Letters

Discovery to Patent to License

Both Mesthene ("How technology will shape the future," 12 July, p. 135) and Theberge ("Inventions beg application," 11 Oct., p. 219) have valid points on the likelihood of "new possibilities" or inventions reaching the public. If a "new possibility" has been "deliberately created by technological development," as Mesthene suggests, it would seem to have a good chance of realization since the same forces that created it will probably promote it through the developmental stages and into use. On the other hand, a discovery or invention that is not deliberately created by technology, but is a scientific serendipity—which is usually the case when such results derive from more basic research—may go for years without commercial application or may never reach the public.

This foundation's experience over the past 30 years in helping colleges and universities bring their inventions into public use suggests that possibly 1 of 10 inventions submitted for evaluation will be deemed worth patenting, 1 of 100 will be patentable *and* licensable, and 1 of 1000 will ultimately be successful in terms of the public acceptance that produces appreciable royalty income. Here, it must be emphasized, we are dealing with inventions which almost invariably occur as side-effects of research that was undertaken purely for academic or scientific purposes or both.

In the process of evaluating such inventions and trying to bring them to the marketplace, the elements of costs and profits to businessmen, cited by Theberge, are, of course, major problems. If the invention does not give the businessman an advantage commensurate with its cost, there is little incentive for its use. However, another problem, one which cuts down the number of inventions to reach the first of the long series of steps between the laboratory and the market, is the tendency of many academic investigators to overlook or ignore the invention and patentable results of their research. If the objective of the research is new scientific knowledge, or the introduction of students to meaningful investigation, once this objective is reached, the sole remaining step taken by the investigator is to publish.

This is not to say that if the faculty investigator or his institution evaluated the inventive aspects of the findings, a new and valuable product or process would result; the odds are still those mentioned above. However, if more such inventions are identified and recognized as being *potentially* useful commercially, the greater input into the evaluation, patenting, and licensing procedure should result in a greater output of research results useful to the public.

WILLARD MARCY
Research Corporation, 405 Lexington Avenue, New York 10017

Lebensraum

I do not know whether the 400-meter separation between persons, referred to by Doxiadis ("Man's movement and his city," 18 Oct., p. 326), is central to his conclusions. However, in order to achieve it, most of the world's population would have to stand on water. If the land mass alone is considered, the distance is halved. If the habitable land mass alone is counted, there is a further cut down. More important, perhaps, is whether the large cities have passed a critical size for usefulness, and whether populations are in the same state.

ARNOLD I. DUMEY
641 Mount Lucas Road, Princeton, New Jersey 08540

Creaking and Rusting Liberalism

I support Whaley's criticism of the call signed by 19 behavioral scientists at Stanford (5 July, p. 20) for a nationwide study of the student protests involving tactics of confrontation. Whaley (Letters, 23 Aug.) incisively points out that what is needed is a study of the antiquated modes of university administration and the insidious, growing collaboration and symbiosis between the universities and the nation's military establishment.

The pro-establishment bias of the 19 behavioral scientists is clear from their report: they interviewed only college presidents, not student activists; and they label student confrontations as violent despite the fact that violence came to these protest demonstrations only when the university administration called out the police.

It requires middle age and comfortable professional success (often nurtured by close cooperation with university and governmental hierarchies) to win a sabbatical at the Center for Advanced Study in the Behavioral Sciences. I am afraid that the 19 Fellows of the Center are victims of their own histories and constrained by creaking and rusting liberalism.

ROBERT LIBERMAN
11461 Washington Plaza West, Reston, Virginia 22070

E. N. Anderson's letter concerning assumptions underlying the study of campus unrest by investigators at the Center for Advanced Studies in the Behavioral Sciences (20 Sept.) deserves comment. Anderson takes the tack that the Stanford group's affirmation that "violent or destructive behavior, of itself, is undesirable and self-defeating" begs the question as to whether research designed to provide information on how to *deal with* and *prevent* student protests is suppressive in intent. After distinguishing the explanation of and control over behavior, Anderson goes on to question whether behavioral science should be used as an "instrument of control, however desirable the control may appear." . . . One of Anderson's conclusions reads: "Campus unrest is not wholly undesirable . . . a modicum of ferment . . . is necessary in an institution of higher learning."

Studies aimed at *dealing with* and *preventing* student protests need not be studies aimed at developing effective methods of suppression. They may be studies which indicate what social changes are requisite in order to make protests (violent or otherwise) obsolete. Such an aim has as its basis the highest respect for dissent, as well as an appreciation of the conditions which stimulate social ferment. To control a