

# Alumni Speak Out

*Some random comments from the Alumni Survey questionnaire*

*In the 5,000 Alumni Survey questionnaires that have been returned to the Institute to date, responses to the back-page invitation for "comments" have been gratifyingly numerous. Although there is no such thing as a typical comment, some representative ones appear on these pages. Remember, however, that for every comment below, there is at least one other stating an opposite point of view.*

If I had known then what I know now — and I don't mean academically!

Social ineptitude caused me more trouble at Tech than any other single cause.

On the other side of the ledger, I can think of no other school where I myself could have finally got my social bearings. I only wish that I had had more time to devote to academic problems. At a school such as UCLA, for example, I would have been at a *complete* loss socially. I don't believe I

would have done better academically because I would have worried even more about my social life. At Tech, the social atmosphere was one I could finally cope with, and I think I came out on top. I even managed to graduate — and I sure don't have any complaints there!

Give more closed-book exams in physical science courses. Otherwise lazy people like me tend not to memorize many things that one should have in one's head and not in a book. A lot of inventiveness comes from having a large number of facts memorized.

Instructors were competent technically, but most lacked a real talent for teaching (notable exceptions were Linus Pauling and several in the humanities). It is hoped that by now the Development Program has stimulated the quality of undergraduate instruction so that it begins to match the excellent programs in graduate study and research.

I am now convinced that every student, and particularly the high-capability student that is attracted to Caltech, should concentrate *first* on obtaining a diversified, "liberal" education, and only secondarily on becoming trained for a future occupation. A full understanding and personal involvement in philosophy, economics, psychology, and sociology is necessary for a well-planned life and a successful career. Such a background can become a motivation for technical study.

All physics majors study too much physics and not enough mathematics. Physics, like medicine, should be undertaken only at the graduate level, after a thorough training in applied mathematics.

More concentration on modern politics and practical economics and finance would be advisable. There are too many Caltech PhD's taking orders from second rate students who graduated from third rate schools.

There is a popular notion abroad today that one must have broader studies in the humanities and solid sciences — even to the neglect of good solid



## BURIED UNDER WORK?

Haven't got around to that alumni questionnaire yet?

There's *still* time to send it in.

Fill it out. Send it in now.\*

\*You mean you've *lost* it?

Then fill out this handy coupon and we'll send you another.

Name.....

Address.....

City..... State.....

## Alumni Speak Out . . . *continued*

engineering subjects . . . I never had any subjects except technical ones beyond my freshman year at Yale . . . I do not consider myself uneducated. There are great book programs, discussion groups, books to read, lectures to attend, etc. I believe I have as broad an education as many of my contemporaries who took majors in the liberal arts areas at Yale.

At Caltech emphasis on humanities may be needed. It is certainly not needed for engineers at Yale, who are in the distinct minority and are in no way segregated in living quarters, etc.

I am highly disturbed that our schools and colleges *do not* instill an abiding faith in our free-enterprise system without the need of the deadening hand of bureaucratic government and welfare statism. I often ask myself and antagonists, "How did our nation become the greatest in the world long before we had the welfare state philosophy?"

My feeling is that CIT tends to produce graduates with an excellent background in science. Unfortunately, this 4-year cramming-in of knowledge may tend to drastically reduce the student's drive

and interest in the very science in which he is so well trained. This I have found to be true in my own case, at least.

I do not believe in the epistemological worth or fairness of questionnaires; this one is particularly offensive in its attempt to elicit a check in one of *three* boxes on issues about which we have perhaps thought long and deeply — and I feel that way about many of the questions asked me. A check in a box simply does not communicate my ideas.

What price "science"?

What price "objectivity"?

Page 5-6 is particularly ludicrous. Were I not a compulsive complier, I should not return this folder.

I think the instruction of *undergraduates* at Caltech is left too much in the hands of graduate students.

I regard Caltech as a great institution. I'm glad to have spent the time there but wouldn't relish doing it again.

***Instant***  
**capability**  
**is**  
***Nanosense . . .***  
**however —**

Fast reaction to problems in the indicated areas is SOP at CTI\*—

<input type="checkbox"/> COMPUTER APPLICATIONS	<input type="checkbox"/> PROGRAMMING
<input type="checkbox"/> AUTOMATION	<input type="checkbox"/> PROBLEM SOLUTION
<input type="checkbox"/> CONTROL THEORY	<input type="checkbox"/> HUMAN FACTORS
<input type="checkbox"/> MANAGEMENT PLANNING	

(\*On a project or staff augmentation basis.)

---

Check area of interest, and send to:

***Control Technology, Inc.***

DR. A. S. JACKSON 1232 BELMONT AVENUE LONG BEACH, CALIFORNIA or please call collect: (213) 433-3360	T. W. CONNOLLY 194 NASSAU PRINCETON, NEW JERSEY or please call collect: (609) 924-5134
---	--

WANTED:

**Ph.D.**  
in  
**ELECTRICAL  
ENGINEERING**

With experience and/or thesis in one or more of the following:

- *Communications Systems*
- *Telemetry & Tracking*
- *Operations Research*
- *System Programming*
- *Information Theory*

One of many major benefits is the professional environment and status you will enjoy at HUGHES-FULLERTON R&D.

For complete information, please write:

DR. ARNOLD SMALL

**HUGHES**

HUGHES AIRCRAFT COMPANY  
**FULLERTON R & D**  
P. O. Box 3639, Fullerton, Calif.  
An equal opportunity employer.