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Short-lived isotopes

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is handled requires action in Washington—not in the junk mail houses.

To highlight the problem where some action could really have an effect, I submit the following modest proposal. Let us declare "National Junk Mail Day." On the selected date each and every person in the US should take all junk mail received at home and at the office, re-address it to the Postmaster General, Washington, DC 20260 (zip code of course), affix first-class postage and remail it. It has been estimated that several freight-car loads would have to be delivered directly to the Postmaster General if everyone in the country cooperated for just a single day.

A deluge of that sort might arouse the Postal Service to initiate some corrective action.

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Filing PT

I wish to second the motions of John Mauldin (February, pp. 110–111). I, too, use many of the feature articles, book reviews, and letters for reference after reading them. I file them by topic, however, so my approach is to completely dismember the magazine to save the pages of interest.

I appreciate the handy provision on each page of source, date and page number for reference. My complaint is that it is often impossible to simply separate and file different articles since consecutive articles begin on the back of preceding ones. How about advertisements between articles instead?

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Short-lived isotopes

I have a few words to add to the enlightening article entitled "Laser spectroscopy on-line with nuclear accelerators" by Hans A. Schuessler (February, page 48).

Under the sub-heading "short-lived isotopes," when the author refers to the production of radioisotopes he mentions that the techniques differ for neutron-rich and neutron-deficient nuclei and involve nuclear reactors, heavy-ion accelerators or high-energy proton beams. I think at this point it would have been useful to also mention the production of using 3- or 14-MeV neutron generators which respectively employ deuterium–deuterium and deuterium–tritium reactions for the production of neutron beams. (The respective fluxes from these generators are of the order of 10^8 and 10^{11} neutrons per second.) The bombardment of stable nuclei by these neutron beams leads to neutron rich nuclei through (n, p) and (n,α) reactions and to neutron-deficient nuclei by (n,2n) reactions. The specific mention about neutron generators is important because they are relatively inexpensive (probably less than $10 000 for a sealed-tube model) and are probably available in any standard nuclear physics laboratory since they are among the basic research tools these days. Hence, while the expensive machines like accelerators and reactors may not be accessible to some researchers (especially for nuclear-structure studies of short-lived radioisotopes), a neutron generator could be in easy reach.

Furthermore, the use of neutron generators in the production of short-lived isotopes has already been demonstrated in neutron activation analysis; there is no apparent reason for not using these devices for nuclear structure studies.

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Quark nomenclature

The inconsistency in quark nomenclature noted by Manny Hillman (March, page 81) may be resolved if the word "charmed" is viewed as a verb in the passive voice rather than an adjective, as in "Some quarks were charmed (that is, were endowed with the property of charm) at the epoch of the big bang." The validity of this interpretation, however, depends upon debatable cosmological and ontological assumptions. Moreover, this interpretation has other disturbing implications. Would we then refer to particles with non-zero strangeness as "estranged"?

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More on universal language

We have been following with some interest the ongoing discussion of a universal language for science in your Letters column. The two letters in the February 1981 issue were particularly interesting (page 108). I will not comment on Hans Dolezalek's letter, since anything I might have to say would be simply redundant; however, I found one or two points in David Harrison's letter worthy of reply.

Without arguing about the validity of the Whorfian hypothesis (that the world-view of any individual is primarily determined by the structure of his language) or about the oft-asserted congruence of the structure of Hopi with the universe of modern physics, let me simply ask: Does Harrison himself speak Hopi? Does he know of any physicist who speaks Hopi? Does he know of any physicist who would be willing to expend the time and effort to learn Hopi, a language whose structure and vocabulary are as complicated as those of English and at the same time completely alien? Does he know of any physicist who would be likely to *succeed* in learning Hopi well enough to communicate freely with other physicists in that language?

I then refer him to the second paragraph of Dolezalek's letter. For the motivated self-student, two months is not a terribly uncommon learning time for Esperanto. *One week*, although rare, is not unknown.

Incidentally, Heisenberg's complaints about the connotations of the English word "particle" are just as applicable to the Esperanto word *partikulo*. However, the meaning of the coined Esperanto word *ondaĵo* should be immediately apparent to any Esperanto-speaking physicist.

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THE AUTHOR COMMENTS: In reply to D. J. Harlow's letter regarding universal language: no, yes, yes, insufficient data.

Since Harlow does not wish to discuss the validity of the "Whorfian hypothesis," I will withdraw my aside regarding the Hopi language. Instead I propose we adopt David Bohm's "rheomode"[1] as the universal language for discussions of the adoption of universal languages.

Reference

1. See, for example, D. Bohm, *Wholeness and the implicate order*, Routledge and Kegan Paul (1980), Chapter 2.

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Missing translator

I am trying to publish an English translation of a selection of W. Pauli's correspondence during the times of the birth of quantum mechanics. Ms. Amelia Rachel-Cohen has been of great help to me in this job, but she neglected to inform me of her present whereabouts.

I would be grateful to any person who could help me to find Ms. Rachel-Cohen.

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