

whether mass or force is intended and to use SI units properly by using kilogram for mass or Newtons for force." Furthermore, European Economic Community (EEC) Council Directive 80/232/EEC, dated 15 January 1980, includes, "products sold by weight or volume..."; (Article 2 (a)) and "Food Products Sold by Weight (quantity in g)" (Annex 1). Thus, we see that even in Europe the ambiguity in the use of the word weight persists, as pointed out by Peter Mikes in his letter.

I can sympathize with Fred Ordway's concern over a matter which may appear Swiftian to an outside observer. I would reiterate, however, that there is not a single "correct" meaning for weight and that it is not a mistake to use it to mean mass in common parlance. I agree with Mr. Worrell that precise meaning of words is necessary for science and technology. That is what the American Standard for Metric Practice (Z210.1) recommends avoidance of the ambiguous term *weight*. Although it is possible for an international conference to recommend that for a specific purpose a certain definition of a word is preferred, usage then determines whether this recommendation is followed.

I agree completely with James Rainwater's sentiments that in teaching mass and weight, it becomes appropriate to discuss all the different meanings of the word weight. It is also desirable, as Rainwater points out, to introduce new units, or special names for SI units over a period of time with sufficient opportunity for comment by interested persons. For a proposed new definition of the base unit meter, exactly such comments were solicited, (*J. Opt. Soc. Am.* **20**, (December 1980)).

I cannot agree with L. J. Giacometti that NBS or any government organization should be in the forefront of straightening out the meaning of words.

Finally, I would like to thank Howard Voss and the others who have communicated to me their kind expressions of appreciation for my efforts in attempting to reach a solution to this particular problem.

DAVID T. GOLDMAN
National Bureau of Standards
Washington, D. C.

3/81

Organic superconductivity

We read with interest your news story in *Search and Discovery* (February, page 17) on organic charge transfer salt which shows superconductivity.

We feel your outline of the history of the subject does injustice to the Jerusalem group who have worked in this

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letters

field for some time: H. Gutfreund, B. Horovitz and M. Weger. A very early proposal advocating the use of pressure is discussed in their 1974 paper.¹ This point is spelled out clearly later: "Pressure increases the interchain coupling and above some critical pressure the Peierls instability is suppressed and superconductivity would appear."² Furthermore, Weger participated in the early stages of the experimental efforts of the pressure studies carried out by the Saclay group.

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1. H. Gutfreund, B. Horovitz and M. Weger, *J. Phys. C* **7**, 383 (1974).
2. B. Horovitz, *Phys. Rev. B* **16**, 3943 (1977).
M. REVZEN, A. RON AND J. ZAK
Technion, ITT
Haifa, Israel

The responsibility for the PHYSICS TODAY news story rests with the editors, but I feel I cannot allow the points raised in the letter above to remain unanswered.

First, with respect to the authors' reference to the Jerusalem group 1974-77 papers concerning superconductivity, I quite agree with them that the mention of these papers would have been of interest to the readers of the PHYSICS TODAY piece, although it is widely recognized that research in the field of superconductivity was stimulated mainly by the early contributions of W. A. Little¹ (1964) in the USA and L. V. Gorkov and his collaborators² (1966) in the USSR. Work by neither of these authors was quoted in the PHYSICS TODAY article (in which reference was made only to very recent work) and yet it was this early work that triggered the research of numerous research groups, among them the Jerusalem group. Second, concerning Meir Weger's participation in the research on organic conductors carried out at Orsay, its value and its extent are fully testified by several articles published in common during our extensive and fruitful cooperation until 1977. His contribution was very important both in gaining understanding of the metal-insulator transition (the so-called Peierls transition) of TTF-TCNQ, and in clarifying ideas pertaining to the concept of one dimensionality. However it was the stabilization of a state with an unusually high conductivity in TMTSF-DMTCNQ at low temperatures under pressure³ which formed the turning point in our research on superconductivity at Orsay. It was on the basis of this result that the Orsay-Copenhagen team claimed the existence of strong

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one-dimensional superconducting fluctuations up to 30 K in TMTSF-DMTCNQ.

Notwithstanding these results, Weger, whose collaboration with the Orsay group had ceased about a year previously, suggested in a series of publications independent of the Orsay group that the very unusual properties of TMTSF-DMTCNQ could be explained from a standpoint disregarding superconductivity. It was by adhering to the former interpretation that the discovery of a zero resistance superconducting state in $(\text{TMTSF})_2\text{PF}_6$ was finally made possible; a position which has proved to be fully justified, as has been shown by the unambiguous tunneling experiments recently performed on $(\text{TMTSF})_2\text{PF}_6$.⁴

References

1. W. A. Little, Phys. Rev. **34**, A 1416 (1964).
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4. C. More, G. Roger, J. P. Sorbier, D. Jérôme, M. Ribault and K. Bechgaard, J. Physique Lett (1st July 1981 issue).

DENIS JEROME

Laboratoire de Physique des Solides

Université Paris-Sud

Orsay, France

6/81

Fund for young physicists

At a recent conference in England I was told that a part of my registration fee would be used as a "required contribution to the European Young Physicists Fund."

Nowadays, we hear a great deal about the need to encourage youth in every field of endeavor from physics to age-group sports. Opportunities and enticements are created and widely distributed. The adulation of youth further extends into the employment market where, often regardless of ability or experience, someone under thirty is preferred to someone over forty.

I suggest that those young physicists who are so lacking in interest and enthusiasm as to need inducements, would not be missed in an already overcrowded profession. Let those who wish to, donate to the European Young Physicists Fund and to other similar funds if they feel so inclined. I can see no reason, however, why these so-called contributions should be compulsory.

C. H. BARROW

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6/81

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