The Potassium Effect

Gina Kolata's article "Value of low-sodium diets questioned" (Research News, 2 Apr., p. 38) characterizes the current debate over the possible correlation between sodium intake and hypertension in terms of levels of sodium. This is understandable because much of the research contributing to this debate has focused on absolute sodium levels.

Some of this research also identifies other important variables, such as potassium intake, weight, and physical fitness. The potassium effect is particularly interesting because several studies (*1, 2*) indicate that high-potassium diets are correlated with lowered blood pressures. The counteracting effects of potassium and sodium would seem to argue for an examination of the *ratio* of the two, rather than focusing on either one's absolute level. If this ratio is significant [there is some limited evidence in the medical literature (*2, 3*) which says that it is], then one can perhaps explain the inconclusive and conflicting results from examinations of variations in the "normal range" of sodium intake (2 to 8 grams per day).

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2. H. C. Trowell, *Lancet* **1978-II**, 204 (1978).
3. ———, *Exec. Health* **16**, 1 (November 1979).

Omitted Data

We wish to call to the attention of publishing scientists and journal editors some of the regrettable consequences of the practice now becoming more widespread of relegating to microform editions certain portions of research papers. It is usual now for tabular data considered less important by authors, referees, and journal editors to be placed in repository. The journal publisher then sells the information to interested parties, who must write for it and pay the charges. Only experimental data, and never items of discussion and speculation, are treated in this way.

As research chemists and authors and editors of research and review papers and monographs, we have noted that:

1) Our students and colleagues who consult these works in the library during the course of research are denied access to potentially important data which could guide ongoing experimental work.

2) Relevant data in repository are not quoted in research papers since authors are unwilling to delay their writing and submission or to spend the money necessary to retrieve the information from remote locations.

3) Authors of review articles and monographs are unwilling to spend the even larger amounts of money necessary for multiple retrievals or are reluctant to delay their writing until information is received from the remote repository sources.

These data are thus lost to the scientific community, who in our opinion shoulder a cost in duplication of work and diminished quality of research much greater than the amount saved on printer's ink and paper. One solution would be to publish these data photoreduced in the journal with the rest of the paper. They could then be read with the aid of a magnifying glass by anyone willing to take the trouble.

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Asteroid Results

M. Mitchell Waldrop, in his note, "Asteroids in rings" (Research News, 2 Apr., p. 42) does not clearly attribute work on Iapetus and Phoebe that was done at Mauna Kea Observatory by my colleagues and myself (*1*). An early draft of our paper on the dark hemisphere of Iapetus was circulated among Voyager scientists at the time of the August 1981 flyby of Saturn. Our spectrophotometric and photometric observations show that the dark hemisphere of Iapetus has a significantly different reflectance from that of Phoebe and also that the organic residue from the Murchison carbonaceous chondrite has a reflectance similar to that of Iapetus. Waldrop correctly states that Phoebe looks like a carbonaceous chondrite, and the key point is that the organic residue from Murchison appears very different from the spectrum of the complete meteorite.

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It is true, as Waldrop states, that the asteroids have been found to be sorted into concentric but overlapping compositional "bands." However, this finding is the result of two separate observational programs. As Waldrop mentions, one involves eight color spectrophotometric observations (0.3 to 1.1 micrometers) obtained at the University of Arizona by Tedesco, Tholen, and Zellner (*1*) that has provided compositional inferences based upon spectral information. The other involves 10- and 20-micrometer infrared observations obtained with the NASA Infrared Telescope Facility at Mauna Kea Observatory by Tedesco and myself (*2*). These latter observations provide compositional inferences based upon geometric albedos.

The recognition of at least six compositional "bands" in the belt is reported by Gradie and Tedesco (*3*) and further explained by Tedesco and Gradie (*2*). Our explanation for this phenomenon is that the compositional "bands" reflect the varying thermodynamic conditions in the solar nebula at the time of the accretion of the asteroids.

Nearly all large, outer-belt asteroids are dark (*2, 3*), and the opaque, tar-like materials found in certain very primitive meteorites (*4*) are probably the darkening agents.

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Erratum: In the Research News article "Nairobi laboratory fights more than disease" (30 Apr., p. 500), the caption on page 502 was incomplete. It should have read, "Life cycle of the tick-borne parasite *Theileria parva*, the pathogenic agent in East Coast fever."

Erratum: In the report "Intrathecal interferon reduces exacerbations of multiple sclerosis" by L. Jacobs *et al.* (27 Nov., p. 1026), the authors identified the following transpositional errors in Table 1: Recipient 4, sex, M (not F); Recipient 7, duration of disease (years) before study 3.0 (not 2.5), Exacerbation rate before study 1.3 (not 1.6), Expected exacerbations on study 1.9 (not 2.1); Recipient 8, Exacerbations before study 6 (not 5); Control 3, Exacerbations before study 4 (not 3); Control 4, Exacerbations before study 4 (not 3). All the calculations appearing in the table were based on the correct numbers. The errors occurred in transferring the data from paper record to computer; they cause minor discrepancies when the calculations are reperformed from the data initially presented in the table but do not influence the results in any way.