It was Greenberg's keen reportorial sense that, first among national journalists, identified the academic promise of the Stony Brook campus of State University of New York. Those of us who had decided earlier that something exciting might become of the place are permanently in his debt for calling the attention of the scientific community to Stony Brook in 1965, and particularly to the importance of the appointment that year of John S. Toll as president. Greenberg's article on our recent difficulties with drugs and with our environment is also perceptive in its speculations about the larger significance of events of this sort to public higher education—especially those institutions which aim to achieve quality in instruction and research.

Therefore, only the most consequential cause should move me to request use of this column to amend or extend his report. Such cause, I regret to say, exists and is made important by the direction which the subsequent assault on the university has taken: a vastly publicized campaign to paint the faculty and administration at Stony Brook as collusively indifferent to the problem of drug abuse. It is thus necessary to add these observations to Greenberg's summary of the pre-raid development of the university's countermeasures. We were not only aware that we had a problem, but were also hard at work on it. Following the arrests on the campus last spring (each of which was a result of the university's investigations), a number of new steps were taken. Every relevant office-the president, the dean of students and his staff, the housing staff, psychological services, the campus ministry, the masters and faculty associates of the residential colleges—was involved in a campaign of discussion and education aimed at sensitizing the student body to the legal, physiological, and psychological dangers of drug abuse. The freshman orientation period last fall emphasized these problems particularly, and evidently with some success since only two members of that large class were among the 29 students indicted. All elements of the university community participated last fall in a revision of the campus regulations, with special attention given to the clarification and strengthening of the rules against use of illegal drugs. Counseling services for students were extended. Training of residence assistants was intensified, with the assistance of experts in narcotics problems. Recruitment of a full-time staff for drug abuse prevention, education, and control was completed in the week before the raid. I am unaware of another campus where a more concerted effort has been mounted.

A staple item in the police charges of university indifference to drug abuse has been the allegation that there were frequent occasions on which large groups of students "turned on" in public lounges. The fact is that the university had no information indicating any such happening prior to the raid, and careful investigation of the tidal wave of hearsay since generated has failed to reveal an instance. The basis of the police allegations has now been entered in the record through the testimony of their undercover agents before the Joint Legislative Committee on Crime. Although rich in titillating hearsay, this testimony is singularly innocent of precise, firsthand information in spite of the fact that it represents nearly 9 man-months of undercover work among the students. In attempting to support their charges, the agents were able to adduce only one incident that could live up to its advance billing, and that on very shaky grounds: a group estimated at 50, judged to be under the influence of mescaline. Since no cross-examination was allowed, it has been impossible for us to find when this occurred or to establish the witness' diagnostic competence. (The latter is an important point, because there are indications that membership in Students for a Democratic Society, use of pastelcolored lights, beards, and unusual hair styles are considered to be suggestive evidence of drug abuse.) To be sure, the agents deemed other incidents relevant, although these were not coupled to a report of public drug use. Thus, one officer described in shocked detail a party at which students appeared in most bizarre clothing. Indeed, he saw by his account one young man with his chest bare, his face painted and an outlandish hat standing next to the president, during which time the president failed to remonstrate with him. The agent elided one possibly relevant detail: this party, which we were able to identify, was a costume affair for foreign students, at which the president awarded first prize to a lad who came as an Indian. Other faculty present characterize the party as proper to the point of ennui.

The whole affair is now rapidly headed for the courts of law. While this is on issues which can only evoke the greatest concern and distress in anyone whose memory of academic problems goes back 15 years, we at Stony Brook will at least welcome the first appearance to date of due process and the rules of evidence in public discussions of the university's problems.

T. A. POND

Department of Physics, State University of New York at Stony Brook 11790

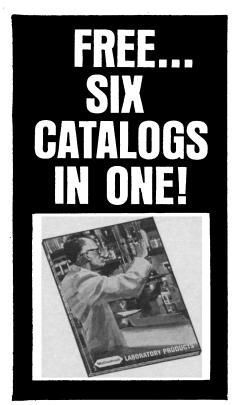
Food Radiation: Burden of Proof

In referring to two areas of research that have public health implications, Auerbach ("The chemical production of mutations," 1 Dec., p. 1141), uses the word "hazardous" in a way that should not pass unchallenged. Speaking of the evidence that irradiation of food makes it mutagenic for mice she says: "... extrapolation from mice to man is hazardous when one is dealing with slight genetical effects . . ." Again, discussing the inconclusive evidence of mutagenesis by caffeine, she writes: "As in the case of food sterilized with radiation, the application to human affairs is doubtful and hazardous."

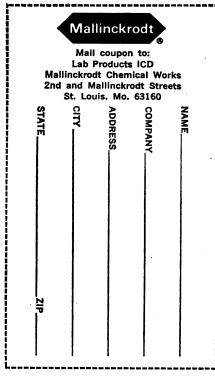
What does the author mean by "hazardous"? Perhaps she means "intellectually hazardous"—which hardly raises any question of public concern. Not specifically stated, but implied surely, is the conclusion that we should not interfere with the use of either caffeine or food irradiation until we have more clear-cut proof of danger. If this is a correct inference from the word "hazardous," I think there are grounds for criticizing the practical recommendation.

Even if the scientific evidence for the two dangers is equally inconclusive, the policy recommendations should be quite different. The drinking of caffeine is already deeply embedded in our culture. Our experience with the cigarette problem indicates the difficulty of changing widespread social habits. To attack coffee at the present time would undoubtedly be in some sense socially "hazardous."

The irradiation of food is another matter. This practice is not now woven into the web of social practices, nor is it likely to be. No one *desires* irradiated food. There are merely commercial interests that believe they stand to gain financially by the development of a food-irradiation industry. It is questionable whether there is any social need



Send today for your copy of the new, 1968 Mallinckrodt Laboratory Products Catalog. Contains hundreds of AR reagents (biggest list ever), plus your mostwanted organic reagents; SilicAR and ChromAR products for chromatography; solvents for spectrophotometry, NMR work, and GLC including pesticide residue analysis; plastic labware packed with new ideas and a host of other items—more than 1,000 products in the laboratory chemist's most complete book of tools. Fill out the coupon now.



for food-irradiation since we already have several alternate methods for preserving food.

What is at issue is the placing of the burden of proof. Whenever a proposed restriction is likely to cause social turmoil (as in the case of caffeine), we can wisely insist on placing a heavy burden of proof on those who propose the change. However, forbidding the irradiation of food would cause no social disruption, outside the narrow circle of a few industries and research laboratories. Here the burden of proof is surely on those who say (ignoring some of the evidence) that food irradiation is 100 percent safe. It would be hazardous to future generations to encourage, or even permit, the development of a foodirradiation industry on the basis of the present inconclusive evidence.

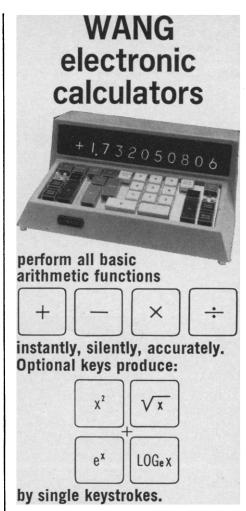
GARRETT HARDIN

Department of Biological Sciences, University of California, Santa Barbara 93106

Transfer Experiments: A Plea for Tolerance

The letter by Nicholls et al. (22 Dec.) reporting the results of preliminary experiments on the transfer of characteristics from one oscilloscope to another, by means of an extract, produced a common reaction among my colleagues: namely, that the letter was really a parody, with intent to portray, by analogy, the intrinsic absurdity of recent suggestions that it is possible to transmit memory between lower organisms by techniques superficially similar to those described by Nicholls. I should like to point out that if the techniques and results of transfer experiments between oscilloscopes are analogous to those of transfer experiments between Planaria, they are also analogous to those of transfer of genetic characteristics between Pneumococci, as described by Alloway (1), the active component for which was subsequently identified as DNA by Avery, MacLeod, and McCarty (2). Those experiments, far from being absurd, have had such far-reaching consequences that I lack arrogance to summarize them.

I have no desire to argue here for credence or incredulity in the suggestion of a phenomenon of memory transfer in *Planaria* (or even in oscilloscopes). It is worthwhile, however, to keep in mind the distinction between invalidity and absurdity of scientific results. Any sci-



There are models to fit every need. Wang calculators can be used to figure everything from monthly mortgage payments to rocket engine thrust coefficient. You can add fractions, do chain multiplication, produce reciprocals, store and recall sums of products, multipliers and/or entries as well as intermediate answers. You can have such options as: four additional random-access storage registers, 80 step plug-in card programmer and/or built-in programs for single keystroke calculations of $\sin \theta$, $\cos \theta$, arcsin x, arctan x. And that's just the beginning. Add-on compatibility enables you to build to a powerful computing system that will branch, loop, do sub-routines, make decisions and manipulate arrays. There is nothing comparable, anywhere.

For complete information, write:



Dept. 3Q, 836 North St., Tewksbury, Mass. 01876 Tel.: (617) 851-7311

		-	-		
In Ma	ajor Cities	, Tel.:		(514)	482-0737
(201)	241-0250	(313)	278-4744		463-8877
(203)			727-0256		234-7631
(205)	245-6057	(317)	631-0909	(612)	881-5324
(206)	245-6057	(319)	365-2966	(614)	488-9753
(212)	255-9042	(402)	341-6463	(617)	851-7311
(213)	278-3232	(404)	457-6441	(702)	322-4692
(214)	361-4351	(405)	842-7882	(702)	735-5802
(215)	839-3345	(412)	366-1906	(713)	668-0275
(216)	333-6611		454-4140		381-5440
(301)			364-0327		397-3212
(301)	821-8212		729-6858		421-0890
(303)	364-7361		255-9042		834-1433
(305)	841-3691		454-4324		489-7326
(312)	456-1542	(513)	531-2729	(919)	288-1695