

is vastly greater than that which universities can bring to bear on corporations. Perhaps before universities are carried away with the "moral implications" of owning shares, they should give a thought to the moral implications, if such there be, of involving universities in matters they have traditionally and appropriately eschewed.

To say that investing in a corporation is "not a morally neutral act" (24 Apr., p. 455) makes about as much sense as saying that the excitement of cell membranes by protein is not morally neutral. To someone totally illiterate about science, such excitement may sound not only immoral but downright obscene. That is how foolish Carter's observations seem to those of us trying to develop a science in an area that receives wide attention and little understanding. Vacuous moralizing about complex social systems is less apt to be helpful than harmful.

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Much of what Manne says appears to rest on his belief that competitive pressures make it impossible for individual companies to solve "externality problems" and that the solution to such problems must be achieved through government regulation. On this point, I offer two observations: first, large companies and their Washington lobbyists work hard, and often successfully, at influencing the laws and regulatory regimes affecting them (for instance, to judge from past statements by its top officials, General Motors almost certainly will lobby against proposals to convert the highway trust fund into a general transportation fund supporting the construction not only of highways but of a variety of mass transit systems); second, if the public is truly concerned about social and environmental problems, individual companies should be able in many cases to exploit that concern to their competitive advantage—as, for instance, Amoco is now attempting to do by heavily advertising its lead-free gasoline. For these reasons if for no other, leaders of Campaign GM had cause to argue that universities and other institutional shareholders should insist on greater corporate sensitivity to social and environmental issues and greater diversity in the interests represented on corporate boards.

—LUTHER J. CARTER

Socrates on Dissent

In his review (Book Reviews, 8 May) of C. S. Wallia, *Toward Century 21*, Ward Madden misrepresents the views of Socrates and Bay, and one of us should set the record straight.

It is true that Socrates had more respect for the moral authority of the law than has Bay today: he conceded to the state the right to put him to death unjustly. But Socrates parts with Madden and joins Bay on the issue in context: beyond affirming an individual right to dissent, Socrates insists that an individual must break the law rather than become an instrument of injustice, or cease living as a vindicator of justice; the state may take the individual's life away but not his political integrity—that is, he will go on teaching his philosophy, whether or not his ways of exploding the conventional wisdom are deemed subversive of the law as interpreted by the Committee on Un-Athenian Activities.

Madden proceeds to charge Bay's theory of civil disobedience with being "morally deficient" because, he says, although I oppose the use of violence when challenging the law, I do so on "strictly pragmatic" grounds and not on moral grounds. First, I explicitly don't rule out use of violence *if this in fact will* (and if strictly nonviolent means will not) serve to reduce or forestall much worse violence (say, violence on the streets of Chicago versus mass killings every day in Indochina). Second, it is absurd to charge me with being morally unconcerned with innocent lives that could be lost as a result of antistate violence, or with being unaware of the probability that new revolutionary regimes will establish their own laws, some of which will be unjust; absurd, not because in other papers I have argued exactly the views that I am here charged with not having, but because these views are necessary implications of the core argument in this paper. Why assume defective logic as well as deficient morality when I fail to restate the obvious?

Bay "fails to realize that all moral questions arise out of conflict of interest." Most moral questions do, but it does not follow that the answers to moral questions are to be determined, for you and me, by the outcome of struggles between interest groups. Bay's view, and incidentally that of Socrates, is that what is just or moral is in large

measure a question to be settled, in each type of context, by "philosophy" rather than by political compromise, conquest, or convention.

Madden is entitled to believe that our laws are merely "imperfect" and that, in the extreme cases when "illegal dissent and even force" might be justified, the laws are likely to become revised so as to "better codify the consensual judgment as to what is just." I find this rosy theory not so much morally as empirically deficient. One aspect of reality that Madden at least in the present book review appears to resist is the fact that most laws arise out of conflicts of interest, and come to express the interests of the privileged. These interests are sometimes but not very often identical with the interests of the oppressed.

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Socrates clearly understood the difference between the need for dissent against specific, unjust laws, and the need of man to live in a lawfully ordered society. The point I wished to make was that Bay, by neglecting this distinction, seemed to undermine the principle of law itself in his attack upon unjust legalism. Even his reply seems to confirm this, insofar as he stresses the oppressive rather than the consensual aspects of legal reality, for if the essence of law is oppression, it would seem best to dispense with law altogether.

WARD MADDEN

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Doom of Coal Research

I am shocked and dismayed by news items stating that the Department of Interior's proposed budget for fiscal 1972 would eliminate the Bureau of Mines energy research centers and would close, within 2 years, the Office of Coal Research. I had supposed that by now nearly everyone realizes we have placed too much hope for the near term in nuclear power and have worked far too little on the problems of coal, particularly the urgent problem of SO₂ emissions.

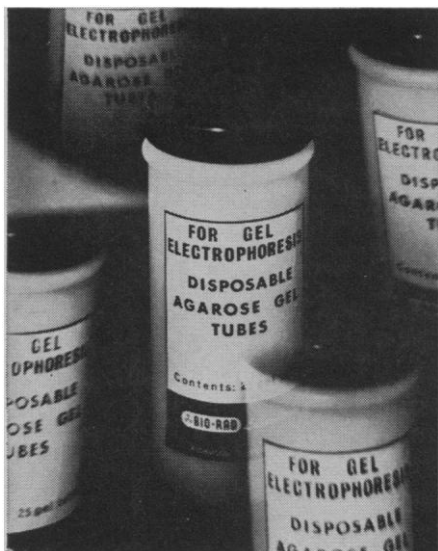
Elimination of ongoing projects cannot be justified by arguing that someone else (industry? newly authorized environmental research centers?) will take

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up the burden. The scattering of teams now in existence would be a tragedy, and would delay answers to the problems on which they are working. Worse, the news of destruction of research teams will reach campuses quickly. It would turn youngsters away from coal engineering as a career, and indeed, would discourage talented youngsters from contemplating a career in government scientific service of any kind. I cannot believe that 50 years of the Bureau of Mines tradition for quality scientific research and engineering study will go down the drain simply to save \$40 million in the 1972 budget.

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Washoe the Chimpanzee

The reports of Washoe's language learning seem destined to be met with analyses attempting to show major differences between the potential language abilities of humans and nonhuman primates. I don't wish to argue the question of differences—careful analysis may prove that there are many. I am concerned, however, that Bronowski and Bellugi ("Language, name, and concept," 8 May, p. 669), despite their concern with the ideal control group, failed to deal with the problem of very early experience. They suggest that Washoe should be properly compared with the (unavailable) "deaf child of deaf parents." Since Washoe was "obtained as an infant chimpanzee from the wild when she was about 1 year old," the more appropriate comparison would be with (an equally unavailable) feral child. (Since chimps mature more rapidly than humans, the expected deficiency may in fact be more profound than would be anticipated from a year of verbal deprivation for a human child.) With the present evidence on behavior of feral children and recent data on other "deprived" youngsters, we cannot be surprised that Washoe shows "cognitive deficits." Her pattern of deficiency is precisely what one would expect: relatively less impairment of simple cognitive skills, and more profound impairment of more complex skills.

In short, we cannot determine from the data whether apes are significantly poorer than humans in complex language skills as "the structural activity of reconstitution," or whether Washoe, like

a new deprived minority, is showing evidence of a considerable imposed "cultural" handicap. I think that the analysis of Bronowski and Bellugi is potentially an important one. I hope that future data will permit a fair comparison.

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A number of further comparisons remain to be made between Washoe and other primates and children. In our view, the most important is with a deaf child learning sign language, and one of us (Bellugi) is engaged in this study. The results will be published in full, but it can be said now that they support in a most interesting way our characterization of a child's acquisition of language.

The one comparison that would be quite fallacious, however, is that with a feral child which Linton suggests. This would imply that Washoe's first year was as unnatural to her as a year in the wild is to a human child—which is plainly false. Washoe before the Gardners adopted her was not a "deprived youngster," and chimpanzees in the wild are not handicapped humans.

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Genetic Patterns

The statement of H. H. Suter (Letters, 15 May) that "abortion, culling, [and] termination" will cover population control concerns only one side of the ledger. The other side—a new worry—is the generation of selected individuals. One can visualize the use of somatic cells or cultured somatic cells for the replication of larger numbers of "superior" beings. Several techniques that could make this feasible will be available in the near future. It is now possible to maintain or preserve the genetic pattern of somatic cells—how perfectly isn't known—of an individual long after his death. From an ethical and "moral" viewpoint perhaps we should take steps to insure that an individual's genetic pattern is not replicated as an individual and dies with him.

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