the safety and security of the objects in her home -- lamps, bric-a-brac, etc. -- and restrictive with respect to them; (5) be unhappy with life and her situation; (6) have little joy in her children; (7) be meticulous in housekeeping; (8) be authoritarian and protective where safety is concerned. As White points out (p. 28f), the child's blooming locomotor functions are likely to result in frequent adventures into new lands of dishes, pots and pans, undersink cabinets, drawers -- anything he can get at, in, over, under, through, or his hands on. Items (1), (2), (3), (4), (7), and (8) can be seen as resulting in restricted opportunity to experience positive effects of his own behavior in just the way suggested by the conclusions of Hess and Shipman (see above). It is also of note that items (2), (3), and (5) are often
cited as characteristic of lower-class attitudes and values (Irelan and Besner, 1969; Ferguson, 1970; Bruner, 1971; Becker, 1964).

The compatibility of the results of these three studies is suggestive of a theme. Incompetence and poverty go together, and the relation is mediated by child-rearing practices. It remains to delineate the relationship between poverty, child-rearing, and achievement.

Poverty, Child-rearing, and Achievement

Achievement. The poor are often said to have low achievement motivation (e.g. Irelan and Besner, 1969; Bruner, 1971). Rosen (1956) distinguished between achievement motivation and achievement-related values, and tried to measure both in the sophomore classes of two large urban public schools. For four social classes, achievement motivation was measured using the McClelland et al. (1953) adaptation of the Thematic Apperception Test, and an original questionnaire was used to measure achievement values.

Rosen's results, though almost 20 years old, were so striking and clear-cut that they still bear scrutiny. For both motivation and values, the percentage of each class-group scoring below the median progressed in roughly equal increments from about 20 per cent for the highest class through about 80 per cent for the lowest. The trend
for percentages scoring above the median is almost exactly the reverse. Rosen concluded that upper and middle class children are more likely than lower class children to value success, and to take those steps necessary to achieve it.

Winterbottom (1958) examined the relationships between mothers and elementary school children with high achievement motivation and with low achievement motivation. The mothers of the former expected earlier evidence of self-reliant behavior from their sons, and in general placed fewer restrictions on their efforts at independence. When such efforts were successful the mothers were liberal in their reward. A followup (Feld, 1965, cited in Crandall, 1965) revealed that early independence training continued to predict achievement motivation in adolescence.

Crandall, Preston, and Robson (1960) studied the relation of maternal behavior to achievement behaviors (as distinct from motivation) of nursery-age children. It was found that in the nursery, children who displayed achievement strivings least frequently and least intensely had mothers who least frequently rewarded them when they sought approval for their efforts. Mothers who not only responded positively when such approval was sought, but spontaneously rewarded achievement strivings even when approval was not sought, had children who engaged most frequently in achievement behaviors. In the home, these mothers were less
nurturant, but no less affectionate, than mothers of children who strove less frequently for success. (The latter point is consistent with White's (1971a) results, discussed earlier in this chapter.)

There has been other evidence over the years that achievement is related to child-rearing practices and to socioeconomic class. It has been found, for example, that children whose IQ's increase during the school years are more emotionally independent of their parents than children whose IQ's decrease (Sontag, Baker, and Nelson, 1958). Rosen (1959) studied ethnicity and achievement motivation, and found that social class accounted for more variance than his intended target; lower-class boys have less need for achievement than upper-class boys. Baldwin, Kalhorn, and Breese (1945) found that highly intelligent grade-school children come from families which are "acceptant-democratic," while the children of "autocratic" or "rejoc­tant" homes were less intelligent.

Achievement and achievement motivation, it seems, are higher in the higher socioeconomic classes, higher where independent behavior is expected earlier, and higher where attempts at mastery are spontaneously rewarded. These results are generally congruent with those of the Baumrind (1967), Hess and Shipman (1968), and White (1971a)
studies, which were used in developing the description of the nature of incompetency (see previous section).

Language. The poor speak differently. Their language is characterized as concrete, immediate, present-oriented, lacking in categorizing functions, thematic, personalized, affective, and so on (Irelan and Besner, 1969; Hess and Shipman, 1968; Bruner, 1971. For a specific linguistic analysis see Labov, 1969). One point of view (e.g. Baratz, in Baratz and Shuy, 1969, p. 99ff.) insists that such differences between lower and middle class language usage should carry no evaluative overtones.

Bruner (1971) sees it differently. He feels that language is the major instrument of symbolic activity, and cannot be divorced from intellectual functioning. The character of cognitive process is, in fact, reflected in the character of speech (see also Piaget, 1950; Church, 1961; Werner and Kaplan, 1963); by refusing to judge the latter we condemn the former to inattention. Bruner sees two significant trends in middle-class language: (1) toward decontextualization, using language "...without dependence on shared percepts or actions, with sole reliance on the linguistic self-sufficiency of the message" (p. 147); (2) toward formal categorization and strategies appropriate to their use, i.e., "...featural analysis of tasks, consideration of alternative possibilities, ques-
tioning and hypothesizing, and elaborating" (p. 146). Both trends increase adaptability, the first because it facilitates communication between those whose "locale and affiliation" give them radically different perspectives, and the second because it is more appropriate to problem-solving.

Language and achievement may be related in an unusual way. Baehr (1965) studied the relationship between achievement motivation, as measured by the TAT, and the use of "southern dialect" in black adolescent boys. A vocabulary test, on which the boys were told high performance was sought, and a "neutral" conversation were both analyzed for the presence of southern dialect. The neutral situation produced no differences; the dialect was commonly present. On the achievement task, however, the dialect was less evident in boys with high achievement motivation. They displayed speech patterns similar to the middle class. Baehr concluded that middle class speech characteristics, though not normally used by the lower-class boys, were nevertheless at their command. Yet such speech was exhibited only by high need-for-achievement boys, and then only in achievement-oriented situations.

Why would children who can speak "well," choose not to?

Powerlessness. Table 1 demonstrates that children of minority groups (which, as shown earlier, make up the
majority of the poor) feel powerless, at the mercy of fate or chance, when compared to children of the white majority.

**TABLE 1a**

PERCENTAGE[^b] OF NON-WHITE MINORITY AND WHITE MAJORITY 12TH GRADERS HOLDING CERTAIN ATTITUDES

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>MG[^c]</th>
<th>MAJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believes self to be brighter than average</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td>&quot;I just can't learn&quot;</td>
<td>38</td>
<td>27</td>
</tr>
<tr>
<td>&quot;Luck is more important than work&quot;</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>&quot;When I try, something or somebody stops me&quot;</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>&quot;People like me don't have much of a chance&quot;</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Expect professional career</td>
<td>22</td>
<td>37</td>
</tr>
</tbody>
</table>

[^a]: Adapted from Coleman (1966), p. 24.

[^b]: n = more than 645,000.

[^c]: "MG" (minority group) is the average of percentages for Mexican-American, Puerto Rican, American Indian, and Negro responses.

This attitude of powerlessness, the feeling that one has no control over his life, that fate or luck has a greater effect than anything one does himself, is well-covered in the literature (e.g. Irelan and Besner, 1969; Gottlieb and Ramsey, 1967; Bruner, 1971). It is usually invoked as a cause of other kinds of behavior, such as laziness, or unwillingness to delay gratification. Seldom is attention paid to the origins of the feeling itself, beyond pointing out the relation between it and the fact of being powerless.
Rotter (1966) has gone farther, though his attention to social class is almost incidental. He speaks of "the locus of perceived control of reinforcement." One who perceives that locus as internal sees reinforcing events as contingent upon his own behavior. One who perceives reinforcements as externally controlled sees them as the result of luck, or of fate, or of the manipulation of others, or of the complex forces embodied by "the system." Rotter and his coworkers developed the I-E (Internal-External) scale, a forced-choice questionnaire in which one choice represented an external orientation and the other internal, to measure this dimension. He summarizes a number of studies in search of sex, race, intelligence, and social class differences on the scale. Those differences which were significant (though usually small) indicate that the following groups are high "externals:" Negroes, females, and members of the lower socioeconomic classes.

Rotter also found a small but significant positive relationship between externality and intelligence in lower-class high school boys. He speculates that socialization for boys in Western culture places a premium on economic success, in order to fulfill the sex role of family provider. The intelligent lower class boy may perceive that in reality his chances to break out of poverty and achieve success are small, and turn to a defensive externality.
Fate is blamed for placing him in the ghetto, and "the system" or white discrimination for keeping him there.

The strongest relation of internality-externality is with achievement. The I-E scale was adapted so that its questions dealt more directly with intellectual achievement. The resulting Intellectual Achievement Rating (IAR) yields scores which correlate positively with achievement as measured by grades and standard achievement tests (e.g., McGhee and Crandall, 1968). It seems that children who do not perceive their behavior as making a difference, are less likely to behave in order to make a difference.

Fader (1971) pulls many of the foregoing points together in a compelling, though decidedly unscientific, way. In trying to implement a radically different reading program (see Fader and McNeill, 1968) in a "typical" junior high school in Washington, D. C.'s poorest area, he almost accidentally discovered something that led eventually to some startling hypotheses (and also to the success of his program).

He saw a young Negro boy, whom the teachers all knew from both experience and his records could not read, looking at a magazine in class. Certain (from the slowness with which pages were turned) that the boy was in fact reading, Fader sought closer acquaintance with him -- and discovered that not only could Wentworth read, but he was
of clearly superior intelligence. He was actually, con- 
sciously, intentionally -- and successfully -- deceiving 
the school's faculty and staff to the contrary. 

A year's close friendship and shared experiences 
with Wentworth and four other children taught Fader the 
truth. Those children saw no value in education, in 
achievement, in using language "correctly," because it 
would not get them anywhere. They did not see such behav­ 
ior as instrumental to the acquisition of things they 
valued -- better housing, more and better clothing, more 
and better food, a sense of significance. In Rotter's 
terms, they perceived the locus of control over their lives 
as external. 

Further, this perception leads not only to "less 
achievement motivation" -- that term explains very little, 
after all -- but to the present-orientation, the disinter­ 
est in delay of gratification, and the concretized language 
of the poor. Lack of perceived internal control leads to 
denial of the value of future-oriented behavior -- if one's 
behavior has little effect, why bother with behaving in 
terms of the future? That, in turn, leads to concern with 
the present, with the concrete, with the here-and-now, 
where rewards which can be seen can be counted on. Fader 
puts it nicely:
When the past is consistently unhappy and the future unlikely to be different, the present becomes all that is bearable. When ideas and concepts have no demonstrable affective value -- when the world remains immovable no matter your lever or footing -- then things may become both haven and support. In order to protect themselves from the damage of past remembered and future feared, from the humiliation of a world summarily immune to their intellectual influence, children learn to limit their aspirations as well as their vocabularies. The natural and inevitable effect of truncated hope is a world defined by the immediate and the tangible (p. 223).

Fader does not mean to imply that all poor children can perform and don't, though he is convinced that that situation is not rare. What he means is that the subculture of poverty has required of its members the development of a defensive cognitive strategy which will protect them from emotional despair. That strategy appears in language use as concrete, implicit, present-oriented speech -- and language, as White (1971a) and Hess and Shipman (1968) have shown, has a critical role in parent-child interactions.

The foregoing sections of this chapter have described competency and some of the early experiences which may lead to it. It remains to consolidate all of this in a theoretical discussion of the determinants of competency.
The Determinants of Competency

To provide a perspective for this section, the major theoretical hypothesis will be stated first, and a discussion of the logic which leads to and supports it will follow.

**Hypothesis.** Competency, in nearly all of its manifestations, is a matter of control. That is, competent children are those who have learned that their behavior has controlling effects upon its consequences; that new behaviors of theirs will cause new consequences or produce new relations; that things happen to them because of what they do, and whether those things are good or bad is under their control.

**Discussion.** Reinforcement theory (Skinner, 1969, 1971; Bijou and Baer, 1961. For a technical description of operant conditioning see Hilgard, 1956, Chap. 4) is most appropriate to the description of the process underlying the control hypothesis. Skinner asserts that learning is a matter of sensitivity to the consequences of behavior, a capacity which has reached its greatest scope in man. Thus certain kinds of events are perceived to follow reliably upon the individual's actions. The relation is temporal; the more immediate the consequence the more likely a relation is to be perceived.
The competent child is one who has perceived a relation between his behavior and events which follow it closely in time. "Closely" is a term dependent to a certain degree on age. The neonate is said to have "little time sense" (Stone and Church, 1957; Hurlock, 1964), by which is meant that his awareness does not extend beyond the current moment. When he cries, it's as though he has always been crying, and always will. Similarly, objects are not "permanent:" out of sight is indeed out of mind (Piaget, 1954; Werner and Kaplan, 1963). As he grows the time sense expands to include the immediate past, and later the immediate future. He is seen to "reach" visually for objects which disappear into the periphery of his vision (White, 1971b). In these terms "closely" is operationally defined as that minimum interval which is necessary for a relation to be seen between behavior and subsequent events. In the adult the interval practically becomes infinity, and the relation can be acquired by logic. As Skinner (1969) says, one learns rules -- statements about contingencies -- rather than contingencies themselves. Perhaps the major function of culture is the transmission of such rules.

The "rules" that are learned, however, are a function of the child's everyday contact with life. If a "subculture" is interposed between the child and the dominant culture, its rules will be the ones learned. The
previous sections described the difference in child-rearing styles between lower and middle socioeconomic classes. It is probable that such differences result in the learning of different rules by children of different classes.

The situation may be analyzed in terms of the control hypothesis. The middle-class child experiences control in the manner described above, and becomes competent. The lower-class child experiences control in a very different way. He seldom experiences his own behavior in a controlling relation with reinforcements or other external events. The things that happen to him are the result of external forces beyond his control; what he does has little relation to the things, good or bad, that happen to him. The two greatest acquisitions of early childhood, language and locomotion, are usually seen as vastly expanding the child's opportunities to influence the meeting of his needs (e.g. Erikson, 1960); to have an effect on the environment, to alter it and incorporate the changes into his world view (Piaget, 1929, 1954). If, however, he has little influence on how his needs are met, if he does not have much effect on his environment, and if the alterations that occur in it are not the product of his operations on it -- then the child is infrequently in a controlling relation with the environment, and he becomes incompetent. For he does not use his burgeoning skills from a perspective of control,
that is with the prejudice that they will have a demonstrable effect, either on the environment or on what happens to him. A cycle begins, in which intellectual skills go unused for the acquisition of further skills, resulting in a deficit which becomes cumulative.

**Expectancies.** The "Rosenthal Effect" (Rosenthal and Jacobsen, 1968), described in the conclusions to Chapter 2, is by now a widely respected phenomenon (e.g. Bruner, 1971). Stated simply, it appears that children who spend much time in contact with adults who have certain expectancies of them, tend to fulfill those expectancies. This implies that teachers, for example, may regard lower class children as intellectually incompetent (see Herndon, 1968; Fader, 1971), as indeed they turn out to be. It is assumed that such beliefs are translated into behavior vis-a-vis their objects, and that the behavior somehow affects developmental outcomes. How the process works has remained unclear, however, beyond the invoking of a role for self-image in achievement (e.g. Schwebel, 1968).

The control hypothesis provides a possible explanation of how beliefs may be translated into behavior. A teacher's belief that a child is unchangeably incompetent leads logically to the notion that things must be done for him; that his world must be clearly and simply structured, the contingencies carefully arranged, so that the
performance required of him is minimal. Fader (1971, p. 220ff.) calls it the process of "minimal demand." The effect of such arrangement is to minimize the frequency and degree to which the child experiences environmental changes and reinforcements as a consequence of his own behavior. Such changes are easily seen as what they are: consequent upon the teacher's behavior. The teacher has effectively assumed control of the contingencies which affect the child's life, as effectively, though later and in a different setting, as the authoritarian parent.

Competency and Control. Finally, if competency is a matter of control, then it should be possible to interpret the competency behaviors listed earlier in terms of the control hypothesis. Tables 2, 3, and 4 on the following pages represent the writer's attempt to do so.

The interpretations are to be taken as tentative and theoretical. There is no way to tell whether they are "right" or not; they simply add, by the fact that they can be made, to the weight in favor of the control hypothesis. If the hypothesis is correct, competency may be viewed in a more operationally simple manner. With fewer constructs between theory and practice, practice becomes simpler. The role of control in preschool education will be shown in Chapter 5.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Relation to Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Uses decontextualized, objective, categorizing, hypothesizing language.</td>
<td>(1) Such language evolves because it is more useful in solving problems effectively than is situation-bound, subjective, uncategorical, concretized language. It is learned as a consequence of successful behavior.</td>
</tr>
<tr>
<td>(2) Recognizes incompatibilities and discrepancies.</td>
<td>(2) Can be seen as a part of (1) above.</td>
</tr>
<tr>
<td>(3) Anticipates consequences.</td>
<td>(3) Awareness that his behavior has reliable consequences makes it worth trying to predict them.</td>
</tr>
<tr>
<td>(4) Plans and carries out multisteped procedures.</td>
<td>(4) The sensitivity to cause-effect relationships extends to the role of intervening steps in a final result. He learns planning because it increases the effectiveness of his behavior.</td>
</tr>
<tr>
<td>(5) Concentrates on task at hand while monitoring peripheral events.</td>
<td>(5) Since he relies on his behavior as the primary source of environmental changes which affect him, peripheral events hold little threat, and require only spotty attention.</td>
</tr>
<tr>
<td>(6) Has many associations.</td>
<td>(6) Can be seen as a corollary to (1) above.</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Relation to Control</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>(1) Gets and keeps adults' attention in socially acceptable ways.</td>
<td>(1) An example of behaving in ways effective in meeting needs.</td>
</tr>
<tr>
<td>(2) uses adults as resources.</td>
<td>(2) Behaving is doing things with things. One of the &quot;things&quot; which can be used in doing things is adults; they know things and have skills which are useful.</td>
</tr>
<tr>
<td>(3) Freely expresses affection and hostility toward adults and peers.</td>
<td>(3) Since his behavior in general is an effective tool, produces good results, the expression of emotion will not (in general) have bad results.</td>
</tr>
<tr>
<td>(4) Appropriately sex-typed.</td>
<td>(4) More a prerequisite to, than a characteristic of competency. Inappropriate sex role behavior would limit effectiveness of behavior by its effect on others.</td>
</tr>
<tr>
<td>(5) Able to take or understand another's perspective.</td>
<td>(5) Some of the effects of his behavior are on other people, and conversely. The relation is learned, and becomes predictable.</td>
</tr>
<tr>
<td>(6) Directs more affiliative behavior toward peers than to adults.</td>
<td>(6) No explanation.</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Relation to Control</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(1) Self-reliant, self-controlled.</td>
<td>(1) His behavior controls outcomes; outside help isn't necessary. Management of his own behavior results in most effective control.</td>
</tr>
<tr>
<td>(2) Plays adult roles.</td>
<td>(2) Adults obviously control more of the world than children; his control will be enhanced the more adult-like his behavior.</td>
</tr>
<tr>
<td>(3) Able to both lead and follow.</td>
<td>(3) His behavior results in &quot;good&quot; outcomes; therefore others should accept his control. (Likewise, since behavior in general controls outcomes, control by others is also likely to have good outcomes.)</td>
</tr>
<tr>
<td>(4) Willing to compete with peers.</td>
<td>(4) His behavior is effective, and so likely to win the object of competition for him.</td>
</tr>
<tr>
<td>(5) Shows pride in accomplishments.</td>
<td>(5) One gets praise or other reward when the good outcomes of one's behavior are noticed by others. Such praise may become internalized, and pride shown without an &quot;audience.&quot;</td>
</tr>
<tr>
<td>(6) Assertive, aggressive in socially acceptable ways.</td>
<td>(6) Since his behavior is effective in getting results, it is worth insisting on its implementation. But push it too far and control from others, perhaps aversive, will result.</td>
</tr>
</tbody>
</table>
Summary

Lower class children achieve at a considerably lower level in all academic areas than do upper and middle class children. They also average lower scores on standard achievement tests. Studies have been reviewed regarding possible sources of this difference.

Children of poverty are not motivated to achieve. The reasons, seen to be rooted in the styles and language modes of child-rearing practices, have to do with the consequences of behavior. Such children do not very often experience their behavior as effective in meeting their needs and achieving their goals. Learning that their behavior makes little difference, they learn also not to bother behaving in order to make a difference. Skills are not used to acquire new skills, and a cumulative deficit begins.

In the end, the cognitive environment which led to this perception of life, for these children, becomes the cognitive environment provided by them, for their children. That is the poverty cycle.

The Well-developed Human Being

The introduction to this thesis (Chapter 1) suggested two broad areas in which a person's development can be evaluated: the realization of individual potential and behavior conducive to survival of the culture. There are,
however, no well-established or consensually accepted
criteria for what a person who has "developed well" should
be like. Yet a goal for programs of change is necessary if
they are to be meaningful, and that goal ought to be in
terms of criteria for optimum development.

One solution under these circumstances is to
examine a well-respected theory of "human nature," such as
that of Jean Piaget (see Flavell, 1964), for possible
characteristics of an optimally developed individual. The
trouble is that there are several such theories (see
Baldwin, 1967, for summaries of some of the major theories
of human development). A compromise solution, to be adopted
here, is to examine several of the best-respected theories
for such characteristics, and draw together an eclectic
picture of the "well-developed human being." Four
theorists, representing widely different perspectives, have
been chosen: Erik H. Erikson, Abraham H. Maslow, Jean
Piaget, and B. F. Skinner. Before attempting a synthesis,
the theories themselves will be briefly described.

Erik H. Erikson

Erikson's theory (ct. 1960, 1968) postulates eight
"crises of life" occurring during eight corresponding
"psychosocial" stages of development. In general, the
crisis of each period has two alternative outcomes. Of
each pair, one is positive and contributes to what Erikson
calls the "vital" personality. Each pair of alternatives exists from the beginning of development, but the crisis between them does not arise until a shift in the focus of psychosexual energy, concurrent with incipient growth and organization, brings about a specific vulnerability in that area of psychosocial development. Further, the emergence of the vital alternative at each crisis point is dependent on the successful completion of earlier crises, and is a condition of the successful completion of later ones.

Given this condition, the outcome of each crisis is a function of the quality of psychosocial experience during the period. Finally, the function of this series of crises is to determine the nature of the very core of the individual: his sense of identity.

The first period in Erikson's scheme is infancy (0-1 year), and during it the infant will acquire a sense either of basic trust or basic mistrust. Basic trust is the psycho-somatic feeling that the world is a safe, reliable place in which to be. The "vital" developmental outcome is an ability to enter and hold deep emotional relationships; a willingness to risk oneself in the faith that life is generally rewarding and betrayal unlikely. From a sense of mistrust, on the other hand, a shallowness of affect evolves, due to the fear that pain will result from commitment to and reliance upon other people and the
world in general. Positive mediating experiences for the infant amount mostly to having physical and (rudimentary) emotional needs well and reliably met.

In this period, as in those that follow, neither outcome is exclusive, in the sense that it is an either-or situation: Every infant will encounter some frustrations and delays in having his needs met. What counts is the quality of the balance of relevant experience, and at the crisis' conclusion one outcome will be dominant but not exclusive.

During the period from one to three years, several significant developments begin. The child learns to walk and talk, opening up the new experiential contexts of communication and control. He starts to gain intentional control over himself and certain facets of the environment. He no longer has to be fed, for example, but can propel himself to where dinner is and (albiet somewhat sloppily) feed himself when he gets there. Of primary significance in this general context of control, however, is toilet training. Physically able to control elimination, it remains for the parents to get him to do so according to their — which is to say society's — preferences. The crisis of the period is thus between a sense of autonomy or individuality, of being in control of one's actions and
destiny, and a sense of shame or doubt regarding one's ability and worthiness to maintain such control.

Mediating experiences in this stage are heavily verbal, and consist of the manner in which parents handle childish attempts at control; of the degree to which they are willing to let go, to allow the child to attempt things and succeed, or fail without severe reproach. Too rigid a set of limits, too severe a set of punishments, will rob the child of the opportunity to exercise his will and experience the consequences. He will experience, on balance, more shame and doubt than autonomy. Toilet training will be the center of this crisis only if society wills it so, by placing a premium on early control over the timing of eliminative functions. Yet the emerging functions of control, will, freedom remain crucial "...for the ratio between loving good will and hateful self-insistence, between cooperativeness and willfulness, and between self-expression and compulsive self-restraint or meek compliance" (1968, p. 109). Such would be the developmental alternatives.

During the so-called "play" or preschool age (3-5 years) the child's radius of experience expands tremendously. Walking and talking are perfected, opening up new worlds of exploration and discovery, question and answer, imagination and fantasy. New social worlds of neighborhood
and nursery school are available. A new awareness of the nature and significance of the genitals emerges, and associated rudimentary sexual desires and fears appear. This awareness, these desires and fears are amplified by the blossoming imaginative faculties of the child. The two developments -- the "new worlds of experience" and the genital awareness -- are two aspects of the same general process, and form the basis for the third crisis: that between initiative and guilt.

With a basic sense of initiative, the child is a willing adventurer, free to invest his abundant energy in new experiences, regardless of a certain percentage of failures. He is possessed of an unquenchable curiosity "about differences in size and kind in general, and about sex and age differences in particular" (1968, p. 116). In other words he is curious about, and willing to play at filling, the various alternative roles offered by the world. With a basic sense of guilt he is timorous, governed by a rigid, uncompromising conscience which punishes him -- makes him feel guilty -- for unauthorized forays into imagination and experience, especially where sex is concerned. The mediating experiences are simply what happens when such forays are made, not so much in terms of success or failure but of the context in which the attempt is made. For that is the source of conscience, the
"great governor of initiative." In a context of freedom to make the attempt without uncompromising, repressive demands for success from adults, the personality emerging from the crisis should be more "vital." The developmental alternatives, then, are a conscience which frees the adult initiative and purpose to attempt tasks with the potential for self-fulfilling use of one's capacities — or one which does not, for fear of self-punishment by guilt in the event of failure.

In the fourth period, that of psychosexual latency (5-12 years), the drives that made the child dream and play "go underground." The period is characterized by a crisis for the development of a sense of industry, of being able to apply technical skills to the production of tangible results — in short, of being able to "use things to make things." Fantasy and play are laid aside for the sake of undertaking real tasks and developing academic and social competencies. As he enters school, the child's circle of significant social relations widen tremendously, and as a result his involvement in competition, with its variety of prejudices, insults, recriminations, criticisms, and so on, does also. Hence the possibility of feeling a sense of basic inferiority, rather than of industry. Which emerges will be mediated by the balance of experience in "industrial" endeavors; the vital alternative emerges when the
balance of feeling is in favor of things the child can do, rather than things he can't do or fails at. Put another way, what is important is positive identification with those adults and other children who can do things, make a contribution, come up with a good product.

When the sexual drives surface again at puberty, adolescence begins. How long this fifth stage lasts depends on when the society declares adulthood to begin. In Western cultures this can be anywhere from 18 to 22 or older; society has tended to lengthen the period of dependency on parents. The period is one of definition and refining of those contributions to identity bequeathed from earlier stages. Infancy's crisis for basic trust becomes the search for people and ideas to have faith in. The autonomy crisis of early childhood evolves into the free choice of role, duty, function. The crisis between initiative and guilt of the play age becomes the willingness to aspire to goals and ideals not immediately within his grasp. The industry achieved during the school age becomes the choice of occupation, or at least the sampling of possible jobs to be mastered. The physiological maturity of sexuality introduces a new experimenting with bisexual relationships.

This period is thus critical for a sense of identity, for the confluence of the characteristics
determined in earlier stages. If previous crises have been resolved in favor of the vital developmental alternatives, the road is fully open for the experiences which mediate this clarification of who and what one is. If society provides clearly defined roles and avenues of entry to them, if the peer group provides roles and standards compatible with and in preparation for society's, then the individual's sense of identity will progress toward stable definition. More or less reliable commitments are made to other people, to a style of life, to oneself. The non-vital alternative emerges if society fails in its role-providing function, or if the peer group's standards conflict with society's, or -- perhaps more crucially -- if earlier crises were resolved in favor of non-vital alternatives. For if this last is the case, the individual does not have the wherewithal -- the trust, autonomy, initiative, and industry -- to risk the role experimentation necessary for identity resolution. Erikson calls what happens identity confusion, manifest in an inability or refusal to make commitments "to physical intimacy, to decisive occupational choice, to energetic competition and to psychosocial self-definition" (1968, p. 166).

This stage, adolescence, is the central one for Erikson, who regards identity as the crux of the personality. Its successful completion is the culmination of,
and founded upon, the success of earlier crises, and later periods provide adjuncts, additional facets to it. The next crisis, that of young adulthood, requires deep emotional commitment of one's self to others, especially one of the opposite sex, and is between intimacy and isolation. Intimacy "...is really a counterpointing as well as a fusing of identities..." (1968, p.135), and thus is not even possible unless identity formation is well on its way. Besides the foundation in the sense of identity, the mediating circumstance of this period is the degree to which the individual's emotional investment is returned in kind, to which attempts at mutually intimate relationships are free of the pain of rejection and failure. The alternative to intimacy is isolation, the substitution of formality for depth in interpersonal relationships.

In adulthood, a crisis arises between generativity and stagnation. As Erikson puts it, "...dependency and maturity are reciprocal: mature man needs to be needed, and maturity is guided by the nature of that which needs to be cared for. Generativity, then, is primarily the concern for establishing and guiding the next generation" (1968, p. 138). The mediating circumstance here is almost exclusively a matter of whether past crises resulted in a fully formed, vital identity, capable of intimacy. There are socio-cultural ethics and institutions for the
strengthening and reinforcement of generative responsi-
bility, but the personal, individual triumph of generat-
tivity over stagnation -- that is, regressive self-love,
self-concern, interpersonal shallowness -- does not depend
on them.

Finally, in the maturity of age, "the fruit of the
seven stages gradually ripens" (1968, p. 139). If the
personality's progress has been increasingly vital, then
toward the end of this last stage it will be characterized
by integrity; otherwise by despair. Integrity is difficult
to define. This, for Erikson, is the goal of it all, the
purpose of human existence, a description of actualized
human nature. Some of the attributes he ascribes to
integrity are emotional integration; acceptance of one's
life cycle, including its approaching end; acceptance of
responsibility for one's own life; a sense of kinship with
greater humanity; confidence in the meaning and dignity of
one's life style; a sense of perspective on life, history,
the future. If these are lacking, despair reigns: a sense
of loss, of incompleteness, of having been shortchanged by
life, of the impossibility of recovering integrity by try-
ing again to find alternative roads to it in the little
time left.

For Erikson, the final statement of life, of
identity, is this:
From the stages of life, then, such dispositions as faith, will power, purposefulness, competence, fidelity, love, care, wisdom; -- all criteria of physical strength -- also flow into the life of institutions. Without them, institutions wilt; but without the spirit of institutions pervading the patterns of care and love, instruction and training, no strength could emerge from the sequence of generations.

Psychosocial strength, we conclude, depends on a total process which regulates individual life cycles, the sequence of generations, and the structure of society simultaneously (1968, p. 141).

The function of the eight critical periods of life, then, is in Erikson's view nothing less than the determination of the structure and character of society and the individuals who comprise it -- in other words, the nature of Mankind.

It is not necessary to extract from Erikson's writings a description of the well-developed human being; the vital outcome of the eighth stage describes just such an individual. It is also clear that Erikson attaches great importance to the role of society in his growth.

Abraham H. Maslow

Maslow is generally considered the leader of the "humanistic" movement in psychology (see Goble, 1970), or was until his death in 1971. He posed his "Third Force" psychology against the biological, instinctual determinism of psychoanalytic theory (see Hall, 1954) on the one hand, and against what he saw as the mechanistic, dehumanizing
influence of behaviorism (e.g., Watson, 1930) on the other. Maslow's perspective is motivational; his "prepotency hierarchy" of needs (Maslow, 1954, 1968; see also Goble, 1970) is basically a description of how several needs common to all men combine with experience to motivate behavior.

There are two categories of needs. (1) Deficiency needs are identified primarily by the state of the individual in the absence of their satisfaction. Thus, among other things, their deprivation breeds illness, while their satisfaction prevents it or restores health. In general, a person with a history of deprivation, or who is currently deprived, will choose to satisfy these needs rather than those in the other category (see below). Finally, in the "healthy" person the deficiency needs are either negligibly active or functionally absent.

The deficiency needs and their function in development are depicted in Figure 1. The needs are biological, species-wide, and they exist at least as potential in every human being. The first needs, the only ones present at birth, are physiological: food, drink, air, warmth, sleep. Their power to motivate behavior at birth is exclusive, and therefore great. Some months later, if the physiological needs are met, the second need appears, that for safety and security. As the infant becomes aware of the world around
him, he becomes aware that "things can go wrong," that the sources of food, warmth, and so on are not infallible. And so he develops a need for reliability in his world, for predictability, for consistency. As time goes on this need increases in its power to motivate -- he cries for company, or when his mother leaves the room -- as the physiological needs, because well met, decrease in that power.

Sometime later in childhood, if the physiological and safety needs are met, a need for belongingness and love emerges. As the child experiences the emotional aspects of his parents' behavior toward him, he comes to need their affection and the commitment to him that it implies. He
also needs a sense that he belongs to and with the members of his family, and out of this grows his need to love others. Eventually this type of need exceeds both the others in potency. Later still in childhood -- Maslow is unclear on the timing (see, for example, Maslow, 1954, chap. 5) -- with the preceding needs continuing to be met, the need for esteem, from both self and others, appears. Thus the individual needs to regard himself as competent, adequate, independent, worthwhile. He also needs recognition, appreciation, attention, status, and so on.

Eventually, as before, this need acquires greater power to motivate behavior as those developmentally earlier needs are adequately met.

Last of the deficiency needs to emerge -- if it does -- is the need for self-actualization. With reasonable satisfaction of the love and esteem needs, the individual begins to feel a need to develop and "actualize" his potentials in skill, intellect, achievement. "What a man can be, he must be" (1954, p. 294). Few individuals can be said to achieve self-actualization, though many more may reach the point of needing it. Those who do achieve it are probably older, simply because it takes a long time to actualize potential. Such people enjoy life; they live it zestfully, invest themselves in it, find meaning and significance in it.
It is important to note that all of these needs must be met throughout life; one does not cease to need food for having enough of it. The nature of deficiency needs is such that their deprivation increases their power to motivate. Thus a starving man's behavior will be directed almost exclusively toward finding food; finding love or self-esteem is not likely to concern him overmuch. Similarly, a man in the process of self-actualization whose wife suddenly requests a divorce will doubtless redirect his behavior to remediating his marital situation, or compensating for its failure in some way.

(2) The second category of needs in Maslow's theory is that of growth needs (1968). Actually this type of need shades out of the self-actualization process; in a sense one can never "be" self-actualized. It is an open-ended process in which the person continually expresses a different kind of value, which Maslow called "Being-values" or "B"-values. Examples are truth, wholeness, aliveness, uniqueness, justice, playfulness, and others (see Maslow, 1971, p. 133ff.). These value-needs are qualitatively different from the deficiency needs, as is the motivational process, which he calls "metamotivation," underlying behavior. Individuals at this level are simultaneously motivated and satisfied by the very process of seeking and expressing the B-values in their everyday lives.
Maslow approaches the problem of the well-developed man directly, in much the same way as White (1971a, discussed earlier). Spurred by his respect and admiration for two exceptional people who touched his own life, he began studying them and others like them to find what qualities they had in common that made them special. He found striking consistency amongst his subjects in the things they value, in their approach to life and in their approach to themselves. First of all they are usually older; it apparently takes time to develop the qualities to be discussed here. Next, these people, without exception, are deeply involved in some purpose or work larger than themselves. They are committed to it and find joy and excitement in it.

The self-actualizing person sees life clearly, as it is rather than as he wishes it to be. He is decisive, with a clear (but not necessarily conventional or rigid) conception of right and wrong. He has humility; he listens carefully and with respect to others, and recognizes his own shortcomings and imperfections. He is tolerant and accepting, but not indiscriminately so. He is flexible and spontaneous; he brings to his life a freshness of approach and a zest for living. He is self-confident and self-respecting, sure of himself, willing to risk mistakes, failure, or ridicule for his beliefs. He is independent
and needs privacy, but he also enjoys people. His independence of others allows less ambivalence, less anxiety, less hostility, less fearfulness of them. He has many acquaintances, but only a few close, intimate friends. He has, however, a deep feeling of kinship with the human race, a sense of oneness with humanity. Finally, his behavior is "synergic" with society; that is, both his personal interests and society's are served simultaneously by it.

Maslow places the behavior of self-actualization in eight categories (1971, p. 45ff.). (1) It is "...experiencing fully, vividly, selflessly, with full concentration and total absorption." (2) Life is a process of successive choice-making; one of each pair is a growth choice and the other a fear choice. Self-actualization requires a heavy preponderance of growth choices. (3) Man has a certain "instinctoid" character (1971, Appendix D); self-actualization is "listening to the impulse voices" of that character. (4) It is being honest and taking responsibility. (5) It is daring to be different, unpopular, nonconformist. (6) It is actively engaging in behaviors which tend toward actualization of potential; it is, for example, "...becoming smarter by studying if one is an intelligent person." (7) The self-actualizing person has frequent "peak experiences," i.e. moments when he is
functioning fully, feels strongly in control, decisive, unified; the world looks better and he sees it more clearly. (8) All of the above requires that the person open himself up to himself; identify his defenses, expose them, and finally give them up.

Such people are rare. They constitute what Maslow calls the "growing tip" of the population, constituting about one tenth of one per cent of it. Yet all people, he asserts, have this potential; nearly everyone, for example, has isolated peak experiences. As the deficiency needs of more and more people are met, that potential may be actualized, and more and more people will enter "the farther reaches of human nature" (1971, title).

Jean Piaget

Piaget's is a theory of cognitive development (see Flavell, 1964). He himself has not published a coherent statement of his theory; it appears in a series of books and monographs published over several decades (e.g. Piaget, 1929, 1950, 1953). It has remained for others to organize his work into a systematic theory of cognitive development (see, e.g., Baldwin, 1967; Flavell, 1964).

There are two major processes by which development proceeds; they operate continuously during development. The first is the process of organization, by which is meant an increasing degree of means-end integration in thought
and behavior. Behavior is not random, but organized in terms of the interaction of the organism's needs with the environment.

The second process, the one receiving the greatest attention, is adaptation to environmental contingencies. There are two adaptive sub-processes: (1) the organism assimilates experience by fitting it to existing mental structures; (2) it accommodates to new experiences by altering those mental structures to better cope with the world and its demands. Assimilation and accommodation occur simultaneously and indissociably; they are in fact a single event -- adaptation. Adaptation may, however, be more heavily assimilative or accommodative at a given time, and development is a process of reaching successively more mature states of equilibrium between them. These equilibrium states demarcate the stages of development.

The "mental structures" referred to earlier, which Piaget calls "schemas," are the products of cognitive development; they are, unlike the process of development, discontinuous. They are classes of functionally similar mental operations, identifiable by the similarity amongst the kinds of behaviors which they reflect and of the situations to which they apply. The several stages of cognitive development are distinguishable by the radically different general nature of the schemas which characterize them:
purely sensory-motor transactions with the environment; concrete, reality-bound operations; formal, symbolic operations.

Piaget distinguishes four periods of cognitive development which are sequentially invariant, though they may appear at different ages in different children and in different areas of cognitive functioning within the same child. The schemas of the sensory-motor period (0-2 years) deal with the infant's immediate relationship with the environment; for example, a "grasping" schema, a "looking" schema, a "sucking" schema, and so on. The behavior involved reflects the largely assimilative nature of adaptation at this stage. Through the application of these schemas (a biological necessity) several changes occur during the period. The child begins to differentiate self from other objects. The conception of causality changes from efficacy (feelings "cause" events) and phenomenalism (one event causes another if it immediately precedes it in time), to psychological (one wills his own acts) and physical (one event may cause another when physical contact occurs) causality. The concept of time changes from a vague sense of duration in the context of ongoing activities, to a generalized demension in which self and objects can be "located." The concept of space undergoes a change similar to that of time. The rudiments of the
ability to symbolize appear toward the end of the period, and with them come the activities of imitation (a predominantly accomodative activity) and play (a predominantly assimilative one).

The period of preoperational thought (2-7 years), despite its length and crucial nature, is really a period of transition from sensory-motor to concrete operations. Flavell (1964) characterizes it as "saturated with sensory-motor adherences" (p. 162); that is, the period retains much of the character of its sensory-motor origins. Thought is still quite concrete, more like internalized action than true cognition. The balance of "power" in the process of adaptation lies mostly with accomodation. Two broad phases of the period are distinguishable by the area of cognition to which accomodative forces apply: symbolization (2-5 years) and decenation (5-7 years).

The ability to symbolize expands and refines as the child gradually becomes able to make internal imitations while practicing the external, pantomimic ones of the late sensory-motor period. Language, an invaluable symbolic tool, is acquired almost entirely during this period, and greatly facilitates (but does not cause) the development of the symbolic function. In Addition, play, though primarily assimilative, in a sense exercises the symbolic function. For much of play is pretending, which requires that a
mental representation of one reality (the one played at) be "laid over" another (the one in which the play takes place). Play and imitation can, of course, occur together, as when a child "plays house."

The second preoperational phase involves decenteration: For the early preoperational child is "egocentric" with respect to most of his cognitive and perceptual activities. That is, he tends to "center" on the most obvious and striking feature of an object or situation, to the relative exclusion of other features. Reasoning and thinking of this kind are called "transductive," passing from one such centered feature to another, and producing cause and effect relationships from simple juxtaposition in thought or perception. (This makes it easy for the child to find a reason for almost anything.) Flavell's description of such "mental experiments" cannot be improved upon: "Rather than schematize, reorder and generally re-fashion events as does the older child, the preoperational child simply runs off reality sequences in his head just as he might do in overt action" (1964, p. 158).

This has several implications. (1) The child cannot yet assume other roles, nor see his viewpoint as one of several possible ones, nor guage the effect of his actions on others. (2) He cannot categorize, since he centers on only one member of a category at a time. (3) He focusses
more on the successive states of a transformation than on the transforming process (for example, he does not perceive that the volume of a liquid is conserved through changes in the shape of its container). (4) He cannot "back up" in thought; the mental experiment is irreversible. (5) Thoughts are real themselves, as are dreams, parental rules, and so on. (6) Play is not distinguished from reality, though in behavior they appear discontinuous.

Gradually, however, "decentration" occurs more and more frequently. As the child centers repeatedly on different aspects of the same object or situation, it becomes difficult to reconcile -- assimilate -- such perceptions without accommodating his schemas to the differences; that is, without decentering. Related to this is the decentering effect of interpersonal relationships. Repeated interactions with others, especially childish arguments and disagreements, force the child to take notice of other viewpoints, and (incidentally but perhaps even more significantly) of his own thought processes.

In general, the preoperational period can be seen as the result of the increasing frequency and degree to which assimilation is inadequate to sustain the adaptive process; or, to say the same thing the other way, to which accommodation is necessary. This "see-saw" effect
frequently gives a random, confused, illogical appearance to the child's behavior.

In the period of **concrete operations** (7-11 years), the child utilizes a budding ability to symbolize to develop a coherent, reasonably well-organized cognitive system with which to deal with his environment. His system contains principles and structures which are practically oriented; they deal with things in the here and now. (Piaget quite precisely describes the logico-mathematical form of specific schemas and operations, but it is beyond the scope of this thesis to describe them. See Flavell, 1964, chap. 6.) He can do many things, with this organized interactional network, that the preoperational child could not. He can classify, categorize; he can retrace his "mental steps;" he can put himself "in another's shoes;" he is aware of the conservation of certain properties of matter through transformations of its shape or composition. But he is still limited in many ways. He is largely incapable of mental movement toward the possible or potential; such forays are made, but Piaget sees them as special cases, amounting mostly to generalizations of existing structures to newly encountered content. The concrete intellect busies itself mostly with exercises in the organization and application of what is immediately present.
Adaptation in the period of concrete operations is more assimilative than accommodative, though there is more often a balance than in preoperational thought. Piaget sees it as a period of "consolidation" of the practical cognitive skills necessary to move in the physical world. It is not until the period of formal operations that those cognitive tools become formalized -- that is detached, more purely symbolic -- enough to allow a generalized view of the world, in which various concepts can be abstracted and interrelated. Reality takes on a probabilistic or possibilistic nature. This quality of formal-operational thought is the one from which Piaget derives all others (Flavell, 1964, p. 205); it amounts to a fundamental reorientation to the world of experience.

Formal operations have several specific properties which serve to summarize their nature. (They also are formally described by Piaget; again, they are not of concern here.) (1) Thinking is hypothetico-deductive; the child conceives of the reality of a particular situation as one of a set of hypotheses about it. The hypotheses may be mentally (or empirically) tested to discover which is correct. (2) Thinking is propositional. The results of concrete operations (which still go on) are cast into propositions which are then operated upon further, in processes like implication, inference, identification, and so
on. (3) The variables associated with intellectual problems and situations are **analyzed in combination**, so that all possible relations can be examined.

Flavell (1964) describes the way the adolescent thinks:

His conceptual world is full of informal theories about self and life, full of plans for his and society's future, in short, full of ideation which goes far beyond his immediate situation, current interpersonal dealings, and so on... The child deals largely with the present, with the here and the now; the adolescent extends his conceptual range to the hypothetical, the future, and the spatially remote... The adolescent is beginning to take up adult roles; for him the world of personally relevant future possibilities -- occupational selection, marital choice, and the like -- is a most important object of reflection (p. 223).

Piaget would probably object to an attempt to describe his "well-developed man," for he is concerned more with what man does than with what he ought to be. He considers himself to be studying "genetic epistemology," or the ontology of knowing; or more simply put, how man's ways of acquiring knowledge change with development. At any rate, the following must be considered tentative, the writer's own formulation.

Clearly the well-developed man must be functioning at the level of formal operations. The key process is the constantly changing balance between assimilation and accommodation. There are small, moment-to-moment changes, and larger, stage-by-stage changes, and the see-saw effect of the latter demarcates the beginning of each of the four
periods of development. Thus in the sensory-motor period assimilation is primary; in the preoperational period accommodation increasingly spurts ahead of assimilation in "power;" during concrete operations assimilation is fairly adequate to the child's experience; when formal operations begin, their symbolic nature indicates the ascendancy of accommodation. This is the process of equilibration, as assimilation and accommodation complement each other in seeking balance -- equilibrium -- at successively higher levels of adaptive ability.

"Higher" needs explanation. Equilibrium states, whether momentary or prolonged, can be compared and contrasted on four dimensions (Flavell, p. 242f.). (1) Field of application of schemas: the number and kind of environmental stimuli which can be attended and adapted to. The larger it is the better is the organism able to adapt to changes in such stimuli. (2) Mobility: the scope, in space and time, of mental operations. Again, the greater the mobility the greater the adaptive ability. (3) Permanence: the resistance of the system of schemas to change, as a function of changes in environmental inputs. Here there is some middle ground; too little permanence would reduce the capacity of mental operations to deal meaningfully with change, while too permanent a system would restrict the accomodative process. (4) Stability: the
capacity of the system to reestablish equilibrium, to nullify or cure imbalances in the cognitive system caused by new or changed inputs. Whether high stability is desirable or not depends on whether the level at which equilibrium is reestablished constitutes successful adaptation. Thus "higher" is taken to mean states of equilibrium with successively greater fields of application and mobility, at appropriate levels of permanence and stability. Progression to higher states is triggered when an environmental input requires accommodation of current cognitive structures. Accommodation, therefore, is seen to be critical for the continued evolution of cognitive functioning to higher levels of adaptability.

Since this all occurs at the level of formal operations, the well-developed man may be pictured as engaging in increasingly formalized, abstract, and symbolic cognitive activity, encountering, almost involuntarily, new or changed stimulation which will upset his equilibrium state, requiring accommodation and reestablishment of equilibrium at a higher level. (There is an important parallel here between the activity of Piaget's well-developed man, and Bruner's characterization of the most adaptive language trends as "decontextualizing" and "categorizing." Abstract and formal is certainly
decontextual, and decentration, an accomodative process, is the precursor and sustainer of categorization.)

B. F. Skinner

Much of Skinner's thinking has been incorporated into the literature of Chapter 2. Accordingly this summary will be brief, its primary function being to tie those earlier discussions together, and add such details as are necessary, for a coherent picture of Skinnerian theory.

Behavior of all organisms serves one of two functions, the avoidance of aversive stimulation or the seeking of positive reinforcement (Skinner, 1971). These functions are genetic; the process is the same in all behaving organisms. The two functions are quite broad, so that all behavior may be included. The contraction of the pupil in response to increased light, for example, is a reflex which serves to avoid the aversive stimulation which would result from exposure of the retina to too much light.

Skinner is less concerned with "respondent" behavior of this kind, however, than he is with "operant" behavior. Operant behavior is a function of its consequences, rather than a consequence of prior stimuli. Simply stated, this means that organisms behave the way they do because of what happens to them afterwards. The environment may thus be viewed as the "cause" and changes in behavior the effect.
The relation is not so simple, of course. The effect of environmental stimulation depends upon the organism. Consequences are said to be reinforcing if they change behavior. Thus if the behavior preceding a particular stimulus increases in frequency that stimulus is said to be positively reinforcing. If the behavior preceding the removal or avoidance of a stimulus increases in frequency, the stimulus is said to be negatively reinforcing. The reinforcing effect of a stimulus is genetic; organisms appropriately reinforced by the consequences of behavior which has survival value are more likely to survive and reproduce. Evolution operates upon behavior as upon species: "...The environment...does not push or pull, it selects" (Skinner, 1971, p. 16).

The relation between behavior and its consequences is temporal; the more closely consequence follows upon response, the more likely its reinforcing effect is to change behavior (Skinner, 1969). This is significant in terms of what is learned. The more temporally remote the consequence, the greater the possibility that another response, not truly related to it, will intervene, and be mistakenly perceived as the cause. (This is the source of superstition.) In man, however, this sensitivity to the consequences of behavior has reached its peak. His increased ability to reason (which, of course, is also
evolutionary) increases the efficiency with which the correct contingencies of reinforcement may be assessed. As such assessments are made they may be formalized as "rules" (maxims, laws, etc.) and taught to other men. This makes it unnecessary for all men to actually experience the contingencies present in their environment in order to learn them. That is the function of culture.

A culture is, in fact, a set of contrived contingencies of reinforcement. Hence Skinner's assertion that man makes his own environment (see Chapter 1). As yet, however, he "makes" it quite unsystematically, for most of the customs, laws, maxims and so on which are designed to not give the environment its due. Some "Inner Man," rather than the environment, is seen as causing behavior; man is seen as a source or center from which behavior, under the control of "free will," originates. Since environmental changes are attributed to man's behavior, rather than conversely, the culture can derive incorrect rules from misunderstood contingencies.

Another more serious problem is the rapidity of changes wrought by man in his culture and in the larger environment (see Chapter 1). Where the evolutionary process formerly selected for survival new characteristics to meet changed environmental contingencies, the latter now change so rapidly that the human organism as now
constituted may become obsolete as a result of his own activity. Skinner feels that man's behavior is remediable by the very process that makes it vulnerable, i.e., operant learning. Once Inner Man — free will — is vanquished as a cultural value, attention may be turned to rearranging the contingencies of reinforcement for Behaving Man.

That will not be difficult. The problems are obvious — pollution, overpopulation, etc. — and the behavior necessary to solve them only slightly less so (Skinner, 1971, Chap. 1). To stop pollution man must filter automobile exhausts or use non-polluting power, or both; he must chemically reduce polluting industrial emissions; he must, perhaps, curtail some of his power consumption; and so on. To reduce birth rates he must exercise control of conception. Knowing what men must do, it remains only to make positive reinforcement contingent upon those behaviors. (Some such arrangements are already under consideration by the U. S. Congress: income tax "breaks" for childless families, corporate tax deductions for industries investing in pollution control, and so on.)

Skinner is convinced that the kind of a culture represented by Walden Two (1948), in which men must engage in little behavior that is aversive to them, and can engage in whatever activities positively reinforce them; in which
science and the arts flourish; in which competition for the purpose of self-aggrandizement and of vanquishing others is unnecessary, is possible. He concludes his latest book (1971) by saying, "The evolution of a culture is a gigantic exercise in self-control... We have not yet seen what man can make of man" (p. 215).

Skinner's well-developed man is easier to describe, at least in his general behavior, for Skinner's work (1969, 1971) served as the model which posed the problem for this thesis. He wants the socialization process to yield up an individual who will fulfill his biological nature by optimizing his positive reinforcements, and whose behavior promotes the survival of his culture. There should be no conflict, because a properly designed culture makes the reinforcements at its command -- money, prestige, power, leisure for meditation, intellectual activity, or whatever -- contingent upon the behavior it needs to survive and progress.

Skinner's penchant for speaking in terms of observable behaviors makes it easy to describe some specific activities in which his well-developed man will engage. (1) He will spend little time avoiding aversive stimulation. (2) He will refrain from engaging in behaviors which are immediately reinforcing but have deferred aversive consequences. (3) He will be "dependent
on things (1968, p. 172f), e.g., clocks, books, sunshine, etc., rather than on personal control (verbal direction) or institutional control (regulations and forms). His behavior will be "self-managed," by which Skinner means that certain of his behaviors will have come under the control of conditioned "internal" reinforcements. He will, for example, "...learn without being taught, solve problems by himself, explore the unknown, make decisions, and behave in original ways ..." (1968, p. 116). The topography of his behavior will be governed more by rules acquired from cultural institutions, rather than by direct exposure to the "natural" contingencies (1969). He will use his increasing leisure time in ways which strengthen his culture, e.g. in the arts and in certain games, in technological development, and in research (1971).

Skinner has also described the behavior of the well-developed man in terms of what his culture can do for him (1948). Frazier of Walden Two describes "The Good Life" which may be brought about by "social engineering" (Skinner's later term (1971) is "technology of behavior"): health, a minimum of unpleasant labor, a chance to exercise one's talents and abilities, intimate and satisfying contacts, and relaxation and rest (1948, p. 159f.).
Skinner's well-developed man is similar in many ways to Maslow's -- and to Piaget's, and to Erikson's. The next section will articulate these similarities.

Synthesis and Foundation

Synthesis. Erikson's theory is of psychoanalytic origin, and remains saturated with "Freudianisms" despite its major departures. Maslow's theory is about motivation; and is explicitly antagonistic to the reactive, unfree man advanced by psychoanalysis. It is also intended to counteract behaviorism; it is full of hypothetical constructs like "values" and the "self" which Skinner would object to as obscuring the real issues. Piaget seems above such feuds, but his theory ignores the unconscious dynamism which characterizes psychoanalysis; it is unconcerned with many of the concepts crucial to Maslow's theory, such as a centrally directed motivational source; and it uses terms at which Skinner would recoil, such as "schemas."

Yet they are not so different. It can be demonstrated that many of the things their well-developed men do are the same. As Skinner himself would say, the topography of their behavior is similar, though the processes invoked to explain it may be miles apart.

Ten major characteristics of the well-developed man have been extracted from the foregoing discussions of the
four theories. Table 5 indicates, for each theorist, the reference in which he discusses each behavior. In those cases the reference cited is considered by this author to be quite similar to the behavior as stated in the Table 5; to that extent the table is self-explanatory. Some points need to be made, however.

All four theorists could not, of course, be expected to hold the same views on what constitutes optimum development. The blank spaces in Table 5 indicate cases in which a given theorist makes little or no reference (that this author could find) to the behavior in question. Most of these cases involve Piaget, whose theory is narrower than the others, and who makes little explicit reference to a "well-developed man." There are instances, however, in which inferences of agreement may be made from knowledge of the theory. They are indicated in the table by parenthesized numbers which refer to the following points.

(1) Piaget's well-developed man is in a continuing process of seeking new inputs to which he must accommodate; "risking" is implicit in such behavior. (2) Erikson's whole period of the "school age" (5-12 years) describes a process of exercise and consolidation of social and intellectual skills in order to solve the practical problems of life. (3) Again, Piaget's theory poses application of
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<th>Behavior</th>
<th>Erikson</th>
<th>Maslow</th>
<th>Piaget</th>
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<td>2. Impelled, by a behavioral process which is common to all men, to seek new &quot;inputs&quot; which may upset their cognitive or emotional balance. Virtually involuntary, though it may be thwarted or stifled by the same process if experiences during development aren't appropriate.</td>
<td>1968: 107-114</td>
<td>1971:</td>
<td>1950: Appen- Ch. 1 dix D</td>
<td>1960: Chs. 5, 7. 1948: 288f.</td>
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<td>5. Unthreatened by (though not necessarily unafraid of) the unknown, ambiguity, change; frequently seeks it.</td>
<td>1968: 129</td>
<td>1971: (4) 1968: 116</td>
<td>134, 59 98f.,</td>
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<td>6. Behaves in ways which simultaneously, by the same act, serve his own interests (fulfills him, makes him happy) and those of society.</td>
<td></td>
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<td>1971: Ch. 14</td>
<td>1971: Ch. 8; 109-125. 1948</td>
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<td>7. Low proportion of behavior or mental &quot;energy&quot; is spent in avoiding pain, suffering, deprivation, discontent, threatening situations, etc.</td>
<td>1968: 135-141</td>
<td>1971: 380</td>
<td>1968: 172f.</td>
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<td>8. Values or respects his &quot;life cycle.&quot;</td>
<td>1968: 135-141</td>
<td>1970: Ch. 3</td>
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<td>9. Much behavior is under &quot;internal&quot; control.</td>
<td>(5) 1971: 47, 123-125 183</td>
<td>1968:</td>
<td></td>
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<tr>
<td>10. Able to enter deep relationships with other individuals.</td>
<td>1968: 135-138</td>
<td>1970: Ch. 3</td>
<td>1948: 195f.</td>
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a. Publication date and page indicate the reference in which the author discusses the behavior in question.

b. Numbers in parentheses indicate points in text which refer to this table.
schemas as a biological necessity. In a very real sense, optimum cognitive development must include what is called curiosity, i.e., the seeking of wider fields of application. (4) This point has an explanation similar to points (1) and (3) above. (5) Erikson speaks of the conscience, "the great governor of initiative" (1968, p. 119). In this he reflects his psychoanalytic education: conscience, or superego, represents the internalized rules of the culture as imposed by the parents.

A final point should be made about Table 5. Behaviors 1-5 may be seen as a "cluster," all having a character of seeking new inputs and experiences. This has implications for education, and requires greater attention.

The behaviors in Table 5, then, may be said to represent a certain consensus between the theories under discussion. It remains to explore the implications of this well-developed man for education.

Foundation. If the ten characteristics of Table 5 are taken to be those of an adult who has developed well, it is still necessary to discover the nature of the process of that development. There are some intriguing parallels between the four theorists even here.

As pointed out above, all four of the theorists believe that development is characterized by certain forms of behavior engaged in almost involuntarily, since they
result from man's biological or evolutionary nature. Each also believes that experience plays a crucial role: with appropriate experiences the process leads to developing well; with injurious or inappropriate experiences it leads to characteristics of the individual which are unhealthy, incompetent, disabling, or unfruitful.

Behaviors 1-5 in Table 5 may be seen as a "cluster" of different manifestations of a single important kind of behavior: that of actively seeking new experiences or inputs, despite the possibility (and occasional occurrence) of painful, frustrating, or defeating experiences. All four theorists refer to it. Erikson speaks of autonomy and initiative; Maslow of self-actualization and a need for information; Piaget of generalizing the application of schemas; Skinner of seeking positive reinforcement. (See Table 5 for references.) All are explicit about the critical nature of early experiences relevant to this seeking behavior: on balance, it must be successful, without punishment or derision following closely upon it, and encouraged or rewarded by someone close or significant to the child. The theorists are also in agreement on the relevance of early seeking behavior (as it shall be called here) to adult problem-solving behavior, which is regarded as highly adaptive for both the individual and the culture (Erikson, 1968, pp. 128-141; Maslow, 1971, chap. 23;
Inhelder and Piaget, 1958, pp. 255-258; Skinner, 1971, chap. 1). There is also, as noted earlier, a close correspondence between Bruner (1971) and Piaget on this subject. Thus early seeking behavior, a more or less constitutional requirement for the individual, must be met with the kinds of experiences referred to above; this is one foundational requirement for the education of the well-developed man.

There are other similarities amongst particular theorists with respect to the process of development. (A review of specific similarities would be redundant with the preceding summaries. The reader is referred to them for specific points of comparison on the general similarities discussed below.)

In the preschool years, the experiences leading to a triumph of trust over mistrust; of autonomy over shame or doubt; and of initiative over guilt (Erikson), are quite similar to those which would constitute meeting of the needs for safety and love (Maslow). This is also the period of preoperational thought (Piaget), of which one characteristic is "transductive thought." This process, as discussed earlier, leads to perception of cause-effect relationships from simple juxtaposition of events in cognition or perception. Recall Skinner's assertion that the relation of behavior to consequences is temporal: the shorter the elapsed time between them, the more likely is a
connection to be perceived. With the truncated time sense of the preschool child, justaposition is the only circumstance in which causation can be perceived.

The "vital" processes and experiences of Erikson's "school age" (5-12 years) are roughly similar to those Maslow would require for successful meeting of the esteem needs. The period also corresponds closely to the years of Piaget's stage of concrete operations (7-11), and concrete operations are easily seen as applicable to the kind of behavior relevant to Erikson's industry inferiority crisis.

A brief summary of the foregoing discussion will clarify the major contentions of this chapter section. (1) Four widely respected theorists, usually considered as having wide theoretical differences with respect to human nature, are nevertheless in remarkable agreement in two important ways. (1) They attribute quite similar characteristics to "the well-developed man." (2) The situations and experiences which they consider crucial to developing well are very nearly the same.
CHAPTER 4

A PRESCHOOL PROGRAM

In the previous chapter two major topics were covered. The first discussed the nature of competency, and the sources of socioeconomic class differences in its manifestations. The second discussed a kind of ideally developed individual in terms of what each of four major theorists would consider him to be like. The purpose of this chapter is to pull these two themes together and generate from them a theory of the important ingredients in the early experience of "the well-developed person," i.e. one who is personally fulfilled and at the same time disposed to behavior with survival value. Finally, a program for providing these experiences will be designed.

The Need for Early Childhood Education

It has been established that the divergence of competent and incompetent children begins early, and is along class lines (Chapter 3). It has also been shown that schools remain the only resource capable of solving educational problems (Chapter 2). These conclusions were reached years ago. Coleman's (1966) solution was to dilute the effects of socioeconomic class by distributing lower class children amongst higher class schools. In retrospect
one wonders why he chose not to attack the problem at its source, in the milieu of early childhood. By not doing so, society commits itself to an unending program of remediating the problem instead of preventing it.

Furthermore, Coleman's logic is incorrect. Because achievement varies more with social class than with the quality of educational resources, does not mean that mixing social classes in schools will raise achievement. It may, of course -- but not necessarily. For if teachers are aware of the student's class origins -- and since most lower class members are also minority group members, they will be -- expectancies, in the process of minimal demand, may be expected to have unmitigated influence. It will therefore be difficult for the present school system, however cleverly utilized, to eliminate incompetency. In a later book (1971) Coleman makes the same error. From a table of regression coefficients purporting to show relative contributions of family, student body, teacher, and school resource factors to verbal achievement (p. 45), he concludes that family and student body are much more important than teachers and school facilities. Later (p. 72) he builds on this conclusion to suggest that racial differences in school achievement could be eliminated by raising specific economic resources to the level of whites, and "demonstrates" it with figures. But, as Bruner (1971)
sleys, enrichment by itself is not enough, since the child of poverty suffers from more than a kind of "cultural avitaminosis" (p. 156). His early experiences must be qualitatively as well as quantitatively different. Education needs to begin in the child's early years, and its target must be the debilitating influence of the child-rearing styles of the lower-class environment.

That need is not limited to children of the lower class. Early seeking behavior is likely to result in situations involving control, in which lower and middle class parents respond differently. Thus incompetency may be seen as the manifestation in achievement behavior of the failure or lack of the "seeking behaviors" of the well-developed man. But, as Table 5 shows, there are other characteristics of the well-developed man the determinants of which have not been shown to vary with social class. In fact, the point of the Introduction to this thesis (chapter 1) was that such people do not exist in sufficient numbers to insure survival of the species, let alone individual cultures.

This, then, is the major contention of this thesis: early childhood education must be made available to all children of all classes in order that more individuals may fulfill themselves as they contribute to the solution of pressing world problems.
The Community Preschool

The need for greater involvement of the community in education has already been discussed (chapter 1; see also Bettelheim, 1969; Bronfenbrenner, 1970; Postman and Weingartner, 1969; Reimer, 1971; Skinner, 1971). This argues for a "community" preschool program (e.g. Frobisher, 1971), in which the school amounts to a community project. Parents and other adults in the community are drawn on as resources in important ways; the school's functioning quite literally depends on their active participation. There is considerable evidence that when parents are thus involved in the maintenance and operation of their children's schools, several things happen: the children's achievement improves, as do their self-images. The parents perceive the school as valuable to their children, and themselves as contributing to that value; they become more cohesive as a group (Gordon, 1969; Weber, 1970, pp. 103-108; Bronfenbrenner, 1970).

Organization

Community. These are "neighborhood" schools, serving families in defined areas. Each neighborhood would be defined in terms of practical geography (e.g. blocks), expected size of enrollment, and existing interfamily ties. In this way the school will be fitted to the community, rather than vice-versa. Enrollment will be voluntary.
Children. Two factors are important here. (1) Experience is important from the first months of life; a "critical period" for intellectual competency may occur between 10 and 18 months. (2) The proportion of working mothers, whether from necessity or desire, is increasing (Peterson, 1965). If the school is to serve both children and community, it must accept children of all ages consistent with health and safety, say from three months up. There must, of course, be no restrictions as to intelligence (except where special education is required), color, ethnic group, and so on.

Calendar. Working mothers take no "summer vacations," nor does learning; the school will operate on a 12-month calendar. At least one staff member will open the school as early, and close it as late, as necessary.

Philosophy and Practice

One consensus amongst the four theorists discussed in the previous chapter is this: there are certain general kinds of activities, called "seeking behaviors" in this thesis, in which man engages due to his biological nature, though inappropriate experiences may alter them into maladaptive forms. This argues for the general philosophy of the "open classroom" (Kohl, 1968; Holt, 1969; Postman and Weingartner, 1969; Spodek, 1970; Bennett, 1972), as
opposed to the "discipline and deliver" method (see Chapter 2).

**Philosophy.** In the open classroom, children choose their own activities, their choice being guided by that biological nature mentioned above rather than by predetermined curricula. Teachers in such a school will not "instruct" children; they must see themselves as resources, guiding, suggesting, helping, answering questions, clarifying, restating from another perspective, and so on.

As resources, teachers may be used by the children in ways which increase their experience of control over consequences, whereas directions and intervention would decrease that experience. As teachers, their job is not to plan lessons, activities, objectives, etc., but to innovate with regard to the variety of activities available. For example, where one activity might follow naturally from another, as from water play to mixing and measuring, but the second activity does not seem to be forthcoming, she might suggest it. "I wonder what it would be like to ..." Similarly, the children, individually or as a group, may decide when to terminate one activity in favor of another. There will not normally be "blocks" of time for specific activities (e.g. story time, music time, etc.).

In this kind of situation the teacher's function may be viewed as that of providing the experiences
appropriate to that innately guided seeking behavior. "Appropriate" here means rich and varied on the one hand, and in a context of child-centered control on the other.

**Behavior.** When a child's behavior can be seen by the teacher as one which can be related to a valuable, enjoyable, useful, or interesting consequence, she should comment positively on both consequence and relation (in reinforcement terms, she should "cue and reinforce" the child). "That's a fine painting you've done. I like the colors you've used. What do you like about it?" "You're helping Tommy with the blocks in that tower. I don't think it could be so high if you hadn't helped." "When you talked to Cindy after she fell, she cheered up fast. What did you say to make her feel better?" "That was a nice thing that you did, letting Paul have the swing. You made him happy." "If you help me with pouring the milk, it will be finished faster." "You've decided to use red paint there? Yes, you change the way it looks when you do that, don't you?"

Suggestions, guidance, and other verbal exchanges should (where appropriate) be couched in the language described by Bruner (1971, p. 145ff.) as decontextualized, hypothesizing, categorizing, questioning, and so on. Whenever possible the solution, conclusion, or other outcome
should be left to the child, not imposed or arranged by the teacher.

In emotion-laden situations, such as those involving physical or emotional pain, fear, anxiety, and so on, the communication technique of "reflection" of feelings (see Rogers, 1961; Gordon, 1970) may be used. Such emotions are not ignored or passed off as inconsequential; the teacher recognizes them and accepts them, and shows the child that she does by verbalizing them to him. At the same time she verbalizes her own feelings, so that the child is made aware of the feelings associated with concern for others' welfare.

Conflicts and behavior problems will arise. In a child-child conflict the foes should be let be, unless it becomes obvious that one will be hurt. Children must learn how their behavior — control — affects other people; they must learn how to limit their control. Skinner (1971, p. 121) is not quite right; it is not better to learn the Golden Rule as a rule, but by experiencing the natural consequences of following it and not following it. For one of its features is its relation to control: by assessing how another's behavior would affect him, he may judge its effect on others. In this way, rather than in the more structured manner of the Kibbutz or the
Russian schools, group processes will be brought to bear.

Teachers must also be somewhat jealous of their rights as individuals. Child behavior which causes them to feel anger, or pain, or discomfort, should be expressed and mutually examined. One of the competency characteristics was adult role-play; the child should know how adults react to such things. Adults (as well as teachers) are not inanimate resources, to be used without regard to their own control relations. Children should not get the idea that teachers (or any adults) can be trod on carelessly. This again is discovering the limits of control.

The staff of the school will be permanent, and the children will remain in the school as long as their parents remain in the neighborhood or until they enter the elementary grades. This situation provides for the constancy and intimacy sought by the "vertical groupings" of the British Infant Schools (see Appendix A). In this context, the kinds of experiences which the four theorists were shown to agree were important (Chapter 3) to developing well, will be provided by the philosophy and practices described above, in the activities described below.

Physical Plant. At about one year of age there is a fairly sudden change in type and level of a child's
activity. In many day care centers this results in separate facilities and staff for the two age groups. In the public preschool there are practical (e.g. financial) and educational reasons for not doing so. The latter are based on the literature which points to the role of age and ability groupings in "the failure of traditional education" (see Chapter 2). There should be a separate room in which infants may sleep, however, since they need more of it than preschoolers.

The school will be divided into "learning centers" similar to the British Infant Schools (see Appendix A; for sample floor plan see Appendix E). The school should have a play yard, or have access to a park nearby.

The suburban or rural community is unlikely to have accommodation problems. The other main "target" of the public preschool, however, is the lower class urban neighborhood. Such areas probably will have neither a ready-made building in which to house their school, nor a place to build one. A possible solution lies in an adaptation of the so-called "storefront school" (e.g. Bennett, 1972, pp. 26-28). One of the usually frequent vacant buildings in such an area is rented and remodeled for the purpose.

Materials. Materials that are standard for nursery-kindergarten groups will be available, such as
blocks, cars and trucks, creative materials, books, dress-up clothes, puzzles, etc. (see, for example, Todd and Heffernan, 1970; Hildebrand, 1971). In addition there are many new kinds of materials available, such as light styrofoam free-standing panels which can be handled by the children, and used for piling, building, arranging, and climbing (see Holt, 1970, pp. 282-284). What is so often missing, yet easily available, is a variety of "non-toy" items such as a steel measuring tape, a typewriter or two, an old automobile engine, a real tool set, some portable tape recorders, a real washing machine (for the children), a stopwatch, a system of pulleys for lifting things (other children?) -- in short, the hardware of our times.

These materials will serve the usual nursery school function of play, of course. But they must be seen in another light -- it has been shown how expectancies may determine outcomes. They are instruments of control. They are the things children can do things to and with, which give them experience with the effects of their behavior.

Activities. Again, activities need not be different in topography; it is the context in which they occur which is important. Thus a range of creative activities (e.g. easel paints, collage), language activities (stories, records, tape recorders), dramatic activities (block play, dress-up, housekeeping) and so on should be available.
The crucial point is to allow the children to make final decisions, with suggestion and encouragement from the teacher. The children's own responses and questions can serve as a source of innovation in the use of materials and as leads to new activities.

One type of activity must be much more a part of the preschool experience. As Brofenbrenner (1970), Bettelheim (1969), Postman and Weingartner (1969), Skinner (1971) and others have pointed out, children seldom come in contact with the world of adult activities, with the things that keep the world moving. The solution is field trips, at least one or two per week. Children should see hospitals, bakeries, shoe factories, fire and police departments, legal offices, universities, cemeteries, garbage dumps, the mayor's office, computer rooms, airports, half-built houses, and so on. They should talk to the people who work there, have their questions answered, get acquainted with the world directly.

Resources

Financial. The exact budgeting requirements of the community preschool must be individual, depending on the needs and resources of the community. Some general financial considerations are relevant to a discussion of the resources available to the school, however.
The traditional method of financing public education, by local property taxes supplemented by state funds, is inadequate and inequitable. (Several states have already judicially declared it unconstitutional.) The poor already pay more for a poorer education; they cannot be asked to add to their burden for a preschool program. For the same reason it is obvious that the funding must be public, achieved perhaps by a permanent income tax surcharge for education. While such funding might apply to all public education, the percentage increase specifically for preschools may be kept down by use of some existing community resources and reallocation of funds according to different priorities.

Community. One characteristic of the "community school" is its use of whatever resources are available in the community (Frobisher, 1971). Parents in particular are drawn on for manual labor, for teachers (see "Staff," below), for "skill models," and for specific skills (e.g., plumbing, carpentry, medical, etc.). The parents, for example, rather than a professional contractor, would remodel their "storefront" school. Certain necessary chores such as janitorial work are allocated on a rotating basis amongst participating parents. Much of the materials for the school, especially the "hardware of the times," may be supplied or "scrounged" (see Bennett, 1972, Chap. 8) by
adults in the community. Even much of the furniture and play yard items may be built by them; several "do-it-yourself" handbooks are available for guides (e.g., Farrallones Scrapbook, 1970; Bennett, 1972). The value of parent involvement has already been noted.

The foregoing makes it possible to keep total costs down, and to shift funds away from materials and facilities -- which have been shown to influence achievement less than people (Coleman et al., 1966; Coleman, 1971; Silberman, 1970) -- to "salaries" of various kinds (see below).

Staff

A hypothetical community to be served by a school consists of 50 families, with 25 children in the preschool. Assume further that 20 families have children not in the school for some reason.

Administration. Some time prior to arrival of the first public funds, the community will be asked to form an unpaid "board of administration" for their school. The director of the school, when hired, will also serve on the board. The board will hire him, with a master's or doctorate in an appropriate field, at a salary of about $12,000. (The federal agency administering the funds must, in order to control the philosophy guiding the school, approve the choice.)
Teachers. The director will choose four teachers for the school with associate degrees or equivalent experience (salaries $5,000 each), so that the total staff: student ratio will be 1:5. (If possible, some teachers should belong to the community.) He will devise and conduct a program to train them in the philosophy of the open classroom and the physical and human environment necessary to implement it.

Extension

The school must have an "extension arm," similar to the cooperative extension services of some large universities, which reaches into the home. For if White (1971a) is correct, many children will have reached the fork in the competency road before they get to the school. The director of the school will serve also as the senior extension agent; he will hire from the community as many agents as necessary to comprise a ratio of agents to families with young children not in the school, of 10:1. In this example, two such agents will be hired, at $5,000 each. They will go through the same training program as the teachers.

There will be a "behavior modification" program for the maintenance of adult involvement, paying an hourly wage of one dollar to parents and other adults for their work for the school. This will include pay for
parents who spend time at the school with the children. Such wages will be paid until the money budgeted for it (22 per cent or $13,000) runs out. It is hoped that, with the initial reinforcement of cash to get adult involvement started, the experience of active and influential participation in their children's education will serve as its own reward.

The primary concerns of the extension force will be threefold. First: train parents of children, especially infants, not in the preschool in the "competent mother" behaviors described by White (see Chapter 3).

Second: maintain the school's influence in the home.

Third: as an integral part of both, maintain liaison and rapport between the school and the neighborhood.

Behaviors to be taught to the agents, who then train parents, are simple. (1) Provide materials like those in the homes of "A mothers" (White, 1971a, p. 31f.). Such things can be found in junkyards, refuse areas in factories and stores, and so on. Any gross deficit should be made up for individual families out of the school budget if necessary. (2) Place any valuable or special items out of the child's reach, rather than making them subjects for restriction. (3) Do not spend frequent and lengthy periods "stimulating" the child, but respond to him briefly, frequently, as he initiates it, using language which is
encouraging, not restrictive or negative; questioning, not
definitive or directive; generalized, not situation-
specific; explanatory, not authoritarian. Specific, famil-
lar examples can bring these qualities down to earth for
the parents. (4) Do not restrict the child nor remove him
from all small dangers; the adventurous nature of his
activity will inevitably lead to such situations, and
restricting would lead to reduced control as the price of
preventing small hurts. (5) Handle sibling conflicts in
the same way as described for teachers in the school. (6)
Encourage the parent who is excessively unhappy with life
to see a counselor at the expense of the school.

Liaison and rapport can be maintained through
incidental chats on home visits, through small-group meet-
ings of those families seen most by a particular agent,
through visits to the school, and through frequent progress
reports from the school's staff, possibly in the form of
individualized tape recordings sent out with the agents.

It is hoped that eventually parent involvement
would become intense and widespread enough for regular,
well-attended meetings to be held, at which the parents
themselves could make decisions on policy and process. If
the behavior modification program works, they may also pro-
vide their resource activities without the hourly wage,
making more money available for school materials, hot lunches, or the like.
CHAPTER 5

IMPLICATIONS FOR SOCIETY AND ITS INSTITUTIONS

This will be a purely speculative chapter, designed to project some of the effects of implementation of the theory and practices developed in the foregoing chapters. Several areas and institutions of society will be considered.

Problems

With a higher proportion of actualizing individuals working on the problems discussed in the Introduction (Chapter 1), many of them should become amenable to solution. Foremost among them, of course, would be the "poverty cycle," which with a program like the one outlined above could be broken in one generation (Bettelheim, 1969).

Education

A question is often raised about the open classroom: "What happens to the kid when he gets into a regular school?" The answer, as Neill (1960) suggests, is that most open classroom graduates perform as well as students in traditional schools in most areas. In some areas he will achieve better, in others worse, since he has directed his own education to that point in time. He
should, however, be quite capable of acquiring what skills he needs but doesn't have. It is likely, however, that such comparisons will be unnecessary as the traditional system gives way to the open classroom system.

**Employment**

Another question: If there are no tests, no grades, how can an employer choose the best qualified person for his empty job? How can a medical school, for example, be sure its graduates are competent? The best way to determine whether a person can do a job is, obviously, to have him do it, and evaluate that. This writer believes, with Postman and Weingartner (1969) that it should not be the responsibility of the educational system to provide industry with its decision-making tools. Education should be for children; let industry devise its own tests on a job-performance basis.

As for the doctor — or the psychologist, or the lawyer — or other "practicing" professional — his passing a final examination does little to guarantee his ability. Terminal performance tasks are more realistic: let the doctor study the symptoms of a set of cases, diagnose, prescribe. Let the lawyer "take a case," prepare it, present it, and have judgment passed on it. The point of education is not to see whether a person can remember facts.
from books and lectures, but to enable him to do something productive and useful with what he learns.

**Politics**

With a society of well-developed individuals, representative government may be unnecessary. Major decisions, such as whether to become involved in an armed conflict (or to withdraw from one); whether to commit a billion dollars to education or to space exploration; whether to impose a law regulating the right to have children; whether to legalize marijuana; whether to build an SST; which man should be a presidential candidate; and so on -- such decisions may be made directly by the people. A congress-like body could be hired to work out the details necessary to implement them. The technology is available now for a beginning: a yes-no button could be included in the present telephone system, and important questions worded appropriately.

**The Family**

The family's socializing role will change. Its influence will be structured through its involvement in the schools, though not imposed by them. The parents will, in fact, have a determining voice in how the schools are run and to what purpose, through both the political changes discussed above and the organization of the school itself.
(see Chapter 4). The family's role will thus be greater, but more reasoned and informed, with considerably more directed commitment behind it. Family cohesion should also be strengthened, by its common experience in and commitment to the school -- which is to say, to children.

**Housing**

An interesting theory of community architecture called "cluster housing" is emerging. In it homes, both single and multiple (douplex and "condominium"), face into the center of the block rather than onto the street ("the housing crisis," 1970; Stewart, 1972. See Appendix F). Each "cluster" has certain facilities of its own, e.g. a park, a playground, a swimming pool, a common landscape area, and so on. Anywhere from a dozen to fifty families may "belong" to a cluster. In addition to practical advantages such as more efficient land use and cheaper maintenance and utility service, it is seen by some as a counterforce to suburban isolation and depersonalization; since most dwellings would "front" on a common central court area containing recreation and relaxation facilities, social interaction would be facilitated.

Cluster housing has one more possibility particularly relevant to this thesis: one of the buildings could be a community preschool.
CHAPTER 6

CONCLUSION AND PROSPECT

This thesis has concluded that current trends in Western culture require, as a crucible for the "well-developed" man, a publicly funded neighborhood preschool program with an active and ubiquitous extension arm. The school would follow the "open classroom" concept, providing for frequent and successful control by the children. The extension arm would teach parents how to have an "open home," and be the instrument for close liaison between school and the home. What are the prospects for the establishment of such a program?

The first requirement is that the property tax method of financing public education be recognized as inequitable and discriminatory. Several states have declared it unconstitutional. It is to be hoped that the issue will come before the supreme court and receive the same judgment.

The next requirement is consciousness, on the part of the public and of the state and federal legislatures, that early childhood is critical, and that education is the best way to insure a favorable resolution of the crisis.
There is evidence from a popular news magazine ("Preschool education," 1972) that this awareness is increasing. What is probably needed to tip the balance so that funds could be allocated is a body of convincing research. Suggestions as to issues whose resolution would be "convincing" follow.

Suggestions for Further Research

(1) Adapt Rotter's (1966) I-E scale for measuring perceived locus of control of reinforcements to eliminate some of the problems associated with the forced-choice technique (e.g. social desirability of certain choices). One possibility is to use a more empirical approach with multiple-choice questions. Which choices are internal and which external would be determined by the choices made by a sample of individuals previously judged "competent" in terms of their achievement and of objective (observed) measures of their autonomy. The following relationships can then be studied:

(a) I-E score and socioeconomic class.

(b) I-E score and child-rearing practices (e.g. language modes, reactions to aggression, reactions to achievement attempts, household rules and how they are taught, "discipline," etc.).

(c) I-E score and the characteristics of competent children as listed in Chapter 3, e.g. degree of
acceptable adult role-play, ability to take another's perspective, language use, ability to anticipate consequences, degree of assertiveness, and so on.

(2) Compile a complete operationally described list of early childhood experiences, from an analysis similar to that done in the section "The Well-developed Human Being," considered conducive to "developing well."

(a) Submit it to the theorists for their comments and suggestions.

(b) Submit those experiences which survive step (a) above to 100 or so of the most respected workers in early childhood or child psychology for their comments and suggestions.

(c) What survives of the previous steps may be considered as a criterion environment for early childhood. Previous research may be culled for the information it provides on the prevalence of that criterion environment in the home, by class, race, education, geographical area, and so on. It is suspected that it will not be very prevalent.

(d) Demonstrate, from the results of ongoing projects such as those described in Appendix A, that the criterion environment can be achieved in a preschool setting.
Prospect

This writer believes that, if this academic study is confirmed and elaborated by the results of the suggested research, and the latter are pulled together in brief, easily understood form for public and legislative consumption, enough agitation will result to make federal funding likely. Perhaps, for example, the Head Start program could be adapted to it.

Perhaps the poverty cycle can be broken.

Perhaps Maslow's "synergic society" is possible.
Several programs of an experimental nature have been designed with the problems discussed in this text as "targets." Some of them represent attempts to remediate or prevent the presumed deficits associated with "cultural deprivation." Some of them are attempts to put into practice specific theories or philosophies of development and education. Some of both types are considered by their designers to be "remedial" in a much larger sense, i.e. to make possible a significantly higher level of personal, intellectual, and social functioning for human beings in general.

Some of the best known programs are discussed below. They will be presented from their proponents' point of view, with a brief summary of research results if available.

**Summerhill**

One of the best known, most radical alternatives to traditional education is Summerhill (Neill, 1960). It is a smallish residential school about 100 miles from London, housing 40 to 50 children of both sexes ranging from 5 to 15
15 years old. The philosophy upon which it is based is wholly that of its founder, A. S. Neill. That philosophy is simple: children are innately wise and realistic and good, and the function of "education" -- as well as child-rearing -- should be to let these qualities grow in complete freedom.

"Freedom -- not license," as Neill is found of saying. There is one adult-imposed restrictive rule at Summerhill: the children cannot engage in behavior which is dangerous to themselves or others. Otherwise the whole place is run as a perfect democracy -- each resident has one vote, equal in power to the vote of every other resident. This includes the staff, teachers, and Neill himself. Thus all rules (with the single exception mentioned above) are requested, written and adopted by "the people" themselves, at weekly meetings. They can, if they so choose, adopt none at all.

But they don't. According to Neill (1960, pp. 45-55), the rules that govern behavior at Summerhill turn out mostly to be rules regarding infringement of the rights of others. Infractions of them are dealt with at the weekly meetings. The judgments and sentences are tailored to each situation, and their most striking characteristic is justice. Consider the following example related by Neill:
...Jim took the pedals from Jack's bicycle because his own cycle is in disrepair, and he wanted to go away with some other boys on a week-end trip. After due consideration of the evidence, the meeting decides that Jim must replace the pedals, and he is forbidden to go on the trip.

The chairman asks, "Any objections?"

Jim gets up and shouts that there jolly well are! Only his adjective isn't exactly "jolly." This isn't fair!" he cries. I didn't know that Jack ever used his old crock of a bike. It has been kicking about among the bushes for days. I don't mind shoving his pedals back, but I think the punishment is unfair. I don't think I should be cut out of the trip."

Follows a breezy discussion. In the debate, it transpires that Jim usually gets a weekly allowance from home, but the allowance hasn't come for six weeks, and he hasn't a bean. The meeting votes that the sentence be quashed, and it is duly quashed.

But what to do about Jim? Finally it is decided to open a subscription fund to put Jim's bike in order. His schoolmates chip in to buy him pedals for his bike, and he sets off happily on his trip (1960, p. 49).

The same philosophy that results in self-government by children results in an unusual educational program. Classes are "scheduled" for certain hours each day, but no one need attend. (The scheduling itself is largely for the convenience of the teacher; the children, recognizing that it would be unfair to him to require him to hold classes at their convenience, passed a rule to prevent it.) If, on the other hand, a child skips a week or two of classes in a particular subject, his classmates may -- and often do -- throw him out of the class for holding them up. That
criterion is also the determinant of who can attend what classes; there are no grades, course sequences, and so on. Ejected students who wish to can bring their appeal to the weekly meeting.

The atmosphere of Summerhill is hard to describe in a few words. There is complete freedom within rules designed to protect the individual, and complete consensual justice for those who transgress. Windows are frequently broken, other materials lost or ill-used -- all, says Neill, in the service of growing toward freedom. Many pupils are former "problem" children, entering Summerhill at almost any age, who engage in a good deal of aggressive behavior in a process described variously as venting years of pent up anger and frustration, testing the limits of freedom, looking for the strings attached to it. But the limits are imposed by the children, and there really are no strings save those arranged by them (Popenoe, 1970).

Neill claims that his graduates suffer no educational handicaps. Most of them perform at par with their contemporaries from regular schools. Those that do not -- because they chose for so long to play rather than attend classes -- are able to make up the deficit with no difficulty as the need arises, if they decide they must -- for exactly the same reason. By being free they became whole, found themselves, regained their innate goodness, wisdom,
and realism. On top of this -- because of it, Neill would say -- they are almost invariably self-confident, aware of their own abilities and how to use them in determining their own destiny. They learn what they need to, when they need to, because they need to, in order "to work joyfully and live positively" (1960, p. 29). Neill's assessment is undoubtedly prejudiced, his perception probably selective. But other sources suggest that it is largely correct (Popenoe, 1970; H. M. Inspectors, 1949).

**British Infant Schools**

The British school system is differently organized than the American. To the layman it might appear that they have extended the traditional kindergarten or "preschool" concept into the primary grades, "true schooling" beginning about the fourth grade (age 8). He would be confused, however, for he would find children from 5 to 8 years old in the same rooms, doing many of the same things, talking, moving about, and so on.

Currently about 30% of the British infant schools follow the procedure described here (Evans, 1971).

The infant schools have two primary distinguishing features; the "integrated day" and "vertical grouping" (Blackie, 1967). The concept of the integrated day incorporates learning into ongoing, child-centered activity rather than into "periods," subjects, age-graded classes,
and so on. Rooms are organized into learning areas for qualitatively different activities such as science, mathematics, language, and arts and creative activities. The children move freely from one area to another as they wish; their activities may be as brief as minutes or as lengthy as weeks.

The teacher has two main functions: She plans and organizes these activity areas (though the children are frequently involved even in that). She also "teaches" in response to the children's responses, to their activities; i.e. she answers questions, makes suggestions about new materials or new uses of old, enjoys herself and the children. She does not impose a predetermined curriculum on the children, with subjects, workbooks, activities, organized into a "lesson plan" for each day.

"Vertical grouping" refers to the mixing of ages and abilities within a class. Children join a class at the age of five, and stay with the same teacher until they enter the "junior schools" at eight. (In practice, of course, there are exceptions. Teachers change positions, families move from one district to another, and so on.) The purpose is to allow more time to become acquainted with each child's needs, and to provide the children with a cross section of the range of ages, abilities and life styles represented in the school district's population.
Another benefit is "peer teaching," in which an older child may help another with a problem, at the same time exercising and clarifying his own newly acquired skills.

The emphasis of classroom activity is on giving the child a useful, enriching, and enjoyable present, rather than upon the skills or abilities he might need for future success. The assumption is that the latter does not need special attention, since the former is its basis. In addition, there is no dichotomy between activity "for play" and activity "for learning;" play is assumed to be the vehicle for learning proper to the age group involved. In other words, children can and do learn in whatever activity they choose, without the necessity for adults to dictate what should be learned, nor how. One of the sources of these attitudes is said to be Piaget's description of the role of experience in sequential changes in cognitive operations. Elkind (1972), however, found little evidence of thorough understanding of Piaget's theory on his visits to British infant schools. Lady Plowden ("What did you learn in school today?" 1972) characterizes the shift to the integrated day and vertical groupings as growing out of practical adjustments made necessary by the evacuation of children from British cities in World War II. Teachers had to be depended upon to innovate in the face of country schools
crowded with unsystematic mixtures of ages, abilities, sexes, and socio-economic classes.

The Plowden (1967) report generally favors this "new" infant school system, saying that the children who "graduate" from it are academically well-equipped, lively, curious, and healthy. Evans (1971), however, feels that there are problems on which the evidence is not yet in: classes are overlarge, children may be exposed to incompetent teachers for an extended time, the abrupt transition to the considerably more rigid and structured junior schools. Yet even he feels that "... Personnel of the British Infant Schools have demonstrated that open education apparently works, even in large classes" (p. 276).

**Head Start**

A major outgrowth of the explosive concern over civil rights, prejudice and segregation, and the condition of the poor which dominated the 1960's was the federally funded "Head Start" program. It was conceived as an effort to overcome and/or prevent the effects of so-called early "cultural deprivation," which were to be seen in "cumulative intellectual deficits" (Ausubel, 1965) exhibited by lower-class children. That is, the early experience of such children was intellectually impoverished in some way, causing an early deficit in cognitive skills which, since later stages of cognitive development build upon the
products of earlier ones, was progressively compounded as the child progressed (or didn't) through school. It was hoped that Head Start, enrolling preschool children, would compensate for these early deficits. Additionally, the original plan called for a wide range of component services: medical and dental care, nutritional "backup," parent education, psychological counseling, and others.

Federal guidelines gave considerable latitude to local Head Start directors, and so existing programs represent a variety of philosophies and techniques. Evans (1971) feels that most of them are similar to conventional nursery programs, with "learning areas" for dramatic play, creative activities, block play, science area, story corner, and so on. What differences there are he categorizes according to the beliefs of individual directors about the nature and source of the children's disadvantages, and consequently of experiences required for compensation: primarily social skills, primarily academic skills, or primarily values and general conceptual schemas. The latter are most rare, and the former two appear to provide similar programs and experiences, so that differences do not extend far into practice.

Most evaluative research points to initial gains, greater in attitudinal (self-image, motivation) areas than in school performance, which tend to be washed out by the
end of the first or second grade (Grotberg, 1969). This lack of concrete, stable evidence for the efficacy of Head Start has provided a rationale for cutting its funds in times of short money.

A number of issues are unresolved, however, and the value of certain benefits unassessed. How appropriate is a traditional nursery school model to the needs of compensatory programs? How important is the positive response of parents to active involvement in the education of their children (Weikart and Lambie, 1968; Gordon, 1969)? Is academic performance in traditional primary schools the most appropriate criterion of success, or will the fairly reliable and stable, though unspectacular, effects on self-image have a more significant long-term effect?

Parent Education Project

Actually funded through Head Start channels, this project rests on the assumption that the proper kinds of infantile stimulation will facilitate future development and mitigate some of the presumed effects of cultural deprivation. To Gordon it follows that the setting for such stimulation is properly the home, and its providers properly the parents (Gordon, 1967, 1969). He believes that parents can be trained to provide their young children with experiences which will promote intellectual, social, and personal growth. He further believes that those who
train parents need not be professionals in the child development or education fields, but can be recruited from the population of local high school graduates. They should be, in fact, for parents in the community are then less likely to feel imposed upon or exploited by the "ivory tower" world.

Gordon trained some 15 "lower class" women as "parent educators to work with some 280 families in the home. Training consisted of five weeks' intensive academic work followed by field work of gradually increased autonomy. Throughout the project, one day a week was given to "maintenance" training and the assessment of results which might indicate changes. The "subjects" to be taught by the parent educators consist of games, materials and interactions based on the theoretical descriptions of Piaget and Hunt. Their presentation is timed to occur for each child just prior to the norms established by Gesell for the appearance of the behavior involved.

The education of parents consists of weekly home visits, at which the parent educator instructs the mother and does the initial work with the child. As the parent gains familiarity with the materials, their purpose, and how to use them in an enjoyable, relaxed way, the educator withdraws from actual work with the child. The goal is to give the parent a rewarding, self-maintaining involvement
with the child which will, on the one hand, balance an otherwise impoverished infancy and toddlerhood, and, on the other, require little or no further intervention from external sources.

Weber (1970) feels that Gordon's project is succeeding. She accompanied the parent educator on several home visits, and was impressed by "the responsiveness of the children and parents and the sensitivity expressed by the parent educators. The spirit of play and of supportive adult-child relationships seemed pervasive so that the exercises took on an air of gentle challenge devoid of any sense of pushing the child into new behaviors" (p. 58-59). Although "hard" data have not yet been published, Weber reports that at least one independent measure, a normative one, showed significant gains of project children over a control group at 12 months of age.

There are problems, though. Parents drop out of the project for reasons reflective of the conditions which give rise to the very problems the Project is designed to help alleviate. Parents have little time, between working and keeping a house running, for meaningful interaction with infants. Financial conditions require sudden moves. Perhaps most insidious and difficult of all is the situation given by Weber as an example: "Mothers dropped out...
Nurseries in Cross-cultural Education

A very significant project is in progress in a San Francisco community undergoing redevelopment. (All literature on this project is so far "internal" to San Francisco State College, and unpublished. The following discussion is based on the first-hand observations of Weber (1970, pp. 71-76).) Three "subcultures" are involved: a low-income Negro group, a group of low-cost public housing residents, and a middle-income group. There are three separate nursery schools, each involving 20 families selected to make up a cross-section of the ethnic and economic groups available — low and middle income; Black, Oriental, and White; intact and broken families. The children started in the schools at age two and will continue in them for three years.

The overall goal of the project is to see whether mutual concern for their children can promote positive community relations amongst groups undergoing stress which, under other circumstances, might be more conducive to friction than cooperation. Thus two benefits will accrue from a successful program: community harmony for adults, and competent, prejudice-free personalities for the children. Weber lists more specific goals for each. For the
children, "...The development of a sense of basic trust, autonomy, initiative, cognitive development, and social competency." For the adults: "...growth in social competence, adaptability in intergroup acceptance, ...extended use of community resources and participation in community activities" (p. 72).

Activities do not seem to be generated by any particular theory, though Weber pegs their appearance as "field-theoretical" (p. 28f.). She quotes the director, Dr. Mary B. Lane of San Francisco State College: "[We] assume that personality is the mediator of learning and therefore plan to develop the kind of a nursery school program that gives personality full opportunity to develop" (p. 72). Since play is the child's spontaneous way of learning in these years, the nursery program is organized around play. "The child in his play is learning to adapt himself to his culture with all its symbolic insights" (p. 73). This can also be considered a "learning by discovery" approach as opposed to "learning by being taught." Materials are copious, ranging from the usual kinds of creative and dramatic "props" to "the hardware of our times -- cash registers, electric appliances, magnets, plumbing fittings, scales, nuts and bolts ..." (p. 73). The children choose their own activities from a variety, some of which are
always available, and some made available by a teacher (e.g., water, sugar, containers, and food coloring for water play).

Child-staff interaction is based on the notion that identification is a critical process in learning during the preschool years. The specific goals outlined above (basic trust, etc.) are therefore to be achieved by consistently accepting and respecting behavior toward the children — though not necessarily toward their behavior. Thus an attempt is made to separate "the deed from the doer." Weber judged these efforts to be largely successful. "A sense of trust in all others at the center — not an undifferentiated social dependence, but a sense of growing autonomy based upon assurance of support when needed — was consistently evidenced" (p. 72-73). And as for their learning, "...experiences seemed to provide a 'match'" (between the task requirements and the "equipment" of the child) (p. 73).

The project seeks to involve parents, rather than educate them as in Gordon's model. In this too they succeed. The staff of each school takes cues from the parents for needed changes, so that each nursery operates a little differently. The goals for adults seem to be succeeding as well as those for the children. "Indeed, parents have shown such strength that the project is
working toward the goals of having them take over and run the nursery school centers themselves — for the funding for the project will eventually come to an end" (p. 75). And the parents themselves later asked for a training program "...to help them become better teachers both at home and in the nursery school" (p. 75).

This case, then, though final data have not yet been published, appears to be one in which communities have become actively involved with the learning and education of their children, and in the process have acquired something like a sense of community spirit which propels them to cooperative action.

**Experimental Schools Corporation of Arizona**

This preschool, for children two to six years old, is included because of the writer's first-hand acquaintance with it. There are no published references. It was started in Tucson in the fall of 1970 on a "shoestring." The staff consisted of six to eight people of varying ages and academic preparations, and of both sexes. Their program is not based on any particular theory of development, though they all reject the "traditional" nursery and primary education systems, with structured, timed, organized activities, as uncongenial to the nature of childhood.
The staff has two things in common. First, they like the idea of Neill's *Summerhill* (see above). Second, they work with young children because they love it. The latter is evident in two ways, by watching them with children and by looking at their bank accounts. During their first year of operation, they "rotated" at the school, so that while four of them were at the school daily with the children, three or four others were working at odd jobs to acquire money enough to live on later, while they worked with the children. Whoever was most needy after the school's requirements were met -- rent, materials for the children, etc. -- received the surplus, never more than about $50. This year (1971-72) they are somewhat better off in a nearly rent-free building provided by a local church. The staff is now permanent -- two men and two women -- and receives for their labors $150 per month apiece.

There is no systematic approach evident in the children's activities. At any given time some of the twenty-off children can be found painting or making sailboats out of egg cartons; leafing through old magazines for pictures to be later pasted into a "book," serving as the illustrations of a story made up by the child and copied into the book by a teacher; watching "Sesame Street" on television; being read to by a teacher; playing in the
large yard, which is full of piles of dirt, holes, tunnels, piles of used tires acquired free, two auto hulks paid for in the same coin, a family of five goats, and the more usual swings, climbing towers, and so on. Usually some children will be doing all of these things.

Teachers impose structure to the extent of inventing new activities, or modifying activities found from other sources, and providing the appropriate materials for the children. The staff regard themselves as resources rather than directors or educators. They respect the children as individuals, and require respect from them on the same basis. There are no rules save those regarding safety and the destruction of the property and buildings they occupy. Conflicts which inevitably arise between children are "resolved" by not interfering; the feeling is that social rules are best "taught" by letting them evolve naturally in group interaction, by allowing the consequences of not following certain guidelines to occur naturally and progress to a natural conclusion.

Though the staff might not agree, the writer perceives some common philosophical threads in their behavior. (1) They are not bound by mutual acceptance of any theory which dictates their behavior; each behaves as himself, an individual. To do otherwise, they feel, would be hypocrisy. (2) The basis of "social responsibility" lies
in mutual respect for the rights and integrity of others as individuals. The best way for a child to learn that is not to have teachers tell him how to behave responsibly, but to experience and see others experience the practical consequences of behaving responsibly and irresponsibly. (3) Teachers can provide models for "behaving with respect," in their relations with each other and with the children, so that the children can observe what kind of behavior works well. (4) Learning cognitive skills is the same as learning social skills: the best way is "naturally," which means through play. Teachers can help by taking cues from the children's responses and interests as to possibilities for new activities, field trips, and so on.

There is no research data for this program; the following assessment is the writer's, and purely subjective. In comparison to children in other local preschools visited briefly (including a Montessori school), the children of the Experimental School appear to be more independent and self-confident; they tend to know where to go for help or information -- to other children, to a teacher -- when necessary; they have acquired a certain "social consciousness" that expresses itself in that respect for the integrity of individuals mentioned earlier, and in knowing when another child is emotionally or physically hurt and needs sympathy; the children, of various ages and ethnic
groups, mix and interact freely. On the other hand, intellectual skills appear to be somewhat uneven, both within and amongst children. There are one or two children, for example, who engage in little but physical play -- running, climbing, tussling, and so on. This is to be expected, since no child is forced or coerced into doing much that he doesn't choose to. (This raises the question of the child's "readiness" for a traditional public school; see text, chapter 5.)

Bank Street

Bank Street College of Education in New York City manages several programs in education and human relations. The newest is the Early Childhood Center, begun in 1965. The Bank Street approach (Gilkeson, 1969) to "curriculum" is actually not particularly unusual for a preschool program. The importance of play, free choice among several kinds of activities, occasional teacher-led discussions and singing, and so on, are all subsumed under the general goal of building a good self-image and positive relations with others. It is assumed that these goals and techniques are appropriate to all children; specially designed compensatory programs are not necessary.

The distinguishing feature is the scope of the program. It is conceived as a community center for all kinds of health, social work, and training services to
poverty families. Their goal is nothing less than breaking the poverty cycle for the families involved.

One hundred children were recruited by direct entry into the target community in search of "hard core" poverty situations. They were broken into five classes of various sizes, with a child-staff ratio of five to one. Parents are encouraged to come to the school any time and mingle with the children, talk to the staff — to the extent that transportation is provided if necessary. There are parent education programs intended to reach older children in the home, and to make families aware of other kinds of community resources available to them. The attempt is to make the Center the primary focus of the families' non-work existence, and to a certain extent they have succeeded (Wagner, 1967). Several educational programs, such as personal care, child care, and communication skills, have been organized in response to parents' requests. The school also claims intellectual success with the children, but focusses more on expanding their world of experience, on improving their ability to deal with everyday physical and social events, then upon academic skills (Minuchin and Biber, 1968; Gilkeson, 1969).

The New Nursery School

Concerned with the "graduates" of Head Start, this project is part of the so-called Follow Through program.
It is considerably different from the conventional nursery school setup (Dittmann, 1968). Its goals are increased self-esteem and increased intellectual ability of the enrolled children. The medium is an environment structured only in that the materials and activities available at a given time contribute to the learning by discovery of specified aspects of physical or social reality. The "theme" may thus be fluid dynamics (a hose, sandbox, containers, sponge, etc.), or "same-different" language discriminations (matching games, clay work). Beyond this, however, the children's activities are entirely self-determined.

Teachers are taught to follow four major principles. (1) Allow most conversation to be initiated by the child. (2) Always read to a child if he requests it, but don't offer to do so. (3) Do not require children to stop one activity and start another. (4) Do not force children to join in group activities; if group behavior is seen as a deficit for a particular child, change the group activity to attract him into it. The effect of these guidelines is to leave the burden of decision regarding his learning up to the child, and the burden of insuring some reward — causing the decision to have been "right" — up to the teacher.
Some preliminary data indicate favorable effects on both self-image and cognitive skills (Nimnicht, McAfee, and Meier, 1969). The most striking evidence of this is the fact that a significant number of children taken into the New Nursery School were initially classifiable as mentally retarded, and others' performance level was too low to be evaluated; yet not a single NNS child had (as of 1969) failed Kindergarten or first grade.

Weber (1970) has some doubts. From her personal observations she had the impression that the four guidelines for teacher behavior resulted in a rather cold environment, lacking in "warmth and supportive interpersonal relationships" (p. 107). She also questions whether teacher behavior is always "responsive" with regard to verbalization; she observed frequent cases of "verbal bombardment" in which the teachers continually verbalized a child's activity to him -- and not at the child's request.

Return to Structure: The Bereiter-Engelmann Approach

Most educational alternatives discussed so far are alternatives in the sense that they are less structured, less coercive, than traditional public schools. Alternatives which are more so are in the minority. The best known of these is the program designed by Bereiter and Englemann (1966) as a compensatory program for disadvantaged
children. They feel that since such children enter school a year or two behind in their academic skills, the only course to be expected is an accelerating deficit. Their problem is not freedom to learn, but making up lost time. That is best done by formal structure and drill, in distinct skills, similar to that in traditional primary and secondary grades.

To that end, the environment of the Bereiter-Engelmann compensatory program is divided into small "classrooms," in each of which a teacher drills five to eight children in a specific area such as reading, writing, arithmetic, or language. The children move from cubicle to cubicle, from subject to subject, on a schedule similar to high school "periods."

The teaching technique is based on operant conditioning. Positive reinforcement, both social (e.g. verbal praise) and primary (e.g. crackers or candy), are used to reward successful performance. Punishment is also used; Bereiter and Engelmann feel that it is necessary to clarify exactly which behaviors are undesirable. Primarily they punish antisocial or destructive behavior. It does extend to physical punishment -- shaking or a slap. In extreme cases a "time out" closet, bare and poorly lit, is used. The degree of severity is determined by the degree of positive reinforcement which it must "outweigh."
Evans (1971) and Weber (1970) provide good summaries of the theoretical objections to this kind of approach. Perhaps the most popular objection is that it is totally contrary to Piaget's theory, in which "free play" with a variety of materials is in the very nature of the process of cognitive development. Bereiter and Engelmann, however, claim that their's is the only compensatory program which raises IQ scores. Evans (1971) summarizes what little research has been done on long-term outcomes, and finds a general "washout" effect by the mid-primary grades. In fairness it must be stated that most compensatory programs, notably Head Start, also show good initial gains which gradually disappear, and the child approaches the performance level of his peers (Bruner, 1971).

Recall that in the introduction (Chapter 1) two goals of education were delineated: individual self-actualization, and behavior conducive to survival. The educational programs thus far described are, in the latter context, rather small-scale. Whatever their value in terms of the specific children involved, increased understanding of children and poverty, and heuristics, their effects if applied on a large scale must remain a mystery. Two education systems are no mystery, having been massively
and totally applied: the Israeli Kibbutz and the U. S. S. R.

In the U. S. S. R. child-rearing and education are of a piece, considered critical as the crucible for the forging of the "New Soviet Man" (Bronfenbrenner, 1970). Schools are charged not only with imparting knowledge, but with primary responsibility for socialization of the child. Russian parents are responsible to the school for their part in the child's social development, while in America the reverse is true.

Soviet pedagogy specifies both goals and techniques. Specific behaviors in five areas (e.g. community morality, cultured conduct, etc.) are the "behavioral objectives," and they are to be practiced in school, in the home, and in public. The group orientation begins early: 10 per cent of all children under two years old are in public day nurseries, 20 per cent of those from three to seven are in preschools. The first collective experience comes in nursery school, when the children are placed in group playpens. In preschool, the formalized, specific training given them in early sensory-motor functions has a group focus -- even to special toys which require the cooperation of two or three children to make them work.

When formal schooling begins at age seven, socialization is pursued primarily through the techniques of
"socialist competition" and the "group adoption" system. The former is competition for official recognition between successive levels of the socialist system: between "links" within a class, between classes, schools, cities, and regions. The latter system provides for each class "adopting" a younger one, taking responsibility for assisting in the upbringing of its members and for training for the competitions. This often extends into adult society, with a school perhaps becoming the ward of some factory or farm. In the classroom the individual is taught to subordinate his interests to the needs and judgment of the group. The children's collective, through weekly evaluations and public criticism of its members, becomes the agent of adult society and the major source of reward and punishment. Early direction and control by the teacher is gradually withdrawn and given to the group (though the teacher remains for guidance).

According to Bronfenbrenner, it works. The Soviet education is qualitatively equal to the U. S., in his judgment. In addition, its graduates are generally law-abiding and reasonable, and have a deep commitment to the Soviet system and philosophy. To the criticism of "mechanical conformity" he replies with the logical contention that law-abiding means conforming.
The original Israelis settled their country in several "Kibbutzim." Their child-rearing and educational system, according to Bettelheim (1969), evolved in response to two needs. First, they needed literally every hand for work in building, planting, starting a country; women could not be spared the time for long-term child-rearing. Second, they were founding not only a country, but a dream -- a dream of unity, total commitment of each individual to the group and its ideals. They feared that the close family ties generated by each couple raising children in their own home would interfere with, i.e. lessen, their commitment to the group; so, with the impetus of these two needs, they determined to raise their children collectively.

Each kibbutz is independent, and has its own policies in all things, including child-rearing. Bettelheim (1969) considers that their similarities are greater than their differences, however, and he trades scope for depth in his analysis of one Kibbutz ("Atid"). The following discussion is taken from his analysis.

Kibbutz children are separated from their parents five to six weeks after birth, and placed in a "children's house" with other infants, under the care of a professional child raiser or metapelet. Therefore, they see their
parents for daytime feedings and occasional visits up to weaning at six months, and after that for two or three hours at the end of the workday. The metapelet's function is almost exclusively one of physical care, and contains little of emotional nuturance. The children's main source of the latter is their peers. From infancy on, day and night, the children's constant companions are their age-mates. At a very young age they learn to make their way in their small society, to get along without extremes of competition, to comfort each other in times of stress. Increasingly with advancing age, they help one another in toilet training, walking, dressing, and so on. This kind of experience continues into adulthood.

The intellectual experience of the kibbutz child is in Behelheim's judgment, excellent. Early stimulation is frequently more varied than the American middle-class child's, coming as it does from so many sources not available to the latter -- numerous other children, care by several different adults, and so on. Schooling is provided equally to all up to 18 years. It is, according to Bettelheim, of excellent quality, though geared to Kibbutz work needs rather than college preparation. The schools are also the focus and source of socialization; formal groups for mutual criticism and praise are the major behavior sanctions.
How does it work? In the kibbutz there are virtually no "dropouts," no delinquency, no crime. For the kibbutz-reared adult has an intense commitment to the kibbutz, and especially to his peers. The kibbutz has from infancy been his conscience, the source of his rewards and punishments, the provider of all security; by adulthood it has become his life. He is emotionally healthy, responsible, and intelligent.

Emotionally healthy -- but different. His capacity for emotional commitment is not -- perhaps cannot be -- directed towards individuals, but to his peers, the group with which he has spent his entire life. The situation in which the infant forms a deep, focussed relationship with his mother, and the young child identifies with the parent of the same sex; that is, the situation in which deep commitments are learned, does not occur. The emotional needs of kibbutz members are met more by their peers than by individuals of the opposite sex. Bettelheim regards this as a crucially significant development: "...The kibbutz example has shown that it is possible to create a viable new personality type wholly different from that of the parents, in a single generation" (p. 72).

_Walden Two_

A discussion of alternatives in education would be incomplete without the fictional system described by
Skinner in Walden Two (1948). In what follows, the general "plot" will be presented as if it had all appeared in the novel; actually Skinner has had other things to say about education (e.g. 1968, 1971) which will be woven into what follows.

Skinner's vision is great. His view of what's wrong with traditional practices was described earlier (chapter 2). The alternative he suggests is as great in scope as the systems of the U. S. S. R. and the kibbutz. Walden Two is actually a small, nearly self-sufficient community designed, physically and socially, on the principles of reinforcement theory. Frazier, the community's founder and generally regarded as one of Skinner's two "alter-egos" in the novel (Skinner, 1959), regards it as a gigantic experiment, in which the results of many "mini-experiments" are used as inputs to continuously improve the workings of the total community.

Of primary interest are the educational features of Walden Two. Two types of features may be distinguished, organizational and those having to do with methods.

The organizational features are somewhat surprising, if one tends to put Skinner on the opposite side of the fence from people like John Holt, or Postman and Weingartner. For the "schools" for Walden Two have no preset curriculum; content is not divided into "subjects"
which must be "taken in sequence;" attendance at what formal classes there are is voluntary; there are no tests and no grading; students are not grouped by age or ability.

There are people in Walden Two whose main "occupation" (the term does not really apply to the community's economic system, but that is not important here) is teaching, but when they teach, whom they teach — indeed, even whether they teach — is determined by the children. They turn out mainly to be companions and guides for the children; at younger ages (early childhood) they may be termed "professional child raisers." It would take too long to train each parent in the science of behavior to the degree necessary merely to prevent botching the job of child-rearing, let alone to equip them to do it well. Therefore the children of Walden Two are separated from their biological parents early and their care and rearing given over to professionals. They live together in an arrangement similar to that of the kibbutz, except that considerably more care is taken to insure good health. All adults are encouraged to regard all children as theirs, and vice versa.

Thirty-four years before Reimer (1971; see Chapter 2) suggested the "skill model," Skinner was using them in Walden Two. To some degree any worker, professional, artisan, is a teacher, and each place of work a classroom.
Children are encouraged to ask questions of anyone in any job in which they have an interest; and the adult is encouraged to pause in his work, slow down, explain, cater to the child's interest. Skinner has avoided Reimer's conflict between the adult as skill-model for all children and as socializing agent for his own child (see Appendix C) by removing the child from the home. The kibbutz has done the same thing -- but again, "it happened first in Walden Two."

By these organizational features Skinner has alleviated the problem of education as a system of aversive control. By the methods he uses he takes the second necessary step, and makes it an adequately reinforcing experience. As pointed out in Chapter 2 above, a teacher can arrange only a small percentage of the contingencies necessary to bring a student to a given level of efficiency. Teaching machines can do a much better job. Knowledge can be "programmed" into packages small or large, isolated or integral to a larger package. The learner is taken through such a program step by step, getting reinforcement at each step, through both feedback as to the accuracy of his progress, and simply through the operation of the machine. According to Skinner, students will work longer, more intensely, learn more, and feel they have learned more, on such machines than by the usual teaching methods (1968,
p. 53ff. The programmed material which actually produced these results has been published as a text in the "science of behavior;" see Holland and Skinner, 1961).

The child-student in Walden Two is thus free to choose the type of learning experience he wants and needs at a given time. He can use one of a variety of teaching machines and programs, possibly guided by the teacher. He proceeds at his own pace. No need for tests or grades; if a student finishes a program, then by its design he must have learned it. He can, with other students, arrange for a teacher to hold classes on a certain topic. He can approach any person with any skill and ask to have it explained. And in the process of this education he learns the ways of his culture, by learning the behaviors upon which reinforcement is contingent. The system will not produce "robots," either. Individual differences will exist just as in conventional society; heredity and environment, though the latter he more deliberately designed, will still have unique interaction effects. In fact, the free, individualized nature of education in Walden Two removes the need to consider "slow" (though not, one assumes, truly retarded) students as a special problem -- or, for the matter, "gifted" ones either.

A culture, in Skinner's (1971) view, is a particular arrangement of contingencies which is intended to
increase the frequency of behaviors which contribute to its survival or advancement. One function of education is to teach those contingencies, rather than require that each individual be exposed to them directly. He has designed a system which he feels will do that most efficiently and most humanely.
RAISING THE GENERAL INTELLIGENCE LEVEL

Schwebel (1968, p. 208ff.), contends that enrichment of the environment of early childhood can drastically raise the general intelligence level. His logic, a combination of his own work and Bloom's (1964) analysis, follows.

(1) The current distribution of IQ scores is normal (see Figure 2). The IQ difference caused by the difference between deprived and abundant environments is estimated at 20 points. Extending Bloom's logic, 50% of that difference is registered by four years of age; another 30% by age eight; and the final 20% by age 17.

(2) Estimates of the proportion of the U. S. population which experiences deprivation range from 16 to 36 per cent; the midpoint of that range, 26 per cent, will do for the sake of argument. Using estimates of the percentage of each socioeconomic class in each IQ range, Schwebel estimates what percentage overall would actually gain IQ points if subnormal environments were made abundant. The change in the shape of the distribution of IQ scores is shown in Figure 2; the shaded area represents the proportion of the population whose IQ increased.
(3) Schwebel estimates that the IQ difference between normal and abundant environments is 10 points. He assumes that 50% of environments are "normal," and using logic similar to that above, he produces figures which would further change the shape of the IQ distribution (see Figure 2, stippled area). Note that the final shape of the curve is skewed very definitely toward the higher IQ scores.

Schwebel contends that since this represents only the first four years, and does not include health improvements which may result from social changes associated with enrichment, his estimates are actually conservative.

Figure 2. Possible Increases in IQ Scores. (Adapted from Schwebel, 1968).
APPENDIX C

CRITIQUE OF REIMER'S SCHOOL IS DEAD

(1) Reimer expects that a major benefit from eliminating compulsory school attendance will be the return of the socialization function to the home. He avoids the question of the parent who, having spent many years choosing and using the educational resources he proposes is now constrained to stay at home and socialize his or her children. Further, how does the factory worker who works as a skill model get to the factory if he must stay home with his children? This is really the "school-as-babysitter" problem, made crucial by "Women's Liberation."

(2) Another failing is more important. Reimer recognizes that, whether intentional or not, a primary effect of education-by-schooling is to equip the lower classes only for lower-class existence, reserving the better education -- and hence the upper-class existence, with all its power and privilege -- for the middle and upper classes. The primary effect of Reimer's program will be to dissolve this barrier. There is only so much wealth; its redistribution means that these privileged classes must give up part -- perhaps a large part -- of their current
share. How will they react when they see their advantages in power, privilege, wealth, and so on begin to be diluted? Reimer seems to think that all that's necessary is for "The Word" to reach them (with one of the major vehicles being his book), and they will voluntarily — for the good of others — yield up what's necessary from the coffers of their own life styles.

History is not on his side. Even in our democracy (as Reimer himself points out) far greater political power resides in the middle and upper classes than in the lower. It does not seem likely, given the impetus only of The Word, that they will use that power to diminish itself and to reduce the privilege and comfort of their living styles. Such a thing has never happened; some other inducements, often in the form of revolution of the oppressed classes, has usually been necessary.

(3) The schools remain the only resource capable of performing the functions in which they heretofore have failed. Reimer's verdict to the contrary is wrong for two reasons. First, the trend in values in Western society is toward the achievement of optimum individual development (see Goble, 1970; Reich, 1970). It is Reimer's own goal. It is the individual — the adult individual, the product of the socialization and education processes — who is to be freed from survival and self-aggrandizing needs to
achieve the maximum that lies potential in human nature. Here is the independent, competent adult, chief among whose activities is concern and action for the solution of human problems, from the self-actualization of individuals to the elimination of war. In none of the theories discussed in Chapters 2 and 3 is the "goal" of human development an individual whose sole, or even primary, concern is socialization and education. Yet this is exactly what Reimer would require.

(4) Reimer's argument is that schools must be replaced because they cannot accomplish their primary purpose: education which is at once "good," universal, and equal. In that, he is simply wrong, for the kibbutz and the U. S. S. R. have done it. Educationally they have succeeded by any standards. Reimer would object, presumably, to their use of education as an explicit tool of indoctrination. As Chapter 4 of this thesis attempts to show, however, the results may be achieved without quite so structured a socialization technique.
APPENDIX D

PROPOSALS FOR CHANGING THE SCHOOLS
(Postman and Weingartner, 1969, pp. 137-140)

1. Declare a five-year moratorium on the use of all textbooks.


3. Transfer all the elementary-school teachers to high school and vice versa.

4. Require every teacher who thinks he knows his "subject" well to write a book on it.

5. Dissolve all "subjects," "courses," and especially "course requirements."

6. Limit each teacher to three declarative sentences per class, and 15 interrogatives.

7. Prohibit teachers from asking any questions they already know the answers to.

8. Declare a moratorium on all tests and grades.

9. Require all teachers to undergo some form of psychotherapy as part of their in-service training.

196
10. Classify teachers according to their ability and make the lists public.

11. Require all teachers to take a test prepared by students on what the students know.

12. Make every class an elective and withhold a teacher's monthly check if his students do not show any interest in going to next month's classes.

13. Require every teacher to take a one-year leave of absence every fourth year to work in some "field" other than education.

14. Require each teacher to provide some sort of evidence that he or she has had a loving relationship with at least one other human being.

15. Require that all the graffiti accumulated in the school toilets be reproduced on large paper and be hung in the school halls.

16. There should be a general prohibition against the use of the following words and phrases: teach, syllabus, covering ground, I.Q., makeup, test, disadvantaged, gifted, accelerated, enhancement, course, grade, score, human nature, dumb, college material, and administrative necessity.
LIST OF REFERENCES


Crisis in the Classroom. Newsweek, June 14, 1970, 90.


Hall, C. A Primer of Freudian Psychology. Cleveland: Hall, 1954.


Rotter, J. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monogr.*, 1966, 80(1), Whole No. 609.


