and for their versatility (most N-nitrosamines are active by various routes of administration).

We find it incredible that manufacturers can be apparently unaware or unconcerned about the toxic nature of such volatile carcinogens, which are so hazardous that they should be handled under conditions as stringent as those required for radioactive materials.

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Politics and Engineers

Ladd and Lipset, in the article "Politics of academic natural scientists and engineers" (9 June, p. 1091) argue that two factors give engineers a conservative viewpoint: the practical orientation of engineering and the close link existing between engineering and the business corporation. However the first factor simply reflects the nature of engineering and does not cause conservatism. Although Ladd and Lipset point out that, within other cultures, engineers can become radicals, their argument leads the reader to associate conservatism with a practical orientation.

The model on which modern engineering schools were founded, the École Polytechnique, formed a hotbed of radical thought and mothered a technocratic philosophy. In the hands of those who possess radical ends, engineering becomes radical; in the hands of the conservative, it becomes conservative. American engineering, because it lives only for all practical purposes within the business corporation, has adopted the values of the corporate enterprise and has therefore a conservative orientation.

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McKeon is quite right that a given discipline may manifest sharply divergent political orientations in different societies. Lipset and I noted that in the contemporary United States the social sciences are the most left-of-center, critical, and change-demanding disciplines. In the Soviet Union, by contrast, political dissidence and critical activity appear more pronounced among faculty and students in the natural sciences. It is not scholars in

social science, but Andrei Sakharov, Andrei Tverdokhlebov, and Valery Chalidze, three prominent physicists, who founded the Committee for Human Rights, an organization which is devoted to strengthening legal norms and essential civil liberties. As the more politically relevant fields, the social sciences are particularly hampered by ideological control.

We do not agree, however, that the relative conservatism of academic engineers in the United States is totally unrelated to the intellectual nature of their subject matter. The link between intellectuality and proclivity for a critical politics, so often discussed, has data on faculty opinion to be exceptionally strong. When a field places greater emphasis upon originality, creativity, and the application of standards involving the ideal or theoretical, with reference to its subject matter, it appears to encourage a general conceptual approach which is carried over to other areas, including orientations toward the social system.

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