

LETTER FROM THE EDITOR

Statistics show that discussions in mechanics journals in general, and in the *Journal of Engineering Mechanics* in particular, are on the way to becoming an endangered species. Should we let them become extinct? My impression is that some among us apparently think we should. They feel that whoever undertakes the act of publishing a discussion of a scientific paper generates controversy, and thus becomes controversial himself. Whether publicly, or just tacitly in their minds, they condemn the perpetrator of this act, especially if he is less than a leading authority. An aspiring junior researcher who publishes a discussion is, in their eyes, a fool. To receive a discussion of their own paper is a prospect that they even fear. Indeed, they feel relieved if they receive none. And, to discuss the paper of a friend? That, they think, is a way to lose that friend.

In my opinion, however, this is an unfortunate state of affairs. The mechanics journals, ours included, are becoming dull as a result. But more importantly, the progress in our discipline is stymied by the lack of discussions. In the long term, we only hurt our profession by shunning discussions.

One must, of course, exempt those poor (and, fortunately, rare) discussions whose hidden aim is humiliation of the author, self-aggrandizement of the discussor, or both. Such discussions are normally weeded out in a good journal by the review process (hence one must insist, as our journal does, on reviewing discussions, and doing so thoroughly, even more thoroughly than papers). If such a poor discussion occasionally slips through, which is inevitable because of the randomness of the review process, the price of embarrassment will ultimately be paid by the discussor, no matter how senior he might be. However, the risk of damage to the prestige of our mechanics community is, in my opinion, small and tolerable. It is far outweighed by the damage from banning discussions. Just as democratic societies thrive on unbridled public discussion of all important issues, and totalitarian regimes rot by suppressing such discussion, our community cannot afford to avoid discussing unresolved scientific issues if it is to remain healthy.

Times used to be different. Many important advances in mechanics were stimulated by journal discussions. Recall, for example, the polemics of Green and Wertheim versus Navier, Cauchy, and Poisson about what later became known as Poisson's ratio of isotropic elastic solids; those about Kirchoff's boundary conditions of elastic plates; those between Terzaghi and Fillunger about the uplift pressure in concrete dams and soils; or those about the huge discrepancy between the measured maximum loads and the calculated critical loads of shells. More recently, the discussions elicited by Freudenthal's paper on structural reliability, or by the papers of von Kármán and others analyzing the Tacoma bridge collapse, have become milestones in mechanics history. Von Kármán's discussion of Shanley's paper on stable bifurcation in elastoplastic buckling, in which the discussor, aside from pointing out new implications, forthrightly admitted an error in his own dissertation, was another sign of the overall greatness of that man (all of his contemporaries had, of course, been wrong, too, for as long as half a century!). Dundurs's constants for elastic solids with interfaces of dissimilar materials, invented by my esteemed friend and colleague at Northwestern University, were first published in a discussion, not a paper. The vehement recent debates on continuum strain softening eventually caused softening of the opposition to this concept, now accepted as a useful innovation if treated with proper attention

to localization instabilities. The discussions of the initial endochronic models, which established the need to counter ill-posedness, have had a similar salutary effect. These are only a few among many examples of crystallization of ideas engendered by discussions in the past.

As editor of this journal, I welcome, and, indeed, strongly encourage more paper discussions. Dear readers, please don't be timid. Speak out if you have something to say. A friend or colleague worthy of your respect would not feel offended if you discussed his paper. Your discussion will probably be noticed and read by more people than your papers. You will make our journal more interesting to read, and you will have a chance of stimulating a breakthrough.

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Editor