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EXCELLENCE IN EDUCATION: A BRIEF ANALYSIS OF THE PROBLEMS

David Pierpont Gardner

To attempt an analysis of the problems inhibiting the attainment of excellence in contemporary American education within the space limitations of this column is, of course, simply not possible. Even in an extended monograph or book of modest length, one would be obliged to condense and summarize a wide array of complex issues and take care not to omit important topics or unduly simplify others.

This task is, in some respects, similar to that faced by the National Commission on Excellence in Education. The Commission, appointed by Secretary Bell in August 1981, has been charged with the following tasks: 1) to assess the quality of our nation's schools and colleges; 2) to compare and to contrast education in the United States with the educational systems in several advanced industrial countries; 3) to study how college and university admission requirements have affected the high school curriculum and how the latter has influenced the former; 4) to identify and study schools and education programs that are successful and those that are not; 5) to assess how major social changes in the last quarter century have affected student achievement and the schools; and 6) to make practical recommendations for action intended to improve the quality of schooling in America with a special emphasis on the education of teenage youth.

The Commission's charge is a broad one, and, given the Commission's eighteen-month life, that charge necessitates a narrowing of the specific topics that might be investigated. While the topics selected for the six scheduled public hearings, six full Commission meetings, two-score commissioned papers, symposia, and other endeavors do not exhaust the range of issues that bear upon the subject, they do reflect what the Commission members and staff believe to be the most orderly way of responding to the Secretary's charge. The topics selected for the Commission's six public hearings scheduled around the country, for example, include: 1) science, mathematics, and technology education; 2) language, literacy, and foreign-language instruction; 3) teaching and teacher educa-

tion; 4) college admission standards; 5) education and work; and 6) education of the gifted and talented. In addition, our first full Commission meeting in 1982 was devoted to an examination of education in the United States and how it compares and contrasts with education in several advanced industrial countries.

Rather than merely list, in a general and summary fashion, material thus far provided to the Commission on these and other topics, I believe it would be more useful to focus on only one of these, albeit briefly. An examination of mathematics and science education will illustrate the seriousness and complexity of the problems we face in general. The Commission's hearing on this topic was held at Stanford University in March of 1982.

At the secondary school level, data presented to the Commission indicate that:

- Between 1960 and 1977, the proportion of public high school students (grades 9 to 12) enrolled in at least one science class declined from approximately 60 percent to 48 percent.

- Secondary school students' exposure to science comes largely from general courses in the biological and earth sciences. Enrollments in chemistry and physics combined, the two engineering preparatory courses, account for only about ten percent of total secondary science enrollments.

- In Japanese secondary schools, where nearly all of the college-bound students take three natural science courses and four mathematics courses during their three-year high school career, thirteen-year olds have the highest math-achievement scores among 12 countries including the U.S.

- The Soviet Union has instituted major curricular reforms at the primary and secondary levels with an emphasis upon science and mathematics. Teaching begins in the primary grades with intuitive understanding of higher mathematics. All students then progress through calculus in a required ten-year sequence.

- Since 1970 there has been a nationwide trend toward reduction of high school graduation requirements. Only one-third

of the nation's 17,000 school districts require more than one year of mathematics and science for graduation.

- There is a severe and growing shortage of mathematics and physical science teachers in the nation's secondary schools. In 1981, 50 percent of teachers newly employed nationwide to teach secondary science and mathematics were actually uncertified to teach those subjects.

At the collegiate level:

- Institutions of higher education have since 1970 reduced the amount of mathematics and science required for admission.

- Remedial mathematics enrollments at four-year institutions increased 72 percent between 1975 and 1980—compared to a seven percent increase in total student enrollments for the same period.

- In public four-year colleges, 25 percent of the mathematics courses offered are remedial. At two-year colleges, 42 percent of these courses are remedial.

How to check and reverse such adverse trends and to seek solutions to these and other problems is far from simple. The task is further complicated by the diffuse configuration of responsibility for governing education in this country. Public education is principally a state and local government function with substantial prerogatives and control exercised by approximately 17,000 local school boards. Private education, of course, is much less subject to state or local government controls. The decentralized nature of the American educational system, on the one hand, provides for local influence and innovation; yet, on the other hand, this decentralization complicates efforts to achieve reforms national in their scope and impact.

The Commission, of course, is an initiative of the federal government. The federal interest in promoting excellence in education is of long standing and ranges over the entire spectrum of educational endeavor. The enhancement of quality education, the promotion of increased educational opportunity, and the funding of basic research have been the principal objects of federal support. The scale of the federal government's involvement, of course, tends to ebb and flow with the times, with politics, and with economic conditions.

DAVID PIERPONT GARDNER, recently appointed chairman of the National Commission on Excellence in Education, is president of the University of Utah. Prior to his appointment at the University of Utah, he was vice-president of the nine-campus University of California system. In 1978, he was selected in a nationwide survey conducted by *Change* magazine as one of "100 leaders of the academy." His book on the California Oath Controversy has been described by philosopher Sidney Hook as a "contribution of the first importance to the educational history of the United States."

Members of the Commission recognized at the outset that any lasting changes in our schools, colleges, and universities would be a function of decisions made by local school boards, teachers, professors, principals, superintendents, other professional educators, state school boards, legislative committees, governors, boards of trustees, boards of regents, scholarly and scientific societies, parents, and the general public. To presume that the federal government or a federal commission can in and of itself effect comprehensive and sustainable changes in our nation's educational system is to misunderstand the workings of both our system of government and the purposes of the Commission. Similarly, to believe that the federal government and the Commission can have no impact is to misunderstand their respective roles and potential. The Commission can be, by its very existence, an effective force for focusing attention on the issue of excellence, for bringing to the fore problems which bear upon it, for teasing out data and testimony of a kind that casts the issues in a fresh perspective, and for offering its recommendations to those whose opinions count at all levels in our country in ways that are perceived to be helpful, attainable, and desirable.

There are two issues which cut across the full range of the Commission's interests which I wish to comment upon in conclusion.

The first deals with the purposes of schooling and the expanding mission of our schools. The erosion of consensus about the essential purposes and mission of the schools in recent years has confused both the public and many within the educational profession as well. It is difficult, under these conditions, for individuals or institutions to seek and attain excellence. Individual and societal understanding of and commitment to our educational institutions would, in my view, be much facilitated and strengthened if there were less ambiguity about the schools' essential purposes and basic mission. In the absence of such clarity, educational standards and expectations tend to be vague and vulnerable. With such clarity, standards can be set and one's performance can be measured against them, thus permitting an excellent, as against a mediocre, performance to be distinguished.

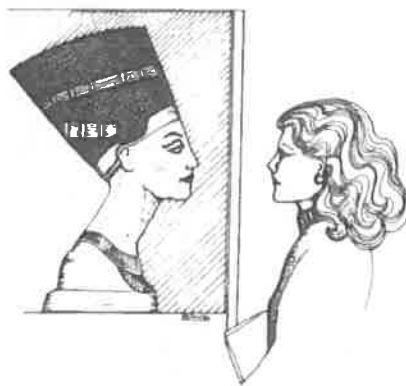
The second issue has to do with reconciling elitist with egalitarian principles which have historically been contending one with another in the making of educational policy. Most of our educational policies and programs in recent years have attempted to broaden educational opportunity. This effort remains as an unfinished agenda in our country. We have tended to neglect, however, policies and programs intended to encourage students, in general, to seek and to attain their full potential. Even though excellence is by definition difficult to attain and is rarely achieved, the successful seeking of it by

the few works a positive and encouraging influence on the many who, although perhaps falling short of their ultimate hopes and aspirations, will, in the process of striving, have accomplished more and grown more and learned more than if the standard of excellence were not there for them to seek, or if they had not chosen to strive for excellence at all. Thus, a better balance needs to be struck between two worthy purposes, viz, the provision of educational opportunity to all of our citizens and the provision of such an education as challenges individual potential and promise.

In summary, excellence in education can be defined and, therefore, sought and evaluated only if the purposes of education and the means of attaining them enjoy a broad consensus among both educators and the public. The purposes of schooling

in America, therefore, are in need of clarification not only because such an effort would be facilitating of the educational process, but also because it is requisite for the setting of standards against which performance can be reasonably measured. Those who seek to achieve at the upper levels of such standards will be seeking and sometimes attaining excellence. In doing so, they will pull the middle performance level toward the top rather than letting it slide toward the bottom. The need to build a new consensus about the purposes of education in our country, a consensus which accommodates in a better balance than we now possess the need for access and the need for more defined and exacting educational standards is, therefore, the most immediate and telling precondition for the improvement of the nation's schools. ■

EGYPT AFTER THE HAIRDO



You have just sprung coiffed
from beauty's den & now
we have come to Egypt
through the portals
of an exhibition.

Three thousand years of culture
float before us under glass
& there you stand—
culture facing coiffure,
each fixed upon the other.

Circling
spiralling inward on the figurines
& etchings, hieroglyphs & mummy gifts
you remark with wonder,
butterflying brilliantly through time.

From Memphis to Thebes
& finally to Alexandria—
which sifts across my tongue like lust—
you grow more marvellously ringed
& ringleted

Until, arriving at the Nefertiti profiles
hewn in stone,
your glance cuts through the glass
& streams across all time
like hair,

Bright as the black Nile,
braceleting my wrists & neck & ankles,
promising me everything
so fundamental
in your newest way.

Alan Perlis

ALAN PERLIS is the chairman of the department of English at the University of Alabama at Birmingham. His books include a study of Wallace Stevens, The World of Transforming Shapes; a study of literature and science, The Mechanical Muse; and a collection of his poems, Skin Songs.

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