Letters

Total View of Campus Unrest

I was pleased to see Kenneth Keniston's letter (19 Sept.) on the 11 July *Science* articles about our study of campus unrest. One effect of the controversy is that some of the principal purposes of the project have not been clearly stated anywhere. The campus unrest project is an extension of our ongoing study of student development which we initiated 4 years ago, primarily because it seemed at the time that college administrators had for too long been avoiding the question of how students were really being affected by their decisions, and that students had for too long been choosing their colleges on the basis of an untested body of folklore. Our principal goals were thus to confront the professional educators with some hard facts about the effects of their practices on students, and to provide students with a better basis both for choosing an appropriate college and for bringing about meaningful changes in existing educational practices. Our belief was—and still is—that ignorance concerning the effects of colleges on students represents one of the biggest obstacles to the improvement of higher education.

Some of the research from this larger program is already beginning to pay off; for example, we recently found convincing evidence to suggest that most colleges—including those that are highly selective—could greatly increase their enrollments of black or other minority group students without materially affecting their dropout rates. These and other findings suggest that the entire practice of college admissions needs to be reexamined, and that colleges, in the interests of putting the concept of "equality of educational opportunity" into practice, might want to consider abandoning altogether the use of grades and tests in admissions, and instituting instead a lottery system for choosing among their applicants. While this idea may be distasteful to many administrators and faculty and even to many students, a few institutions—including some highly selective ones—are already considering such a change in their admissions procedures, primarily as a consequence of our research findings.

Unfortunately most of the criticism to date of the campus unrest study is based largely on ignorance and misinformation. With the exception of Robert Powell, former president of the National Student Association, critics have apparently not taken the trouble to find out what the research goals of this or the larger project actually are, how the studies are designed and being carried out, how we plan to disseminate the findings, how the security of the data is protected, or even who the researchers are. Since the study of campus unrest is part of the larger longitudinal study, one of our major research objectives is to find out how the typical student is being affected by campus unrest—a topic which has been largely ignored by social scientists in their preoccupation with the characteristics of the radical left, the dynamics of confrontation, and the tactics of administrative response. It is both ironic and exasperating that critics who claim to be "protecting" students are—perhaps unwittingly—attacking a research project that offers some real hope of ultimately giving the student a better shake in his college experience.

Some of the critics have implied that we are engaged in a kind of conspiracy against student radicals, and that the study represents a form of "counter-insurgency" research which involves the compilation of extensive "dossiers" on protest leaders. This is rubbish. While student radicals represent one of the groups being studied, the research is focused much more on other students—protestors and nonprotestors alike—and is concerned with *their* needs and desires for higher education and with how they are affected by campus unrest when it occurs. We have not prejudged *any* of the students, faculty, or administrators who are taking part, but are interested rather in learning more about how they interact and how they are affected by campus unrest. In this regard, the ACE research staff is not a "commission" that has been assigned the task of producing a report which attributes blame to various parties to the "problem." As researchers we have not taken the view that campus unrest is a "problem" in need of a "solution." Nor have we assumed that it represents a panacea for the ills of higher education. We claim no special expertise in making such value judgments. What we do claim to be expert in is the objective empirical study of higher education, and we assume that our findings will provide a better basis in fact for others to make such judgments.

As for compiling "dossiers," we have gone to extraordinary lengths to protect the anonymity of all students, faculty, administrators, and institutions that provide us with data. All identifying information from our personal interviews has been destroyed. In addition, our longitudinal survey data on individuals are *not* accessible to any governmental agency, other institution, or individual. Recently we have instituted a data protection system which makes it virtually impossible for anyone (including myself or any other member of the ACE research staff) to obtain access to data on any individual, even by means of a court order or congressional subpoena. Although this new system makes it very unlikely that we should ever be forced to do so, we are prepared to go to jail, if necessary, to make good on our promise of anonymity.

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Fight Fire with Fire

Mark Oberle's report on forest fire policy (8 Aug., p. 568) describes the ecological significance and the increasing use of controlled burns to prevent major fires in forested areas. He also touched upon the "fuel break" program of the U.S. Forest Service, a fire control and prevention method being tried in California. This idea of converting large areas of chaparral (brush vegetation) to a grass, a prostrate, or a slow burning species is an attempt to

work against, instead of with, the ecological dynamics of the vegetation. Working contrary to the ecosystem is always expensive and difficult, especially so with chaparral species because they are adapted to an environment that is submarginal or detrimental for most species. Furthermore, chaparral is a fire type and the plants sprout or have seed that can survive in the soil for many years.

Fire records in southern California show that all the mountainous chaparral-covered land is burned periodically. The fires may be caused by man or nature and even the best protected areas are not immune to destruction. In 1960 the 17,000-acre San Dimas Experimental Forest, almost pure chaparral, and used for watershed research, was swept by fire even though the forest was closed to the public, had a network of roads, and several fire fighting units located on its perimeter. The fires started by lightning and consumed 12,000 acres of brush the first day and 15,000 by the end of the week.

To prevent such extensive and hazardous forest fires which occur especially in southern California, I suggest that more effort be expended at working with, instead of against, the ecological characteristics of the vegetation. The brush on the San Dimas area is now 9 years old. This is an ideal area to test a controlled burning program as prevention against a major fire in the future. The watersheds have contour trails at 500-foot elevation intervals, and in some areas after the 1960 fire trenches were established at 40- to 90-foot elevation intervals. I propose that each year a band of vegetation on the slopes be burned starting at the tops of the ridges and mountains. In this way the burn of the previous year would act as a fire break for the present year's burn. Since the elevation difference between the top and bottom of the forest is approximately 4000 feet, it would take 8 years to burn the entire area using 500-foot elevation strips. At that time the natural vegetation would be dense enough to start the process again. If at any time during the process a fire is started at the higher elevations it would be prevented from spreading downward by the burned zones below. Fire starting low on the slopes would stop at the previously burned area and would not generate sufficient heat to cross ridges and jump canyons.

Although this controlled burning would involve the risk of some flooding in heavy rain years, it couldn't be as severe as what happened this past winter below whole mountain slopes which had been denuded by fire. Furthermore, the vegetation below and above the burned strip would serve to some extent as a barrier to erosion and flooding.

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XYY Chromosome: Medical and Legal Aspects

Kennedy McWhirter's discussion of the XYY chromosome and criminal acts (Letters, 6 June) and comments on that discussion by C. B. Goodhart (Letters, 5 Sept.) point up a basic weakness in society's approach to the control of antisocial or criminal behavior. . . .

McWhirter rightly emphasizes that restraints placed upon individuals must be minimal, and that their purpose must be protection, not retribution. But this principle really should apply no matter what the nature or cause of the behavior that society (or the individual himself) is being protected against.

Behavior is generally believed to be determined by a complex of relatively unalterable genetic factors, more easily alterable effects of previous environment, and freely chosen values and objectives. Current judicial processes presuppose that malefactors with congenital defects, those with temporary mental aberrations, and those that have freely chosen to do wrong can be clearly and readily differentiated; that the legal rights of the individual vis-à-vis those of society, and the legal processes required to adjudicate those rights, differ for these different classes of malefactors (and with the age of the malefactor); and finally, that appropriate, different processes are known and available for rehabilitating malefactors of each class.

However, information currently available offers little assurance that the various factors affecting human behavior are sufficiently well understood to permit reliable diagnosis and effective treatment. . . . For example, it seems likely that when reliable diagnostic procedures are available, they will reveal that most malefactors suffer from combinations of all three general types of defects, and hence will require the same basic kind of treatment in the same basic kind of facility for effective rehabilitation. It also seems likely that

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