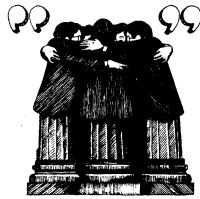


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The Forum on Social Implications

The Need For Heroes

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In a play about Galileo, Bertold Brecht has one of his characters comment bitterly after Galileo's recantation that "unhappy is a land that breeds no heroes." The reply by Galileo is "unhappy is a land that *needs* heroes."

This exchange was brought to mind by David Hartmann's comments [1] on Ralph Nader's call for whistle blowing engineers. Hartmann points out the risks incurred by any engineer who heeds Nader's call to anonymously "turn in" his employer to a public interest group when he finds that company decisions are damaging the public. In addition to the possibility of finding himself suddenly unemployed, and perhaps unemployable, Hartmann also argues that the whistle blower may also help to bring his own profession into disrepute. (Altho this latter point certainly merits serious consideration, I think one might also defend the opposite contention — but I shall not do so here.)

A better way to accomplish the same end, Hartmann argues, would be for the engineering profession to do its own policing rather than have this function carried out by an outside organization. This I believe is a very important concept, and I would like to continue the discussion that Hartmann has opened.

First of all, a basis for such action by a professional society must be a code of ethics that includes some definition of professional responsibility. Such provisions must be sufficiently general to encompass a variety of viewpoints within the profession and to cover to the greatest extent possible, unforeseen situations that may arise in the future. Yet they must be more than empty admonitions to promote the general welfare. My impression is that codes of ethics of the medical and legal professions offer little guidance in this respect, since they seem to be concerned more with protecting the economic interests of their members than with defining their responsibility to society (except perhaps for the Hippocratic oath).

As a basis for discussion, I would suggest the code of ethics adopted by the National Society of Professional Engineers and the following oath proposed by M.W. Thring [2]:

AN OATH FOR SCIENTISTS AND ENGINEERS

I vow to strive to apply my professional skills to projects which, after conscientious examination, I believe to contribute to the goal of co-existence of all human beings in peace, human dignity and self fulfillment. I will not use my scientific training for any purpose which I believe will be used to the harm of any human being.

I vow to struggle through my work to minimize danger, noise, strain or invasion of privacy of any individual pollution of earth, air and water, destruction of natural beauty, mineral resources and wild life.

Assuming that agreement can be reached within the profession on those aspects of a code of ethics concerning the public interest, the question now arises as to how a given professional can live up to it. Engineers and scientists, unlike most physicians and lawyers, are nearly all employees. Hence the relevance of the reference to heroes which appears at the beginning of this discussion. While it is of some value to promulgate important principles that often require heroic individual action for their implementation, it would be much more effective to accompany them with other measures that would lessen the need for heroes. What could be done along such lines?

One approach would be for a professional society to set up machinery for defending those of its members whose employers attempt to punish them for actions that can be justified in terms of the accepted code of ethics. This machinery should include an investigation by a society committee, negotiation with the employer, and, where all else fails, the inclusion of the employer on a list of censured organizations. Such tactics have been employed during the past 3 decades by the AAUP (American Association of University Professors) on behalf of the principle of academic freedom with considerable success [3].

It might appear at first that censure by a professional society would not be very effective, but in fact, academic institutions of all types, sizes and locations display a marked desire to avoid this distinction. The greatest effect of the AAUP approach is not in remedying wrongs done to particular individuals, but in causing the great majority of all universities to adopt and follow procedures consistent with the principles promulgated by the AAUP. Many individual cases are settled at an early stage by "out of court" negotiations.

Should engineering and scientific societies adopt a similar method, it is reasonable to expect a significant degree of success. This is not to say of course that an engineer employee would invariably escape unscathed when he defied his employer on ethical grounds. But the degree of heroism and self-sacrifice required would certainly be substantially reduced, and the principled practitioner would at least have the satisfaction of knowing he is not alone. In the extreme case where he does lose his job, this factor could also confer tangible benefits. A committee of the American Society of Mechanical Engineers is giving serious consideration to a proposal along the lines sketched here [4].

It might also be worthwhile to consider a further step in enhancing the status of the engineer and scientist in industry; namely to establish some sort of tenure system that would protect him against arbitrary discharge on grounds unrelated to his work.

The need for such protection has been dramatically highlighted recently by the case of Lawrence Tate [5]. [6], a highly respected IEEE member who was an employee of IBM for 18 years. Mr. Tate, as a result of an attempt on his part to combat high handed and possibly unlawful behavior on the part of the police in his community, became the subject of police harassment that culminated in his arrest and conviction on two dubious misdemeanor charges. Altho the affair had no connection whatsoever with his position as a high level managerial trouble shooter within IBM, and despite the fact that it seems most probable that the convictions will be reversed on appeal, Mr. Tate was fired immediately after the verdict.

Had Lawrence Tate been a tenured university professor he would undoubtedly have received strong and effective backing from his professional society (altho most likely, as a result of the climate brought about by the AAUP, few universities would even have considered discharging him under these circumstances), but as an engineer in private industry he stands alone.* It seems reasonable to raise the question as to why engineering and scientific societies should not consider providing similar protection for their members.

*Not quite. Those interested in backing him should write to The Committee for Social Responsibility in Engineering, 137 West 14th Street, New York, N.Y. 10011.

A rather different approach to the problem of securing a form of tenure for engineers is through unionization. The pros and cons of this alternative were hotly debated at the New Engineering Conference last March [7].

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