

UNITED STATES



OF AMERICA

# Congressional Record

PROCEEDINGS AND DEBATES OF THE 91<sup>st</sup> CONGRESS  
FIRST SESSION

VOLUME 115—PART 6

MARCH 20, 1969, TO APRIL 1, 1969  
(PAGES 6921 TO 8378)

## OTHER NECESSARY MEASURES

- (1) Special attention to consumer problems of the poor;
- (2) Better enforcement of existing consumer protection laws;
- (3) Improvement of regulatory power so that Government can effectively administer Congressional directives;
- (4) Elimination of loopholes and modernization of antiquated laws.

## AGENDA FOR CONSUMER ACTION

From the Council's point of view, an Agenda for Consumer Action must also stress the following goals for both Government and the private sector:

1. Availability of information necessary for intelligent consumer choice;
2. Assurance of safe products and wholesome foods;
3. Assurance of an adequate supply of goods and services at reasonable prices;
4. Abolition of fraudulent and abusive sales and credit practices;
5. Protection of the consumer's right to an unpolluted environment;
6. Stronger enforcement antitrust laws and removal of anti-competitive restraints;
7. Provision for adequate housing, health care, and transportation.

## APPENDIX

The Office of Consumer and Citizen Affairs should have the following powers and duties:

- (a) Make recommendations to the President on questions of policy relating to consumer affairs;
- (b) Coordinate the consumer programs of other Federal agencies;
- (c) Maintain an Office of Consumer Counsel with authority to intervene on behalf of the public in administrative and judicial proceedings;
- (d) Receive consumer complaints, hold investigatory hearings and recommend corrective action;
- (e) Receive complaints on the operations of Federal departments and agencies and recommend corrective action; authority to investigate disposition of consumer complaints by Federal departments and agencies (the American concept of the ombudsman);
- (f) Have authority to represent consumer interests before any Federal agency;
- (g) Make recommendations and provide reports to the President, the Congress, and the public to assure that consumer or citizen problems are expeditiously and properly resolved by public agencies;
- (h) Cooperate with and assist state and local agencies in consumer representation and protection;
- (i) Cooperate with and assist industry and business in voluntary efforts to promote consumer protection;
- (j) Conduct studies of matters related to consumer interests;
- (k) Act as a clearinghouse for information and programs affecting consumers;
- (l) Maintain liaison with consumer associations and councils at the national, state, and local levels;
- (m) Encourage and participate in development of consumer education programs;
- (n) Establish a Federal Register for Consumers.

Members of the Consumer Advisory Council present at the meeting included:  
Bronson C. La Follette, of Madison, Wisconsin, Chairman.

Robert J. McEwen, of Boston, Massachusetts (Associate Professor and Chairman of the Department of Economics, Boston College).

William J. Pierce, of Ann Arbor, Michigan (Professor of Law and Director of the Legislative Research Center, University of Michigan).

Corwin D. Edwards, of Eugene, Oregon (Professor of Economics, University of Oregon).

Richard H. Grant, of Portsmouth, New Hampshire (General Manager, Peas Air Force Base Federal Credit Union).

Gerald A. Lamb, of Waterbury, Connecticut (State Treasurer, State of Connecticut).

Hon. Maurine B. Neuberger, of Portland, Oregon (Former United States Senator).

Mrs. Otrie Taylor, of Los Angeles, California (Neighborhood Aid Participant for Neighborhood Aid projects in Watts, Los Angeles).

Louise Gentry, of State College, Pennsylvania (Assistant Dean for Resident Education, Pennsylvania State University).

## EDUCATIONAL OPPORTUNITIES FOR THE AMERICAN INDIAN

Mr. MURPHY. Mr. President, on February 27, the Los Angeles Herald Examiner did an editorial, entitled "Help the Indians."

Early this year I was appointed to the Special Subcommittee on Indian Education, and recently testified on the importance of improving and expanding educational opportunities for the American Indian. Because of the importance of the subject of Indian education, I inserted my testimony in the RECORD on March 11.

Today, Mr. President, I would like to ask unanimous consent that the editorial be printed in full in the RECORD at this point.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

## HELP THE INDIANS

Sen. George Murphy says the Bureau of Indian Affairs is "stagnant, blundering and inept" in dealing with American Indians.

The California senator wants sweeping reforms to improve the conditions and provide a future for the 600,000 Indians in this country.

Murphy has recommended that Indian education, health and welfare programs be transferred from the Bureau of Indian Affairs to the Department of Health, Education, and Welfare. He also has asked that federal funds earmarked for state educational programs for Indians be restored.

Testifying before a Senate committee recently, Murphy said 50 percent of Indian youngsters drop out before completing high school. One of the largest tribes, the Navajos, has a 30 percent illiteracy rate. The average education level of all Indians is only five years. The average income of Indians—\$1500 per year—is 75 percent below the national average. Indian unemployment is 40 percent—10 times the national average. Tuberculosis among Indians is seven times the national average.

Exclusion of California from Johnson-O'Malley federal funds has caused the California Indian, both educationally and economically, to fall to hold his own with his contemporaries and to fall further behind, said Murphy. The senator said Indian students from Arizona and New Mexico are attending Sherman Institute at Riverside, but California Indians are not admitted. Relocated Indians from other states, while living in California, receive federal assistance while California Indians do not.

"The federal government's performance record insofar as the American Indian is concerned should give pause to those who believe that solutions to our problems should be packaged in and dictated from Washington," Murphy said. "The federal government must help, but however good its intentions, without local cooperation, initiative and commitment, chances for success are slim."

Senator Murphy's concern is well taken and his recommendations merit strong consideration.

## "LEARNING, SCIENCE, AND ART"

Mr. MONDALE. Mr. President, recent studies have shown that as much as "one-fourth of our growth in per capita income can be traced to increased schooling and as much as one-third to inventions and advances in knowledge." Everyone is aware that money spent on education is an excellent investment, both in terms of the individual and in terms of the future of our country. It is surprising to find, however, that there is almost no information on the extent to which the specific resources we allocate to education actually result in the realization of intended goals. "Toward a Social Report" calls attention to this dirth of knowledge.

"Toward a Social Report" is a working model of the social report which the President would annually submit to Congress if the Full Opportunity Act of 1969—S. 5—were enacted. The Full Opportunity Act would also establish a joint committee to help the Congress evaluate the report. A Council of Social Advisors would be established to assist the President in the preparation of the report. S. 5 also declares that full opportunity for every American is a national goal.

One of the advantages of a social report is that it points to difficult policy questions which must be decided if full opportunity for every American is to be realized. For instance, the sixth chapter of "Toward a Social Report," entitled "Learning, Science, and Art" points out that we know relatively little about what or how much American children learn as a result of specific resource allocations.

We have also learned that those groups which "suffer social and economic deprivation systematically learn less than those who have more comfortable backgrounds." The situation is even more unfortunate since even those deprived students who manage to do well are still denied equal and full opportunity. Specifically, "of those high school seniors who are in the top one-fifth, in terms of academic ability, 95 percent will ultimately go on to college if their parents are in the top socioeconomic quartile, but only half of the equally able students from the bottom socioeconomic quartile will attend college."

It is indeed pathetic that some students who manage to overcome the handicap of poverty in high school cannot go on to college not because of their ability but because of the accident of their socioeconomic background.

The report goes on to note that merely increasing the number of schools or teachers will not by itself be a sufficient answer to the problem. If we are to tap this reservoir of talent, we must work to eliminate the cause of this inequity; poverty. It is, indeed, a difficult problem, but then this Nation has never before shied away from equally difficult problems. I sincerely hope that in the future we shall see as much progress in this realm as there has been in the realm of science and technology.

I want to also call to my colleagues' attention one other unfortunate situation discussed in the sixth chapter of "Toward a Social Report." The report notes that "however vibrant the cultural

life of the Nation may be, many of the live or performing arts are in financial difficulty." Thus, it can be seen that the report helps us to identify another problem which needs to be placed on the Nation's agenda.

Mr. President, I ask unanimous consent that the sixth chapter of "Toward a Social Report," entitled "Learning, Science, and Art," be inserted in the RECORD.

There being no objection, the chapter was ordered to be printed in the RECORD, as follows:

CHAPTER VI. LEARNING, SCIENCE, AND ART  
HOW MUCH ARE THEY ENRICHING SOCIETY?

Knowledge, intellectual skills and the creative capacity of scientists and artists are an important part of the Nation's wealth. Health, national defense, and the quality of the environment in future years depend on the success of research and education now. So does the future performance of the economy. Some studies have suggested that as much as one-fourth of our growth in per capita income can be traced to increased schooling and as much as one-third to inventions and "advances in knowledge." The decisive productive potential of the supply of knowledge is illustrated by the surprisingly rapid recovery of the German and Japanese economies after the devastation of World War II. However much physical capital had been destroyed, the stock of useful knowledge remained.

This chapter will first attempt to bring together available information on how much Americans are learning. It will then turn to the sources of the knowledge that there is to teach: to the stock of systematic knowledge which we call science, and to the unstructured collection of human wisdom and creativity which we call art.

LEARNING

*Exposure to learning*

The average American has spent far more time in school than his parents did. Today, three-fourths of the Americans just old enough to have done so have finished high school—roughly the same proportion that finished the eighth grade in 1929. Today, about 15 percent of Americans in their late twenties have graduated from college—about the same proportion that had graduated from high school at the time of World War I.

In addition there has been an increase in the proportion of each year that the student spends in school. Since 1900, 34 days have been added to the average academic year. Pupils are also absent much less often, so the actual number of days of school attendance per year by the average pupil has increased by more than half.

The difference in years of schooling received by different groups of Americans has at the same time decreased. Among Americans born in 1901 or shortly before, those in the 90th percentile had 13.5 years of schooling, and those in the 10th percentile 2.6 years of schooling, for a difference of almost 11 years. Among those born between 1932 and 1936, those in the 90th percentile had 16.4 years of schooling, and those in the 10th percentile, 8.4 years, for a difference of 8 years. This difference is projected to decline to about 5.5 years for those born between 1956 and 1960. The gap in median years of schooling between whites and Negroes has fallen from an average of 3.4 years for those born in 1901 or before to one-half year for those born between 1942 and 1946, and appears to be narrowing still further.

The amount of resources used to educate each pupil is also increasing. In 1956, there were 27 pupils for each teacher; now there are 24. Teachers have also had more formal training; 93 percent of the teachers now have college degrees, as compared with 78 percent only 13 years ago. The one-room

school, commonplace in rural areas as late as World War II, has largely disappeared. Total expenditures per pupil in elementary and secondary public schools increased from \$2.25 to \$3.43 per day (in constant dollars) between 1954 and 1964. There have also been improvements in curricula, especially in science and mathematics.

It is generally assumed that these increases in the length of schooling and expenditures on education have brought about an increase in the amount children have learned. There is, however, almost no direct evidence on this point—unless it be the evidence that parents often have difficulty with their children's homework. The *Digest of Educational Statistics*, for example, contains over a hundred pages of educational statistics in each annual issue, yet has virtually no information on how much children have learned. The Department of Health, Education, and Welfare has recently encouraged an attempt at a "national assessment" of educational achievement in the United States. This assessment would involve administering tests measuring standard academic skills to a representative sample of Americans of various ages. Such an assessment, if repeated periodically, would yield for the first time a series of estimates of the change taking place in the intellectual skills and knowledge of the population.

*Are we learning more?*

In 1870, 20 percent of the white and 80 percent of the Negro population were illiterate. Now only 2.4 percent are deemed illiterate. They are mostly older people and Negroes, and are concentrated mainly in the South. The rate of illiteracy among Americans from 14 to 24 years of age is only about one-half of 1 percent. These facts mark our progress in bringing most Americans up to the rudimentary but critical point of being able to read and write.

What about higher levels of skill and knowledge? Although there is no national assessment of what students are learning, testing is widespread and some clues to changes in test performance of school-age children are available.

The Educational Testing Service recently assembled 186 instances in which comparable tests have been given to large and roughly representative national samples of students at two different times over the past two decades.

In all but 10 of the 186 paired comparisons, the later group performed better than the earlier group. On the average an additional eight percent of the students in the more recent group scored higher than the median student in the old group.<sup>1</sup>

The results that have been described cannot be accepted uncritically; neither can they be casually dismissed. Until better evidence is presented, the tentative judgment must be that American children in the sixties are learning more than their older brothers and sisters learned in the fifties.

This collection of achievement test data also suggests that high school students, and perhaps students in the higher grades generally, have not improved as much as students in the lower grades. Typically, the test comparisons for high schools showed a smaller gain in performance than was usual in the elementary grades. In addition, the

<sup>1</sup> This amounts to an improvement of one-fifth, assuming a normal distribution of scores. These test results must be interpreted with extreme caution. There is the possibility students are becoming increasingly "test wise" as time goes on, and this might account for the improvement in test scores. Moreover, test results do not measure all types of intellectual achievement. There could have been retrogression along those dimensions of intellectual development that the tests did not measure.

Preliminary Scholastic Aptitude Test and the American College Test program, which are given to juniors and seniors in high school, showed no improvement on balance.<sup>2</sup>

One possible reason for this disparity is that the increase in the proportion of teenagers attending high school may have reduced the average level of intellectual ability and cultural background in high schools. The increase in preschool education may also have had a particularly beneficial influence on the lower grades. Television may have at the same time significantly raised the intellectual level of younger children, but seldom stretched the minds of high school students.

*How much more could we be learning?*

One way to answer this question is by comparing the performance of American students with those in other countries to see if we are doing as well.

One of the few sources on how well American students do as compared with foreign students is the International Study of Achievement in Mathematics. It deals with only one subject, but this is probably the one in which performance can best be compared among nations with different languages and cultures. The study considered only developed nations, and found that American students had one of the poorest levels of performance of the nations which were studied.

The fact that the United States did badly in this comparison is probably due in part to the fact that a larger proportion of young people go through the secondary education system in the United States than in most other countries. Still, American 13 year olds also did comparatively poorly, and this is an age at which none of the countries concerned have excluded many children from the educational system. Thus, if we contend that American youth have on the average as much aptitude for mathematics as children of other nations, we must conclude that we can do much better than we are doing.

In estimating the potential for improvement in American education, international comparisons are probably less relevant than measured differences in learning among different groups in the United States.

For estimating differences in learning among groups, the two best sources of information are the Armed Forces Qualification Test (with its forebear, the Army General Classification Test), and the tests done for the *Survey of Educational Opportunity* (also called the "Coleman Report") carried out under the Civil Rights Act of 1964.

These tests, like others, inevitably incorporate cultural bias. Verbal performance, for example, tends to be measured in terms of the student's command of literary English or the standard conversation of the majority, not in terms of the special dialects of minorities. Mathematics tests include fractions and compound interest, but rarely deal with the probability of "making a six" in craps. Nonetheless, the tests measure skills which are needed in order to do well in contemporary American society.

The Armed Forces Qualification Test is used to evaluate the trainability of prospective servicemen for military service. Because the proportion of young men who are drafted changes from time to time, place to place, and group to group, the test does not provide entirely satisfactory information. Nonetheless it shows clearly that Negroes and Southern whites score, on the average, lower than whites from other regions, and Southern Negroes score less well than Northern Negroes.

<sup>2</sup> Average scores on the Medical College Admission Test and the Law School Admission Test have been increasing. But this does not show that college students are necessarily learning more, since the sort of students who apply for medical and law school admission may change over time.

These groups receive, on average, different amounts of schooling, but this difference accounts for only part of the differences in performance.

A 1964 study by the President's Task Force on Manpower Conservation revealed that a majority of young men failing the Armed Forces Qualification Test, white and black alike, were brought up in poverty. Forty percent had never gone beyond eighth grade, four out of five failed to complete high school, and half came from families with five or more children.

The *Survey of Educational Opportunity* was based on a nationwide sample of 564,000 students in grades 1, 3, 6, 9 and 12. The tests covered verbal ability nonverbal intelligence, reading comprehension mathematics, and general information in the practical arts, natural sciences, social studies and humanities. With the exception of Oriental American children, the average minority group pupil (Negro, Mexican-American, American Indian, Puerto Rican) scored distinctly lower on these tests than the average white pupil. Students in the South, both white and Negro, scored below students of their own race in the North.

The schooling which the disadvantaged groups had received had apparently done nothing to lessen the gap between them and more fortunate pupils. Their disadvantage was evident from the start of their school experience through grade 12. The relative position of the different groups was about the same for all the grades tested (except in the South, where Negroes fell to a lower relative position in the later grades). This means that in terms of absolute grade level the disadvantaged fell further behind. Negro pupils in the metropolitan Northeast, for example, were 1.6 years below the norm in grade 6 and 3.3 years below the norm in grade 12.

The Armed Forces Qualification Test and the *Survey of Educational Opportunity* thus show that persons from both poorer groups and poorer areas performed less well on achievement tests, and that the existing pattern of schooling does not compensate for the initial handicap entailed in being brought up in a disadvantaged group or area.

If talented individuals do not get a full education, the Nation is obviously not developing its capacities as much as it could. And as the chapter on "Social Mobility" showed, only half of those who are in the top ability quintile, but from families in the lowest socioeconomic quartile, go to college, whereas 95 percent of the equally able students from the top socioeconomic quartile go to college. Socioeconomic status also has a major effect on college attendance at other ability levels.

If high school graduates from all socioeconomic levels went to college in the same proportion as high school graduates of the same ability level in the top socioeconomic quartile, more than half a million additional students would enter college each year. This would increase the number who attended college from each high school graduating class by about one-half.

If the environmental and social handicaps of poor children could be overcome, and the elementary and secondary education they receive improved, an even larger number of high school graduates could profit from a college education.

We have seen that American students did less well in mathematics than students in a number of other countries, and that the pattern of results in the Armed Forces Qualification Test and the *Survey of Educational Opportunity* implied that there is an untapped reservoir of intellectual capacity in the Nation's disadvantaged groups and areas. It is also clear that those young people from poor families who do nonetheless score well on achievement tests are much less likely to enter college than those who come from a

higher socioeconomic level. Thus there is no doubt that the Nation has failed to take full advantage of its children's capacity to learn.

#### *The policy challenge*

The greatest challenge to American education today is to find effective ways of helping low income children learn the basic intellectual skills so that they can be more successful in school and compete more successfully for jobs and rewarding positions in the community when they become adults.

How much a child learns depends upon his mother's diet before he was born, his own nutrition and health, his access to books, and the psychological and intellectual influences in the home. Most psychologists seem to agree that the preschool years are a period of particularly rapid development, and that attitudes acquired in these years can have enduring effects. Even after he reaches school age, a child typically spends only one-third of his working hours in school. Television programs and conversations with parents and playmates take up much of a child's time. The motivation to learn is obviously important, and there is every reason to believe it is decisively influenced by the home environment.

Some of the findings in the *Survey of Educational Opportunity* suggest the importance of the educational impact of factors outside of school. The *Survey* found that the socioeconomic status of a child's parents, and of his classmates, were major determinants of a student's academic performance. Once the impact of the socioeconomic status of parents and peers had been accounted for, such differences in quality of schooling as were observed and measured explained very little of the remaining variation in student performance.<sup>3</sup> The only observed school characteristic that had a significant effect was the verbal ability of its teachers, and this effect was much smaller than that of socioeconomic status of parents and classmates.

Despite the limitations of the *Survey* the conclusion that a child's socioeconomic environment is an important determinant of how much he learns is almost certainly right. This conclusion, in turn, suggests that we cannot take full advantage of the potential for learning simply by spending more on schools. Higher incomes and better jobs for parents may have more influence on their children's learning than any "compensation" which can be given to the children themselves. Better television programming and help for parents in how to talk with and stimulate their own children may also be important. Improved housing arrangements which give children from poor families the opportunity to attend schools and live in neighborhoods with children of different social and economic status may also be of crucial importance.

Nevertheless, it is clear that schools could do far more to stimulate and foster the curiosity and creativity of children—not just poor children, but all children. We must somehow find a way to do two things. First, we need to channel more resources into education especially in areas where the needs

<sup>3</sup> The *Survey* did not measure the quality of schools well and its conclusions are subject to varying interpretations. The conclusion that the socioeconomic status of the families of a student's classmates is an important determinant of a student's performance could be interpreted as evidence that differences in the quality of schooling are important, because high status parents usually want and can afford to live in neighborhoods with good schools. Since variations in the quality of schooling were measured only partially and crudely in the *Survey*, it is possible that the average socioeconomic status of the families of the students in a school measures the quality of that school better than the explicit measures of school quality used in the *Survey*.

are very high in relation to the tax base and present spending. It takes money to attract sensitive, intelligent, and highly trained people into teaching and education administration, and to replace rat-infested old schools, especially in the center cities, with attractive convenient structures.

But resources alone will not solve the problems of American education. A new spirit of acceptance of change and desire for improvement is needed. Progressive industries often spend 5 to 10 percent of their funds on research and development. But expenditures on education research and development are now miniscule, perhaps a half of 1 percent of the total education budget.

Furthermore, much "research and development" in education consists of small projects having little impact on actual learning in the schools. There is a need for major departures, for developing whole new curricula and approaches to education, for trying the new approaches with real children and real schools. This kind of effort is expensive, by the present standards of education research, although not by the standards of military and industrial research and development.

But even a major effort to find more effective methods in education through research and development will not be sufficient unless the schools as a whole adopt a new attitude toward change. School systems must learn to see themselves as continuous laboratories trying new things, evaluating results, and making changes.

#### SCIENCE

The advance of science has an effect on the Nation's capacity to produce more goods and services, better health, and a stronger defense. Our society also values scientific truth for its own sake. And because it is clear that the state of a nation's science is related to its productivity, the health of its people, and even to national security, Americans are concerned whenever any other nation excels us in an important area of scientific capability.

#### *Resources devoted to science*

What is the state of American science and how much are we adding to the stock of systematic knowledge? Unfortunately, useful measures of scientific productivity do not exist.

A frequent measure of our scientific capital is the number of scientists and the amount of resources devoted to scientific pursuits. Between 1950 and 1965 the number of scientists and engineers nearly doubled, reaching about a million and a half in the latter year. About a million were engineers, a half a million scientists. This increase in the number of scientists and engineers was 4.5 times the rate of growth of the total labor force. The number of scientists and engineers getting doctorates has doubled in the last 10 years.

Between 1953 and 1965 the Nation's research and development expenditures increased fourfold, from 5.2 billion to 20.5 billion. This means that these expenditures increased at a compound annual rate of 12 percent per year, and that the percent of the Gross National Product used for these purposes rose from 1.4 to 3.0 percent. No other nation comes close to devoting a similar proportion of its resources to scientific research and development.

#### *The diversity of science*

Three hundred years ago all experimental sciences were grouped together in one specialty called "natural philosophy." An individual could attempt to master almost all important scientific knowledge. In 1958, the National Science Foundation counted 120 subfield groupings and 142 groupings in 1968. The number of particular specialties increased even faster: 695 specialties were listed in 1958, 1,235 in 1968.

This increase of specialization does not measure the pace of scientific advance. Classifications and new specialties are sometimes created for reasons unrelated to the growth of knowledge. Nonetheless, the statistics on the increasing diversity and division of labor in science reflect the rapid growth of scientific exploration and knowledge.

#### *The advance of technology*

The remarkable advance of industrial technology in recent years are too obvious to need documentation. Television, supersonic jets, computers, nuclear power and many other advances have revolutionized our lives and made possible feats, like trips around the moon, that earlier generations thought sheer fantasy. Whereas the *Mayflower* took 2 months to cross the Atlantic, in the 1890's it took 1 week, in the 1930's a day, and now about 7 hours. But advancing technology has also created problems for society—noise, congestion, pollution, and the like.

Some insight into the level of technological achievement in the United States can be obtained from what is called the "technological balance of payments." This is an accounting of payments foreigners have made to us for the use of patented techniques or technical expertise, minus our payments for their patents and technical expertise.<sup>4</sup> The United States enjoys a huge surplus in the technological balance of payments, and this surplus appears to be growing. Our surplus was \$311 million in 1956 and \$1,097 million in 1965. The ratio of our payments to our receipts was one to seven in 1956 and one to nine in 1965. If the transfers within multinational firms are left out, our surplus is still growing; it rose from \$110 million in 1956 to \$235 million in 1965.

These striking figures on our technological lead can easily mislead us. Science is international, and any major scientific achievement is likely to be of mixed ancestry. Moreover, many scientists have come to this country from other lands. Although the "brain drain" increases the inequality of income among nations, it is nonetheless an encouraging indicator about the state of American science.

#### *The policy challenge*

The main challenge presented by the state of American science is the need to lay the foundations for a science policy. We are confronted with burgeoning advance that offers great promise. Can we formulate policies that will nurture our invaluable scientific resources and ensure the fulfillment of prospects that lie ahead?

The competition for public resources will almost certainly be more intense, either between science and other programs, or between different scientific endeavors. The Nation will also continue to find itself at the center of controversies concerning the condition and needs of world science.

If there is almost sure to be more heat generated by issues of science policy in the future, ways must be found to generate more light. Priorities in science could be laid out more systematically, and farther in advance. Issues involving such priorities could be exposed to wider public debate. The very unpredictability of scientific breakthroughs could be made the basis for more rational development of scientific manpower, institutions, and communications with an emphasis on keeping these resources flexible.

The international character of the scientific enterprise poses a special challenge. The United States, as we have seen, spends a larger percentage of its income on scientific research and development than do other countries. One possible explanation for this is that some of the benefits of scientific advance are readily available to any nation in

the world. For example, people of any country can take advantage of such medical advances as heart transplants. Because of its size and affluence, the United States gets a larger share of the benefit of a basic scientific advance than other countries, and therefore has an incentive to spend more of its national income on basic research. Even the biggest countries do not, however, reap all of the benefits of the basic research they finance. Thus the world as a whole probably tends to spend too little on basic science.

The benefits of basic research are international, and worldwide cooperation in science is essential. A cooperative recognition of the universality of basic science could benefit all mankind.

#### ART

Artistic creativity and its appreciation are an important part of our national life. There is art not only in museums, theaters, opera houses, and books but in every aspect of life—in cooking, dress and industrial design. Although this section concentrates on the conventionally most professional and "highbrow" forms of art, we must not forget that this is only a small part of the total and may not be the most important.

#### *Access to art*

*Access to many forms of art is easier today than it has ever been before.* Modern technologies of communication and transportation have given the entire population an access to a variety of art forms that could in an earlier age have been open only to a privileged few. Even the most fortunate in earlier periods could not possibly have heard as wide a variety of symphonies, or seen such a diversity of drama, as the connoisseur of records and motion pictures can enjoy today.

This improvement in the accessibility of art has continued even in recent years. Twenty-five years ago almost no one owned a television set; by 1952, 30 percent of the households owned at least one set, and this percentage rose to 67 percent in 1955, 88 percent in 1960, and 94 percent in 1967.

Notwithstanding the obvious shortcomings in television programming, the growth in the number of television sets has given more Americans an access to at least some serious attempts at artistic expression. National Educational Television's 148 stations now reach almost all metropolitan areas, and surveys have shown that the NET audience about doubled between 1961 and 1966, by which time it reached over 6 million homes and an estimated 14 million viewers weekly, apart from school programs. Of 260 hours of programming supplied last year to NET's affiliates, about half or more were in the field of art and culture.

Television is, to be sure, only one of the technologies that has made art more accessible. Even such an old technology as that involved in making books has changed with the "paperback revolution," which has made books more accessible to millions of Americans. This development, along with expanding incomes, increased education, and other factors, has brought about a 90-percent increase in the number of new books and editions between 1960 and 1967, and a 65-percent increase in books classified in the arts or humanities. These increases considerably exceed the rates of growth of population and income.

Improved methods of transportation and increased incomes have also widened the range of possible artistic experience for many Americans by facilitating foreign travel. In 1929 about half a million Americans traveled abroad, but in 1967 almost three and a half million did so.

New technologies have not only widened the access to art, but also permitted new forms of artistic expression, from films to new kinds of sculpture and music.

#### *The performing arts*

At the same time that technology and economic advance have improved the accessibility of many types of art, they have also created problems for other art forms, especially for those involving live performances. There is evidence that live performances of certain kinds are not increasing in proportion to the growth of population and the economy, and in some cases are perhaps even in an absolute decline.

The Broadway theaters are the largest single part of the American theater, and they have been keeping records in a consistent way longer than other theaters. These records reveal that Broadway attendance has not expanded in proportion to our population or economic growth. The Broadway theater reached its peak quite some time ago, probably about 1925. No new Broadway theater has been built since 1928.<sup>5</sup> There has been no clear trend in attendance since World War II, and there clearly has not been enough of an increase to offset rapidly rising costs. Since 1950, ticket prices have risen only half as much as costs. Though a few "hits" make great profits, the Broadway theater as a whole is in serious financial difficulty.

The off-Broadway theater grew rapidly from the late 1940's until the midsixties, but it has an attendance of about one million, compared with seven million for Broadway. More recently, the off-Broadway theater has suffered, too; the number of productions is now smaller than it was in 1961-62.

There has been little or no growth in the number of professional symphony orchestras since 1950. In 1967 there were 28 entirely professional symphony orchestras playing for seasons ranging from 22 to 52 weeks. There are about twice as many "metropolitan" orchestras, mainly professional but having smaller budgets, and a large number of partially amateur community orchestras.

Chamber music groups are generally less well organized than symphony orchestras. Receipts from ticket sales to the small halls appropriate for chamber groups are generally low, and the cost of the individual performer relatively high. Some orchestras are organizing chamber groups to achieve the advantages of a longer season for some of their members.

Opera is perhaps the most vulnerable of the arts because it is easily the most expensive, requiring large casts, an orchestra, a chorus, and a ballet company as well as expensive scenery and costumes. The only major opera companies are the Metropolitan, the New York City Opera, the Chicago Lyric Opera, and the San Francisco Opera. There are about 40 other professional and semiprofessional organizations, but they usually give no more than 25 performances in a year. Estimating total attendance at these performances requires a good deal of guesswork, but the figure has been placed at less than 2 million in 1963-64.

Ballet as a separate artistic undertaking is characterized by high costs in many of the same areas as opera. Annual attendance for dance performances is estimated at less than 1 million, with dance tours showing a marked relative growth in popularity since 1952. At the present time, however, there is little chance to see a professional dance company perform any place except in one of the largest cities or in a college town.

Notwithstanding the paucity of information in this area, it does seem very likely that there is no "cultural boom" where direct attendance at live performances is involved. The rate of growth in such performances is probably slower than that of the economy as a whole, and expenditures on these art forms have certainly not risen at anything like the rate at which expenditures on science and education have increased.

<sup>4</sup> This is not an ideal measure because of problems of definition and the bias against basic science.

<sup>5</sup> Unless Lincoln Center is counted.

*Vulnerability of the performing arts*

To some extent, the relative decline in live artistic performances is probably a natural result of the development of modern communications technology. The new technologies offer a less expensive substitute for live performance.

But there is another factor at work. One explanation of the slow growth of audience participation in the performing arts is the tendency for this participation to become even relatively more expensive as the economy advances. There is little increase in productivity per worker in the performing arts: a string quartet continues to require four performers. In the economy in general productivity increases regularly, and so then do wage levels. Since this does not happen in the performing arts, someone must make sacrifices. If it is not the public or the patrons, it will be the artists themselves, who will have to choose other careers or forego higher incomes.

This systematic tendency for the relative cost of live performance to rise is made somewhat less serious by the technological improvements in ways of disseminating culture, such as by phonograph records, motion pictures, and television, providing substitutes for the audiences and additional earnings for some performers. But if there is presumably also a need to enjoy culture at first hand, these technological developments do not altogether fill the gap from the audiences' point of view. From the performers' point of view, the fact that only a relatively small number can expect careers in the media may be discouraging.

There is another cultural sector, where the problem of productivity can be considered not to exist at all. This is what we might call amateur or subsistence culture: artistic work carried on by the artist primarily for his own enjoyment. Increased incomes may allow more of this, as growth of amateur community symphonies, for example, seems to show. Sometimes amateur efforts can create or enlarge a commercial audience, as with rock music.

The probable long run tendency for a relative decline in certain types of live performances does not automatically indicate a "social" or "public" problem. Nevertheless, live performances are needed to give the typical performer (or composer or playwright) a chance to develop. The quality of records, motion pictures and television could decline if live performances fell off beyond some point, since the lack of this large testing and training opportunity could become critical.

The performing arts indirectly benefit others besides members of live audiences in other ways as well. Their quality is tied up with the capacity to educate, and probably also the capacity to communicate. The cultural inheritance of a nation is also a source of important values in a civilized society—understanding, appreciation, and respect for other people. Finally, the taste for art is in part an acquired taste: those who have a broader cultural experience tend to have the greatest concern for art. The demand for art might be greater if the opportunities to enjoy it were more numerous. These arguments suggest that the prospect of a relative decline in live performances is a matter of general public concern, and something to keep in mind in any assessment of the condition of American society.

## BYELORUSSIA

Mr. GOODELL. Mr. President, today I rise to join my colleagues and all Americans in commemoration of the struggle of the Byelorussian people for their freedom and independence.

Fifty-one years ago, on March 25, 1918, the people of Byelorussia declared

their independence, and established the Byelorussian Democratic Republic. Despite the hardships, battles, and sacrifices endured by her people, the young state was unable to preserve her hard-won independence against the onslaught of overwhelming Bolshevik forces—and in early 1921 the young Republic was made part of the Soviet Union.

Today the Byelorussian people do not enjoy the freedoms that we regard as our birthright, but they valiantly cling to their hopes of regaining freedom. And we salute their efforts.

## DAVID K. E. BRUCE

Mr. TYDINGS. Mr. President, today marks the farewell for one of America's most accomplished diplomats. Our Ambassador to the Court of Saint James, David K. E. Bruce, is returning to private life.

With 8 distinguished years in London, Ambassador Bruce has held our Nation's most prestigious diplomatic post longer than any other man. Prior to 1960, he served in Paris and Bonn, the only individual to represent America at her three premier Embassies.

Throughout his public career David Bruce set a standard of excellence rarely equalled.

Throughout his life Ambassador Bruce has been known as a man of intellect and grace.

President Richard Nixon is said to have remarked that while he and his three predecessors in the White House disagreed on many things, they all "agreed that David Bruce was a giant."

Born in Baltimore, graduate of Princeton and the Universities of Maryland and Virginia, member of the State legislatures of both Maryland and Virginia, he has led a remarkably varied and decidedly brilliant career.

Lawyer, Foreign Service officer, businessman, Ambassador Bruce went to Britain as a Red Cross representative in the early days of the Second World War.

Shifting to intelligence work and the Office of Strategic Services, he ended the war as a colonel in charge of OSS operations in Europe.

He then began a career in public service which in time would include Assistant Secretary of Commerce, American Aid Administrator in France, and for 2 years Under Secretary of State.

I am proud to say that Ambassador Bruce is a good friend of the Tydings family and was for many years a close and trusted friend of my father.

His stepping down today is, in one sense, an occasion of sadness for the Nation is losing one of its finest diplomats and public servants. On the other hand a note of joy creeps in for Ambassador Bruce and his lovely wife, Evangeline, are now back in the States with us.

I have the feeling that their counsel and company shall be widely sought.

Our first Ambassador to Great Britain, John Adams, was noted, among other things, for his brilliance and commonsense. The same can be said, I think, of David Bruce.

The Nation owes him a vote of thanks, and I know that we all wish him well.

## THE CHALLENGE OF VICTORY

Mr. HANSEN. Mr. President, it was my distinct honor and pleasure to take part last night, Tuesday, March 25, in the fourth annual Robert A. Taft Memorial Award presentation. On hand making the presentation was President George H. Williams.

The meeting, on the American University campus, presented the Taft Memorial Award to U.S. Senator JACOB K. JAVITS.

The award was presented by the American University Young Republican Club in recognition of his distinguished service to the Republican Party and the Nation.

Mr. President, I ask unanimous consent that the Senator's address on this occasion be included in the RECORD.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

## THE CHALLENGE OF VICTORY: BUILDING A DURABLE REPUBLICAN MAJORITY

I am honored to receive the Robert A. Taft Award. I never served with Robert Taft in the United States Senate, for he was tragically taken from public life before I was elected to that body in 1965. However, I worked with Senator Taft on the Taft-Ellender-Wagner Bill (which I sponsored in the House of Representatives) and on Federal Aid to Education, and had great regard for his stature and achievements.

I am also pleased to appear before the Young Republican Club of American University on this occasion, for I owe the members of that Club a debt of gratitude. Last autumn, many members journeyed to New York City to spend several days working with me in my campaign for reelection to the United States Senate. I am deeply appreciative of that help, and, as a grateful and successful Republican candidate, I really should be presenting an award to you!

The Republican Party, led by President Nixon, won a great victory last November. Mr. Nixon received support in almost every section of the country, and, to that extent, both the Republican Party and he are in an admirable position to form a stable national majority—indeed, better placed, I would argue, than the Democratic Party. However, if we are to do so, it is important to remember that the Republican Party has not yet become the majority party in this country and that President Nixon was elected by a minority of the people. His 43 per cent of the popular vote and the almost 32 million votes he received in 1968 were both lower than the comparable figures he had obtained eight years before.

It has become almost axiomatic since last November to report the end of the New Deal coalition which was formed by Franklin Roosevelt in the midst of the Depression and remained in virtually uninterrupted power for almost four decades. As former Presidential Assistant Bill Moyers, paraphrasing Mark Twain, recently pointed out, the reports of that coalition's demise continue to be "greatly exaggerated." But, unquestionably, the Democratic coalition is in disarray, and the Republican Party now has a unique opportunity to transform its Presidential victory into a stable governing majority.

Whether we do so or not depends upon the development of an affirmative Republican program aimed at a national constituency and to the emerging "youth" sectors of American society. But, let us bear in mind, that majority status for the Republican Party will not be won automatically.

Specifically, it has been argued that a new Republican majority can be formed by an appeal to the previously "solid" Democratic South—to those who supported George Wallace in 1968—and to an as yet unformed social