

expected. Thus in information space, the mapping measures of such impressions do not cluster sufficiently for efficient separation.

At least one of the projects, however, now shows considerable promise and we have reason to believe that, in a year or two, a scene-of-crime fingerprint retrieval system will be available.

Yours faithfully,

A. GANSON

Secretary,
Fingerprint Contracts
Management Committee,
Home Office.

Ribosome Ambiguity

SIR,—As was recently pointed out in "News and Views" (*Nature*, **223**, 115 and 415; 1969), there is still controversy over the significance and even the existence of 70S bacterial ribosomes; but unfortunately both your correspondents have added to the confusion by inaccurately summarizing the alternative explanations that have been proposed. In particular, the model advanced by my colleagues and me is not included in either list, and we are erroneously cited as supporting the view that 70S ribosomes are necessarily attached to messenger. In view of the repetition of the misquotation I would like to restate our view: that while some of the 70S particles are undoubtedly monosomes complexed with peptidyl-tRNA (or f-met-tRNA) and mRNA, the cell also contains a substantial fraction of "free" 70S ribosomes, not complexed with these ligands, and playing a definite part in the ribosome-polysome cycle.

This view is based primarily on two findings: when a cell increases its conversion of polysomes to runoff products it accumulates 70S particles rather than subunits¹; and such runoff ribosomes can be distinguished from polysomal ribosomes by their greater ease of dissociation². Moreover, the "free" runoff ribosome appears to be a stable intermediate in the ribosome-polysome cycle, since under physiological conditions its conversion to subunits requires complexing with a protein dissociation factor, whose limiting supply can account for the observed constancy of the level of subunits³.

The main experimental evidence against this model, appropriately cited by your correspondents, is the finding in two laboratories that under various conditions the presence of Na⁺ instead of K⁺ decreases or even eliminates the 70S fraction in the extracts. But instead of assuming with the authors that Na⁺ preserves the intracellular distribution of ribosomal particles better than K⁺, we would suggest that the Na⁺ ion (which is foreign to the cell) dissociates free but not complexed ribosomes, and that the ratio of the two varies with the conditions. Experimental evidence for this interpretation, obtained by Mr R. Beller in this laboratory, will be forthcoming shortly.

Yours faithfully,

BERNARD D. DAVIS

Bacterial Physiology Unit,
Harvard Medical School,
Boston, Massachusetts.

¹ Kohler, R. E., Ron, E. Z., and Davis, B. D., *J. Mol. Biol.*, **36**, 71 (1968).

² Ron, E. Z., Kohler, R. E., and Davis, B. D., *J. Mol. Biol.*, **36**, 83 (1968).

³ Subramanian, A. R., Ron, E. Z., and Davis, B. D., *Proc. US Nat. Acad. Sci.*, **61**, 761 (1968).

SIR,—I would like to comment on two recent "News and Views" in which my recent article (*Nature*, **223**, 1364; 1969) and several others on the subject of the 70S ribosome were mentioned.

In contrast to your correspondent's statements, I do not consider that my results support either Schlessinger's or Davis's previous work. Davis pointed out the technical fault in Schlessinger's work and now one might say that Franklin has found a fault in Davis's work. A point of Franklin's most recent paper (*J. Mol. Biol.*, **45**, 23; 1969)

is to investigate the origin of the higher proportion of 70S ribosomes found when the lysis media contain K⁺. This led to the conclusion that the type of profile obtained when Na⁺ salts are used is more representative of the *in vivo* situation. These are in fact the conditions which I used. Franklin's sucrose gradient profiles are compatible, I believe, with the small amount of 70S, 4-7 per cent of total ribosomes, that I said were present. You may admit that it is very difficult to quantitate each class of ribosome, from 30S to polysomes, from one sucrose gradient profile.

I hope that with closer attention to experimental details and the actual figures your reviewer will agree that there is no disagreement between Franklin's result and mine. I, in effect, presumed Franklin's conclusion and then asked what does this small amount of 70S material represent.

Yours faithfully,

F. VARRICCHIO

School of Medicine,
Yale University,
333 Cedar Street,
New Haven, Connecticut.

University Reform

SIR,—Professor Doty has many interesting things to say in his Granada lecture "The Academic Condition in the United States", printed in your issue of December 13, but he could hardly have been more mistaken in his choice of Aunt Sallies when calling for "the informed involvement of students who are not content to be the spiritual descendants of William Cobbett and William Morris, living in self imposed semi-poverty making ceramic jewellery and psychedelic posters". Both Cobbett and Morris were deeply committed radicals who spent their energies battling against the injustices of their societies as they saw them.

Yours faithfully,

R. S. SMITH

Librarian,
University of Nottingham.

Black Velvet

SIR,—Please note that the mole is not "the rodent toasted by the Jacobians" (*Nature*, **224**, 1053; 1969) but "the insectivore toasted by the Jacobites".

Yours faithfully,

J. W. WARREN

Physics Department,
Brunel University.

Miscellaneous Intelligence

SIR,—Last night in the bath we were considering your distressing item about the incidence of fatal heart attacks during the act of procreation.

On reflexion, we found that 0.6 per cent of one's time is about one hour per week. Surely, Sir, this is a moderate—nay, a very moderate—estimate of the time the reasonable man would devote to this pursuit. Some indeed would regard it as a gross under-estimate. It follows that the act may not predispose to coronary infarction.

On the contrary, your figures could be construed as showing a protective influence.

Is it not time for the minister to consider setting up facilities for the study of this branch of preventive medicine?

Yours faithfully,

A. E. M. McLEAN
E. K. McLEAN

University College Hospital
Medical School,
University of London.