

An Invitation to the Faculty

On the assumption that we could all enjoy the pedagogical nuances of teaching and the subtleties of research into fundamental physical laws better in an atmosphere that permitted respiration—I would like to invite the faculty to join in a smog action program.

We are all aware of the outstanding contributions of some individual members of the Caltech faculty. For example, Dr. A. J. Haagen-Smit's discovery of the photochemical reactions of smog and his present leadership of the Air Resources Board are well known. But I wonder what the faculty as a whole has done to back up the efforts of individual members, to insure that the simple technical steps which should have been taken ten years ago will in fact be taken today.

For just one example, the public knows practically nothing of C. C. Patterson's research showing the dangerously high lead levels in the blood of average urban dwellers. Have we, as Patterson's colleagues, made sufficient effort to insure that the legislature faces the problem of the lead content of gasoline? About eight million gallons are burned every day in Los Angeles County—the home of the California Institute of Technology, an institution which has just embarked on a program of "Science for Mankind."

The core problem today is that there are about four million cars in the Los Angeles area. They produce *12,000 tons of pollutants per day*. Each car on the average will go on producing this pollution for a period on the order of ten years. No matter what kind of new-car emission standards are passed, these cars already on the road will continue to put out this enormous amount of pollution unless we actually, in operational fact, do something about it.

There are simple, inexpensive repairs and adjustments that can be made on some cars which will cut their smog emission by a large amount, some more expensive repairs that will cut pollution by a smaller amount, and so on. There is an obvious cost-benefit criterion of action to be taken.

This cost-benefit approach is an important part of the study undertaken by Associated Students of Caltech in their research project and continuing studies on smog.

The Caltech student project will shortly produce a report on the completion of this work, a project which I have heard characterized by professional smog experts as one of the best analyses produced by any group so far. Part of that ASCIT report will be a proposal for diagnostic stations that would prescribe corrective remedies for cars currently in use and insure the maintenance of low new-car emission levels. Will the Caltech faculty support this very fine piece of work? Will the faculty communicate it to the community? Will we mobilize support for obvious actions which need to be taken to alleviate smog now?

Here is my invitation:

Will some of the faculty volunteer to come together, discuss and agree on a few technical, engineering actions which should be taken in the immediate future to alleviate smog contribution from cars?

Will they make one trip to Sacramento to get the legislature moving on these measures?

Would they talk to the local radio and TV once or twice, the newspapers occasionally?

Depending on how they felt they could be most effective, I would suggest they do this either in the name of an ad hoc faculty committee, as a subcommittee of the Los Angeles Chapter of the Federation of American Scientists, or under the auspices of the Southern California Clean Air Council.

Halton Arp
*Staff Member, Mount Wilson and
Palomar Observatories*

*Board member, Southern California
Clean Air Council*

*Chairman, Los Angeles Chapter
Federation of American Scientists*