

# CALTECH'S 1963 ALUMNI SURVEY

## II. Opinions, Interests, and Concerns

by John R. Weir

The 1963 alumni survey produced considerable information on alumni interest in social and political problems. The information was gathered from two different sections of the questionnaire. In one, there were opinion statements about which the alumnus could "agree," "disagree," or have "no opinion." In the other section, he was asked to indicate "one or more of the political, cultural or philosophical problems that genuinely interest you now."

It is safe to say that scientists and engineers, at least of the Caltech variety, are no longer enclosed in ivory towers or insulated in their laboratories. Practically all of them responded to the statements, and 68 percent took the time to write of one or more current problems which were of paramount concern to them. These highly educated men, many of them in key positions in our society, are vitally interested in a broad spectrum of national and world affairs, and they hold opinions which could have considerable effect in shaping our destiny.

### CURRENT OPINIONS

The opinion statements were the same ones used in the 1952 survey. There were some objections to the oversimplified and unqualified nature of many of these statements (in *both* surveys) and we recognized that they were no longer as timely or relevant in 1963 as when they were first used. However, if there were shifts of opinion from 1952 to 1963, we felt it would be useful to identify them, and this would outweigh many of the disadvan-

tages inherent in the statements. There have been some significant changes that justify this decision.

In 1952 our alumni strongly favored free enterprise and minimal government planning and control. In 1963 they hold similar opinions, but much less strongly. They seem to share in — and, in a sense, approve of — the national trend toward more centralized planning that has characterized the past decade, as indicated by their response to all three of the following statements:

*Democracy depends fundamentally on the existence of free business enterprise.*

	% in '63	% in '52
Agree	65	71
Disagree	30	23
No opinion	5	6

*The best government is one which governs least.*

	% in '63	% in '52
Agree	52	60
Disagree	42	32
No opinion	6	8

*Government planning should be strictly limited, for it almost inevitably results in the loss of essential liberties and freedom.*

	% in '63	% in '52
Agree	54	65
Disagree	41	28
No opinion	5	7

While these percentage changes are not spectacular, they are consistent in direction and suggest a valid change in the attitudes of the respondents

— a change toward accepting more government control and less of the individual autonomy associated with “free enterprise.”

Today’s alumni also seem to be more tolerant of other people and other viewpoints. In spite of having an intensive education in science, nine out of ten (versus eight out of ten in 1952) think: *There are many worthwhile and important concepts which cannot be proved scientifically.* In line with this is the fact that, even though half of the alumni rarely or never go to church (*Engineering and Science*, May 1964), seven out of ten disagree with the statement: *Religion has little to offer intelligent, scientific people today.*

They disagree even more emphatically than in 1952 with the statements: *If we allow more immigrants to this country, we will lower our standard of culture,* and *Agitators and trouble-makers are more likely to be foreign born citizens than native Americans,* and *Individual liberty and justice under law are not possible in Socialist countries.*

At the same time, nine out of ten continue to agree that: *All Americans — Negroes, Jews, the foreign born, and others — should have equal opportunity in social, economic and political affairs,* and to disagree with the statement: *Children of minority groups or other races should play among themselves.*

Caltech alumni have further extended their acceptance of other people and other viewpoints to an increased endorsement of the statements: *Over the next decade, we must try to make the standard of living in the rest of the world rise more rapidly than in our own country,* and *We now have enough scientific and technical knowledge to substantially eliminate poverty, disease and ignorance in the world, if we would apply our knowledge.* Our alumni believe that the technological advances in which they are playing a leading part should be applied for the benefit of everyone.

However, the 11 intervening years of operation of the United Nations would seem to have somewhat tempered their enthusiasm for our commitments to that organization. For they agree less that:

*The United Nations should have the right to make conclusions which bind members to a course of action.*

	% in '63	% in '52
Agree	53	66
Disagree	36	22
No opinion	11	12

Yet there is a note of optimism in that still only one-fifth believe that: *Deep ideological differences between countries are irreconcilable.*

Upon reflection, the foregoing opinions seem to present something of a dilemma when we consider them in the light of the opinion statement that had the most change of all. In 1952 a majority agreed, whereas in 1963 a majority are now in definite disagreement, with this viewpoint:

*We are not likely to have lasting peace until the U.S. and its allies are stronger than all the other countries.*

	% in '63	% in '52
Agree	34	47
Disagree	53	41
No opinion	13	12

Perhaps we can infer from these data that our alumni favor international cooperation and negotiation rather than overwhelming strength as the road to peace. However, they seem loath to assign this function entirely to the United Nations.

Finally, a significant change has taken place in alumni attitudes toward government support of scientific research. In 1952 only half of the respondents agreed with the statement: *The government should promote and subsidize research in the physical and biological sciences.* In 1963 two-thirds of them hold this view.

In the decade between surveys there has been a tremendous increase in government support of research and development, and many of the alumni have been recipients of this support, so we might infer that this change of sentiment is due to a desire to share in future R and D appropriations.

However, alumni attitudes toward research in the social sciences have changed in a similar direction. In 1952 they were evenly divided on the statement: *The government should promote and subsidize research in the social sciences,* while in 1963 they favor it almost two to one. These changes seem to imply an increased approval of government support of all scientific research and would seem to be further evidence of what has already been suggested — a trend toward increased approval of government planning and coordination of economic and social affairs.

## CURRENT INTERESTS AND CONCERNS

The 11 years that have passed since the 1952 survey have seen many scientific and technological advances. Computers, men in space, the discovery of the structure of the DNA molecule, and oral contraceptives are but a few of the developments which are having a significant effect on all mankind. Also, many potential difficulties only dimly foreseen in 1952 have become major problems for modern industrialized societies. Automation, tech-

nological unemployment, urbanization, and air and water pollution are some of the more technical problems that interest our alumni.

But they are even more concerned with solutions to what might be termed the more human problems of modern life. Human relations, population control, the elimination of poverty, and world peace are more frequently mentioned. At least this seems to be one conclusion to be drawn from an analysis of the replies to the request to indicate "one or more of the political, cultural or philosophical problems that genuinely interest you now." This request, followed by nine blank lines, elicited 8,081 separate interests or concerns from 3,167 alumni. We have attempted to analyze and discuss them by first dividing them into several categories. Most of them could be readily grouped under nine general headings, with a tenth provided for those miscellaneous items that were either unique or too infrequent to merit an additional category. The list that follows has these ten categories arranged in order of decreasing importance. For example, the interest that was mentioned most often — and therefore was most important to the alumni — related to civil rights. Therefore it is first on the list.

In addition, it also proved useful to subdivide each category in order to retain important shades of meaning. These subdivisions are listed under each category, again in order of decreasing importance. Thus, under Civil Rights, "for integration" occurred most frequently, "against integration" least frequently.

#### A. Civil Rights

- 1) For integration.
- 2) Integration, but no indication whether for or against.
- 3) Civil rights or civil liberties in general.
- 4) Integration, but limited or qualified in some manner.
- 5) Loss of liberties, censorship, a police state, House Un-American Activities Committee.
- 6) Against integration.

#### B. Economics

- 1) Population control, population explosion.
- 2) Aid to underdeveloped countries, foreign aid, technical assistance, Africa, Latin America.
- 3) U. S. government fiscal policy, defense budget, taxes, balance of payments.
- 4) Urban problems, city planning, transportation and traffic.
- 5) Industrialized society, depletion of natural resources, automation, use of leisure.
- 6) Economics in general.
- 7) Unemployment or technological unemployment.
- 8) The Common Market, foreign trade.
- 9) The farm problem, surplus food.

#### C. World Peace

- 1) International relations, peace in general.
- 2) Disarmament, arms control.
- 3) Communism, the communist threat.
- 4) Atomic war, nuclear testing.
- 5) The Cold War, U. S. defense.
- 6) Cuba, Red China.
- 7) U. S. foreign policy.
- 8) World government.
- 9) Improvement of intercultural relations.
- 10) For the United Nations.
- 11) Against the United Nations.

#### D. Growth of Big Government

- 1) Individualism, states rights, free enterprise.
- 2) Government controls and big government in general.
- 3) Creeping socialism.
- 4) Welfare state, government subsidies, medicare.
- 5) Growth of the radical right.
- 6) Growth of influence and power of the Defense Department, military control of industry and research.
- 7) The Kennedy dynasty.
- 8) Growth of a power elite.
- 9) Invasion of privacy.

#### E. Miscellaneous

- 1) Academic interest, such as philosophy, history, literature.
- 2) Political interests other than purely local or civic.
- 3) Local, state, civic or political problems.
- 4) The future of democracy.
- 5) The future of conservatism.

#### F. Religion

- 1) Religion in general.
- 2) The question of atheism, science versus religion.
- 3) Applying religious principles to modern day life.
- 4) The ecumenical movement.
- 5) Separation of church and state.

#### G. Role of Science in the Modern World

- 1) Role of science, scientists and engineers in the modern world.
- 2) Space exploration, life on other planets.
- 3) Conservation.
- 4) A specific science question which was claiming the respondent's interest.
- 5) Pesticides, air and water pollution.
- 6) Government sponsorship of science.
- 7) The decline of status of the engineering profession.
- 8) Academic freedom.

#### H. Personal Development

- 1) The nature and purpose of existence, the place of an individual in a mass society.
- 2) Interpersonal and human relations, communications.
- 3) Personal development or understanding in general.
- 4) Music.
- 5) Art.
- 6) Encouragement of the arts, the place of the artist in our culture.
- 7) Mental health.
- 8) Mental processes.
- 9) Drama, television.
- 10) Retirement, longevity.

#### I. Education

- 1) Education in general.
- 2) The improvement of public, or elementary or secondary education.
- 3) For federal aid to education.
- 4) Improvement of higher education.
- 5) Development of the social sciences.
- 6) The information explosion, professional obsolescence.
- 7) Improvement of adult education.
- 8) Improvement of international education.
- 9) Against federal aid to education.

#### J. Concern for Ethics and Morals

- 1) Concern for the deterioration of U. S. moral fibre, public apathy, materialism, loss of pride in work.
- 2) Concern for morals or ethics in general.
- 3) Concern for ethics in unions.
- 4) Delinquency, juveniles.
- 5) Ethics in government and the courts.
- 6) Capital punishment.
- 7) Narcotics.
- 8) Ethics in advertising.

The foregoing rank list indicates that civil rights is the most frequently mentioned category of interest, and concern for ethics and morals is least frequently mentioned. This does not imply, however, that the alumni have no regard for ethics or morals. It simply indicates that they are currently more keenly interested in civil rights problems — and

certainly this is one of the central concerns of the nation today. In fact, the sub-headings under Categories A, B, and C represent the great bulk of subject matter covered by radio, TV, and press in recent years. Our alumni interests are indeed very similar to those of the nation as a whole.

### *Central concerns*

Another way we might identify the kinds of problems that are of central interest to our alumni is to ignore the ten major categories and just look at the most frequently mentioned sub-headings.

The single most frequently mentioned interest was under Civil Rights — “for integration” (A, 1). Mentioned almost as often was A, 2 — “integration, but no indication for or against.” Together, these two account for one-eighth of all the interests mentioned, and clearly indicate the central concern of the alumni. In classifying these responses, we were forced to use a certain amount of subjective semantic selection. Where a respondent wrote merely the one word “integration,” we somewhat arbitrarily decided he was probably “for” it; if he wrote something like “race relations,” or “segregation,” we assigned his response to “no indication either way.”

The third most frequently cited problem was the population explosion and its control (B, 1). Here, perhaps, is a marked difference between Caltech alumni and the general public, which still seems to see this problem as of minor importance in world affairs.

The fourth important problem was international relations and the general problem of world peace (C, 1). Many technically trained people, especially scientists, have become closely associated with arms control, disarmament, and nuclear deterrence activities, and many have become advisors to various government agencies concerned with foreign affairs. Obviously, the technically trained scientist and engineer of today has his eye on more than his scientific apparatus.

The fifth most frequently mentioned problem was aid to underdeveloped countries (B, 2). Again, this seems to represent a recognition that there must be equality of social, cultural, and economic opportunity for all if we are to have a peaceful and satisfying existence.

The sixth most frequently cited concern was U. S. government fiscal policy (B, 3); the seventh was education in general (I, 1); eighth was individualism, states rights, free enterprise (D, 1); ninth, big government, government controls (D, 2); and tenth, religion in general (F, 1).

### *One-interest alumni*

Most of the alumni named several concerns that interested them, some as many as ten. However, somewhat less than a third of the respondents listed only one interest in this section of the questionnaire.

If we examine the frequency with which they mentioned specific interests and compare these with the rankings already discussed, there are no differences among the three most popular interests. Both the one-interest alumni and the other respondents mention integration and population control most frequently. But, from here on, an interesting and provocative divergence emerges. The total group's preferential interests are for peace and international relations, foreign aid, U. S. fiscal policy, education in general, bureaucracy and big government, disarmament and arms control, and so on. These are almost all interests of a political, social, or cultural nature involving either international or institutional relationships.

By contrast, the one-interest group focuses their concerns on academic topics, individualism, the nature and purpose of existence, the individual in a mass society, creeping socialism, communism, personal understanding, and human relations. These interests clearly seem more personal, private, and self-centered, as if the respondents were more insulated, more detached from national and international affairs than the rest of the alumni. Their attention seems to be focused inward upon themselves rather than outward toward the world.

By and large, however, we think the kinds of problems that interest our alumni are undoubtedly representative of the kinds of questions that are commanding the attention of educated, public-spirited men throughout the United States. It is most gratifying to have had this kind of spontaneous response to tabulate, rather than a more circumscribed check list from which some particular interest or concern might well have been omitted. Alumni concerns are diverse, yet complementary; self-interested in the enlightened and best sense of the word, yet public-spirited. So far, it seems from our survey results that Caltech alumni are responsible, concerned, and informed citizens in whom the Institute can take a justifiable pride.

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*This is the second in a series of articles reporting the results of the survey of Caltech alumni conducted last year by Dr. Weir, associate professor of psychology. In our next issue (October), Dr. Weir will discuss political and civic activities and affiliations.*