ence Manpower, 1968, National Science Foundation pamphlet 70-5, January 1970).

If the AAAS and scientists in general are committed to the goal of equal opportunity, is not some investigation called for to ascertain why that goal continues to elude us?

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Effect of the Draft on Graduate Physics Education

On 24 April 1968, Betty Vetter, executive director of the Scientific Manpower Commission, Washington, D.C., gave an address to the American Physical Society entitled "The doomsday machine for physics—the draft." At the time, her prediction that "the new rules will result in the elimination of half of three consecutive classes of entering students (and almost two-thirds in physics)" was considered by many to be exaggerated. It is now apparent that the effect of the draft on graduate physics education at Stanford University is threatening to fulfill her dire prediction.

The Stanford physics department is fortunate in attracting each year an outstanding class of entering graduate students. Out of approximately 400 applicants, an entering class of roughly 30 students is formed. More than 80 percent of the entering students have National Science Foundation or other fellowships and have Graduate Record Examination scores within the top tenth of all physics undergraduate students in the nation.

Of the 29 students who accepted admission to graduate study in our department in the fall of 1968, 5 did not come for reasons related to the draft, 1 did not come for other reasons, 6 left during the first academic year for reasons related to the draft, and 17 returned for the current academic year; of the 17, 13 are vulnerable to the draft.

In order to explore whether our experience has been duplicated elsewhere, we sent inquiries to the top 21 departments in this country whose graduate faculties were voted as "distinguished" or "strong" in the 1966 *Assessment of Quality of Graduate Education* by A. M. Cartter (American Council of Education, Washington, D.C.). Ten replies were received. Table 1 shows that many of them had experiences similar to ours; that is, of the students who accepted offers of admission for the fall of 1968, between 11 and 38 percent did not come or have since left for draft-related reasons.

Our experience has shown that uncertainty with respect to draft status has an extremely detrimental effect on our students. Graduate study in physics, and, no doubt, in other professional fields, requires an absorption and concentration on the subject matter which is probably unique as far as occupations are concerned. Under these circumstances many of our graduate students cannot bear the pressure of a I-A classification, even for 1 year. They tend to join other activities in which their military status is defined with greater certainty.

Judging by the classifications of the new class of students who entered in the fall of 1969, most of the 13 students vulnerable to the draft will receive I-A classifications during the present academic year. Furthermore, under the present lottery system one may expect that at least half will be

Table 1. Summary of draft experience of students entering graduate work in physics in the fall of 1968.

	ACE rank	Students (No.)				
		Accepted admission	Did not come or left		Remaining in 1969	Did not come or left for known draft reasons (%)
			Draft reason	Other reasons		
Berkeley	1	65	20	6	39	31
Harvard	3	22	6	1	15	27
Princeton	4	32	11	1	20	34
Stanford	5	29	11	1	17	38
Illinois	8	88	17			19
Yale	11	21	7	4	10	33
Michigan	13	44	9	14	21	20
Rochester	13	28	3	4	21	11
Maryland	16	90	14			16
Hopkins	19	15	5	0	10	33
Carnegie-Mellon	21	22	6	5	11	27

drafted. Therefore we can predict that of the class which accepted admission for the fall of 1968, less than half, perhaps as few as one-third, will be left in the fall of 1970.

We realize that the present method of draft selection is in a transitional period as far as graduate students are concerned, since in the future mainly 19-year-olds will be affected. Nevertheless, the transitional period will be of approximately 4 years duration. If no special consideration is given to graduate students during this period, the effect on our graduate program will be disastrous.

The situation is actually worse than predicted by Mrs. Vetter who suggested that after 2 years of military service most graduate students would return to graduate study. It appears, though, that a large percentage of students are actually leaving the field of physics as a result of a I-A classification and that they will not return to our department at a later date. This statement is based on interviews with students who have left our graduate program over the years for nonacademic reasons. Over the years, also, there has been no equivalent flow of graduate students from other fields into our department, so that the loss of graduate students is not balanced off.

The recently announced postponement of induction of graduate students until the end of the academic year does not affect the long-range predictions made here. Although the postponement will allow many students to obtain their Master's degrees, it does not avoid a I-A classification and the period of uncertainty which causes students to leave graduate study in physics.

In assessing the effect of the actual and the further predicted decrease in graduate enrollment on our department it should be noted that graduate students are heavily engaged in our teaching and research programs. Specifically, one-third of our students teach and more than 95 percent are involved in some research project. Obviously, a large decrease of graduate enrollment caused by the draft will have a very damaging effect on our department. The blame for this unhappy situation clearly lies with the legislative and executive branches of our government. Unless drastic changes in the draft laws are made, our government is guilty of eroding the educational and research programs of some of the finest physics departments in the country.

A volunteer army, recommended by the President, would clearly provide one solution to the problems outlined above. Failing that, we propose that during a transitional period of approximately 4 years, deferments be extended to graduate students. This would allow a man to finish his training before he starts military service. Such a man is much more likely to return to physics than one whose study is interrupted, thus helping to assure an adequate supply of highly trained physicists for the needs of our country.

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Mind Assault

Stanley Milgram's "The experience of living in cities" (13 Mar., p. 1461) provides evidence on the quality of life in the city. He reports that McKenna and Morgenthau devised an experiment in which telephone callers misrepresented themselves as long-distance callers "who had, through error, been connected with the respondent by the operator." The callers then proceeded to diddle the subjects by representing themselves as persons in need of information. When that dialogue was established, the subjects were then put to a greater test when the caller asked, on some pretext, that the respondent "please hold on." The caller would put the phone down for almost a minute, and then would ask further questions, in the cases where the respondent had continued to make himself available. "Scores were assigned the subjects on the basis of how helpful they had been."

Henry Thoreau observed in *On the Duty of Civil Disobedience*, "It is not so important that many should be as good as you, as that there should be absolute goodness somewhere; for that will leaven the whole lump." From that I draw the uneasy conclusion that the small leavening of absolute duplicity which McKenna unloads onto the lump of troubled city life may do more to increase those troubles than to alleviate them. The informed citizen of our city will henceforth consider the dangers of mind assault as well as body assault when he wonders whether he should open his door, or heed the phone call of a stranger. . . .

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