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Excessive Educational Pressures

Emotional shock waves following the launching of Sputnik in 1957 have been dissipated. Nevertheless, sequelae linger—notably in American education. During the late 1950's strenuous efforts were directed at improving all aspects of instruction and especially the teaching of science in the secondary schools. To achieve this a number of steps were taken. Summer institutes for science teachers were fostered. Efforts such as the Physics Secondary School Curriculum Project were launched. Campaigns to induce more students to enroll in science courses were conducted. Higher standards of performance were established. An increasing amount of homework was required. At the time, these steps generally met with enthusiastic response. However, today questions are being raised concerning the overall results of the efforts.

The most recent statistics show that campaigns to increase interest in science and engineering have not been very successful. From 1960 to 1965, the number of college juniors majoring in physics dropped by about 15 percent, while overall college enrollment was up over 50 percent. During the same period undergraduate enrollment in engineering increased only slightly. In 1965 more baccalaureate degrees were granted to English majors than to all students in the branches of engineering. Nearly five times as many baccalaureate degrees were granted in the social sciences as in the physical sciences.

To what extent is the current student unrest chargeable to the more stringent secondary school curricula? We do not know. However, there is growing concern that too much is being asked of the young. A recent poll conducted by *School Management* showed that 88 percent of the respondents believed that, in their own school districts, pressure on college-bound students had increased during the last 5 years. A substantial majority felt that pressure had become too intense.

In a speech reported in *Chemical and Engineering News* (20 February 1967), L. Carroll King, a professor of chemistry at Northwestern University, is critical of present-day education. He feels that secondary school students are being asked to do "too much, too fast, too soon." He suggests that some students are enduring 17 hours a day of activity in high school. King charges that "we have committed a crime against a generation." These are strong words, but soundings in various areas of this nation have elicited similar sentiments.

King's concern was aroused by observations on chemistry majors entering his university. He found that too many very good high-school students fail outright or do poorly in college. King believes that the poor performance is a sequel to excessive work in high school. The students quit rather than face seemingly endless years of 17-hour days.

Responsibility for excessive pressure on secondary school students is shared by many. College admission offices, parents, new curricula, teachers, and the students themselves are involved. Results of the excessive pressure seem to be especially evident in the physical sciences and engineering.

In the decade since Sputnik, scientists and others have participated in notable experiments in education. Some of the results are unexpected. Evaluation, looking toward prompt changes, is in order.

—PHILIP H. ABELSON