

Mass, Force, and Weight

R. J. Temple's comment (Letters, 21 Feb., p. 598) that the SI (International System of Units) is illogical because "in the SI . . . , weight is measured in kilograms."

The facts are, that, in the SI, mass is measured in kilograms, and force in newtons. Weight is a general word that is widely used for both force and mass, but as a force it can be defined precisely only for the special case of bodies at rest on the surface of a heavenly body. The dual usage of the term weight has led to a National Bureau of Standards editorial guideline statement (1):

Considerable confusion exists in the use of the term weight as a quantity to mean either force or mass. In commercial and everyday use, the term weight nearly always means mass. . . . Because of the dual use of the term weight as a quantity, this term should be avoided in technical practice except under circumstances in which its meaning is completely clear.

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References

1. *NBS Guidelines for Use of the Metric System* (National Bureau of Standards, Washington, D.C., 1974).

Merit and Discrimination

Brewster C. Denny's editorial (6 Dec. 1974, p. 875) rightly stresses the importance to society of rewarding merit. Unfortunately, a presently popular ideology opposes rewarding superior performance and penalizing bad performance. This leads to policies that maximize the *short-term* comfort of the populace, but also slowly cause all social systems to sink into a slumber of inefficiency and sloppy performance. In fact, the fundamental thermodynamic principle of strictly egalitarian systems states that, "In the long run, all men and all institutions sink into a state of uniform dynamic incompetence." In the words of Kenneth Boulding, "Radical egalitarianism may be a good way of legalizing stagnation" (1). The canonical example of dynamic incompetence is the U.S. Postal Service.

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References

1. K. Boulding, "Economics of the 21st century," lecture delivered at the University of California, Berkeley, 29 July 1971.

Denny's editorial asserts that there has been a decline in the use of merit as a principle for selection, promotion, and reward. Frankena, in a discussion (1) of moral and nonmoral virtue as possible criteria of merit, concludes:

. . . before virtue can reasonably be adopted as a basis of distribution, there must be prior *equal* distribution of the conditions for achieving virtue, at least insofar as this is within the control of human society.

If there has been discrimination and if the condition of equality is necessary for the distribution of rewards according to merit to exist, then a reward system based primarily on merit has not existed during the time when discrimination was present. The people employed, promoted, and rewarded before 1968 were drawn from a favored 30 to 40 percent of the population. This group cannot claim that they are the most virtuous or meritorious members of their generation: they will never know if they are, since most of the population (minority and female members) were excluded before the selection for recognition began.

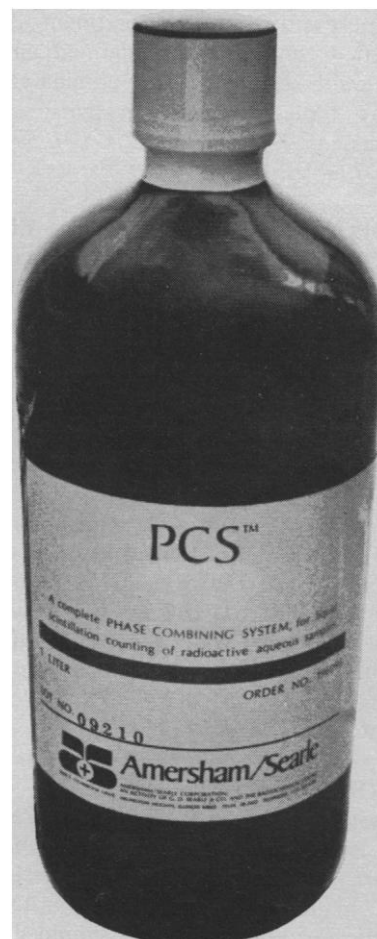
Following this line of reasoning one can conclude that the employment, promotion, and reward systems of the past favored "mediocrity." The so-called merit system of the past was "hollow mockery," and those who wish to use a "crowbar" to further discrimination are using the words "merit" and "mediocrity" for this purpose. (The word excellence is used in this way also.)

The leadership of the academic community was not actively promoting equality of opportunity before the civil rights legislation of the late 1960's. Faculty composition reflects this discrimination. The civil disturbances in 1967 led to the legislation that has promoted equal employment opportunities, not only for minorities, but also for women. There is little evidence that university officials have willingly made many of the changes required by law. The civil rights agencies are swamped with complaints.

I realize that it requires some humility for the members of the academic community to admit the possibility that they could not be judged meritorious in a meaningful way, but humility

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will be necessary if there is to be a change from the mediocrity of a situation that condones racial and sexual discrimination. If changes are not made, the type of instruction given in the sixth grade is of little consequence. Under a pattern of discrimination the daughters of the majority, and the sons and daughters of minority members of the population will not be allowed to contribute fully to society.

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References

1. W. K. Frankena, *Ethics* (Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1973), p. 50.

I read Brewster Denny's thoughts on the decline of merit with fear and respect. I too feel that we need an abundance of excellence for our very survival. But I fear his call for merit because I sense in his editorial a demand that merit be judged in a very classical and incestuous manner, one which comes from a white, male perspective and which asserts that "[b]rains and sound quality performance will be the basis of whatever success our society has. . . ." Brains and performance are good, but alone they are not good enough. Alone they have gotten us where we are today, and that doesn't feel like a very good place to me. A "brains and performance" orientation has helped us relate to the physical world. But in today's world of decreasing technological options and increasing interpersonal tensions, we have a major, if not a primary need to understand and relate well to ourselves and to each other. Those white males concerned with brains and performance have not done well in personal and interpersonal understanding. Their definitions of merit cannot be expected to evaluate dimensions they themselves do not seem to understand. In fact, definitions of merit based on brains and performance might be expected to exclude from decision-making levels many of those people whose experiences and training might add, in addition to their brains, needed new dimensions—compassion, warmth, and emotion—to the solutions of our problems. This is not a suggestion that women and minorities lack brains. Nor is this a patronizing call for acceptance of any woman or any minority group member into the upper echelons. It is simply a recognition that white, male concern exclu-

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sively with brains and performance may be valuable in developing technology, but the new problems of today require new definitions of excellence and new people to make the judgments.

Furthermore there is a concern that, even using classical definitions, merit systems have worked and will continue to work against excellence. Most of us are aware that "merit" systems have been used in the past to exclude women and minorities, especially some of the most able ones who seemed the most threatening to our stereotypes. Under so-called merit systems, we in academe for years have hired not the most qualified people, but rather friends and friends of friends. We never heard about rigidly enforced merit decisions in those days. Even now, the merit issue is only raised when we are talking about women and minorities.

It seems strange to argue with the notion of merit. But merit, as it has been defined and applied, has had the effect of limiting the range of solutions available for our problems. We can't afford this luxury any longer. I doubt that we ever could.

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McMeekin and Roth correctly point out that discrimination, favoritism, mediocrity, and just plain bad judgment have historically hidden behind personnel processes called merit systems, often incorrectly. In fact, despite the many instances of blatant, overt, racial, religious, and sexual discrimination in our society, the majority of such discriminations, particularly in this century, have probably occurred covertly in the name of rules and procedures giving the appearance of fairness, like seniority, or the appearance of scientifically determined merit, like civil service examinations with their exquisitely precise scores based on unvalidated test instruments. Affirmative action rather than a status quo neutrality is needed for precisely this reason, since the work forces of our society now in place are neither fully representative of the society nor determined wholly on merit. I agree fully with Roth's insistence that merit must include much more than brains and regret and retract any implication to the contrary in my brief editorial. Merit includes all those qualities which enable and inspire a person to do an outstanding job and which assure a moral and humane perform-

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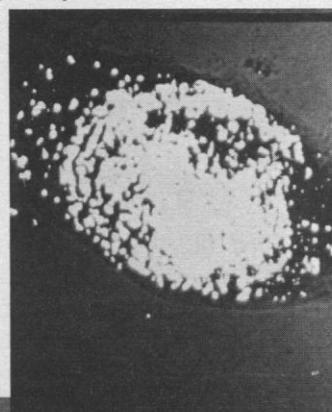
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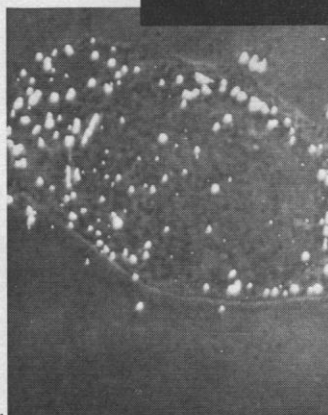
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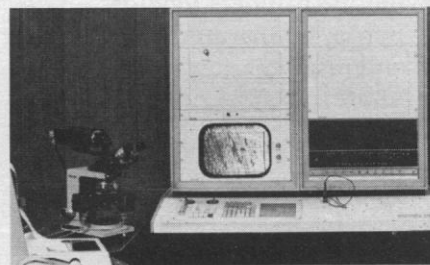


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ance as well. Jefferson advocated public higher education for those who had the "interest, competence, and *character*," to profit from it—a standard closely tied to his view of public service. While qualities of intellect may be easier to judge than qualities of character, both judgments are essential to the determination of merit.

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Green Revolution: Just or Unjust?

Nicholas Wade's report on high-yielding varieties of rice and wheat "Green revolution (I): A just technology, often unjust in use" (*News and Comment*, 20 Dec. 1974, p. 1093), while it can hardly be called biased, can't be called balanced either. I suppose every one of the thousands of new technological innovations in agriculture that have occurred since man emerged from his hunting status in the forest has tended to favor those who already have in hand the most capital to make the innovations. To argue on these grounds that the innovations should not be made leads to the absurd conclusion that *Homo sapiens* should never have evolved, for technological innovation is what distinguishes man as a species.

Of course the distribution of income is a major problem. But perhaps social scientists need to give more attention to solving that problem and less to lamenting the social-justice consequences of increasing productivity. The problem has been around a long time; it's not unique to the green revolution. I haven't run a poll, but I doubt if very many economists would agree that the green revolution is bad.

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U.S. Grain Production

Although I am not a vegetarian, it seems to me that the crux of the problem of protein production is in the growing taste of the affluent nations for meat (U.S. annual meat consumption increased from 55 to 115 pounds