■ VOLTAGE MONITORING SYSTEM contains a switch-type magnetic amplifier for each of eight sensing channels, a d-c voltage reference unit and a resistor assembly. Indication is provided by the instrument when a deviation from nominal voltage is greater than a preset value; the indication is held until the voltage being sensed has become less than that value. Operating power is 120 volts, 400 cy/sec. (Magnetic Controls Co., Dept Sci687, 405 Cambridge St., Minneapolis 26, Minn.)

■ ALARM SCANNER for millivolt and higher-level signals is said to be capable of scanning from 1000 to 20,000 points per second with provision for adjustment of setting and tolerance on each input. Signals are accepted from thermocouples, strain gages, or resistances. Minimum common-mode rejection at 60 cy/sec is 130 db. Input for each point consists of a winding on a magnetic amplifier. Scanning is effected by switching carrier power to each amplifier in turn by means of a solid-state matrix. Visible and audible alarms can be provided with alarm-point identification and memory. (San Diego Scientific Corp., Dept. Sci689, 3434 Midway Drive, San Diego 10, Calif.)

■ CAPACITANCE BRIDGE measures from 0.002 to 1.000 pf with accuracy said to be ±0.2 percent. Operation of the completely self-contained instrument is based on a transformer ratio-arm bridge operating at 1 kcy/sec. The technique requires only one capacitive and resistive standard. (Marconi Instruments, Dept. Sci686, 111 Cedar Lane, Englewood, N.J.)

■ FRACTION COLLECTOR transfers fractions from the carrier gas of a gas chromatograph directly into an ultramicro cavity type infrared absorption cell. The fraction collector consists of a glass condenser, the bottom end of which opens into the neck of the infrared cell. In operation the lower portion of the collector is placed in a coolant such as solid CO_2 and acetone. The unit is designed to fit directly into standard 15/16 in. centrifuge tubes to permit small samples to be moved from the condenser to the cell. (Connecticut Instrument Corp., Dept. Sci691, Wilton, Conn.)

■ MICROMINIATURE ELECTRIC LIGHT BULB is an incandescent lamp 0.015 in. in diameter and 0.062 in. long. The bulb is furnished with axial platinum leads 0.003 in. in diameter. Operation is on 1.5 volts with current of 15 ma. (Kay Electric Co., Dept. Sci680, 14 Maple Ave., Pine Brook, N.J.)

JOSHUA STERN

National Bureau of Standards, Washington, D.C.

Letters

"Of Mice and Mangun"

About two years ago I set up a small laboratory and animal husbandry room in my barn in Mendham Township, New Jersey. It is back from a dirt road in a farming and residential area on an 18-acre farm. On a complaint from one neighbor, I was found guilty of "hiring employees and raising animals for the purpose of doing research." The area is also zoned to permit builders, contractors, physicians, surgeons, engineers, carpenters, hairdressers, and plumbers to conduct their offices and usual accessory activities.

I applied for a variance following the limited interpretation of the zoning ordinance, and it was rejected despite the fact that only one of the 12 neighbors within 500 feet of my property lines was opposed, and despite the fact that a petition for a variance or a change in the wording of the ordinance was signed by 150 township property owners while an opposing petition received only eight signatures.

At this point I decided to move elsewhere, and soon after I announced my decision, children began calling for free mice. Word spread, and a growing stream of children appeared. On Friday, 13 May, a reporter called. The conversation was quite short and in essence went as follows:

Reporter (convulsed with laughter): Dr. Mangun, is it true you are giving away white mice?

G.H.M.: Yes, about 20 kids have come around and picked up a couple of hundred mice.

Reporter: And is it true you are doing this for revenge against the township because they forced you to close your lab?

G.H.M.: Not at all. I've given away lots of mice before and helped the kids set up feeding and growth experiments in the hope of stimulating their interest in biology, science, and medicine. Some of the children have spent many hours in my laboratory helping to care for the animals and watching or assisting with experiments. I did once jokingly remark that it would be a jolly sight as I drove my trail herd down main street on my way West, and just maybe a few of the critters might get lost.

Reporter: Then is it definitely not true that you are doing this for revenge?

G.H.M.: Of course not! [Then, after contemplating the situation in this new light] My only "revenge" will be to turn their children into biologists so they will amount to more than this generation.

Reporter: *Very* good, Dr. Mangun. Goodbye.

The resulting story went critical the

following morning, and shortly thereafter my barn went intensely paramagnetic (kiddophilic and mammaphobic). It took me 10 days to crawl out from under the crowd. Meanwhile the press forged two versions of the story—the humorous side captioned by such headlines "Pied Piper Sends 'em Back," "Science at Work." "Researcher Avenged with Mouse-ola,'" "One Jolly Hickory Dickory Doc," "Of Mice and Mangun," "Doc Makes Town Crawl," and "Mangun, Merry Mouse Man of Mendham." No one thought to call me the Pied Pipetter. Except for the original story in the Newark *News*, all versions edited out the *only* in my original statement and used the statement out of context.

Some papers ignored the tongue-in-cheek vein of the original story and quoted me as saying I was taking revenge against the township. I have never made any such statement. Retribution is proceeding sanely by due democratic process.

I have learned the hard way that research is looked upon by some as "just a way to make a buck." In part this may be due to the confusion existing in the mind of the public as to the distinction between basic scientific research, applied research and technology, and manufacturing laboratories. Fear and distrust of the scientist were also abundantly evident in the attitude of a few of the objectors, who had some almost amusing Frankensteinian qualms.

Well, it's been fun and most educational to operate a laboratory on an isolated farm. At the same time I have obtained a lot of very interesting data on enzymes and analgesics. However, I would reccommend that anyone setting up a private research laboratory seriously consider inventing a new name for it—for instance, a "knowledge studio."

GEORGE H. MANGUN
Schoolhouse Lane,
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The Chinese Chestnut

I noted with interest the photograph of Chinese chestnut nuts, bur, and leaves on the cover of the 25 March issue of *Science* [**131** (1960)].

I have a slight criticism to make about your statement about the Chinese chestnut. You say that widespread planting of the Chinese chestnut "is bringing back the chestnut to the American scene." It is true that we again have nut-producing trees of the chestnut growing in this country, but the Chinese chestnut is very different in its habit of growth from the American chestnut, and it will never replace the native tree. The American chestnut was one of our greatest timber species. It was a tall, stout-growing tree whose wood found many uses, particularly for telephone poles. The Chinese chestnut is almost a shrub in comparison. It is a small-growing tree of unimpressive potentialities as a timber tree. It will never find its way into our native forests. Its best use is as an orchard or lawn tree.

Incidentally, the poetic phrase "Under the spreading chestnut tree" referred to the horse chestnut, a beautiful tree which fortunately is still with us.

ROBERT RODALE
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Robert Rodale's statement that the Chinese chestnut will never replace the American species as a timber tree is correct. In our description of the cover illustration we did not have the space to point out that "bringing back the chestnut to the American scene" referred to the production of nuts and not to timber. However, Rodale is somewhat misleading when he says the Chinese chestnut is "almost a shrub" in comparison with the American. We know of Chinese chestnut trees that have a trunk more than 2 feet in diameter and are more than 50 feet tall. It is true that the tree does not generally have a straight central trunk, and the top is usually spreading and rounded.

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More on Stochastic Models

This note is concerned with a criticism of some of the remarks made by N. E. Manos in his recent letter [*Science* **131**, 1400 (1960)]. Although Manos did not give an indication of what he meant by the much abused term *deterministic*, I assume that he meant it in the sense of entailing a necessary logical relation between the members of a class of prescribed characteristics. The latter is in keeping with E. Nagel's definition of *deterministic* [*Phil. and Phenomenolog. Research* **20**, 291 (1960)].

By way of equilibrating Manos' statement to the effect that many investigators in the physical sciences reject any research which is not deterministic, I wish to point out that much of contemporary philosophy, physics, and electrical engineering is "process-minded"; this includes stochastic processes. Surely, quantum mechanics with its expanding domains of intellectual inquiry and its materialistic yield of the transistor cannot be said to be unrealistic. The statistical model pulled together enough relevant facts long enough so that a human mind could make a significant prediction. The same may be said for the model of communications called "information theory." Further fuel may be added to the fire when we consider D. Bohm's remark, "we may say that the processes taking place in nature may have been found to satisfy laws that are more general than those of causality. For these processes may also satisfy laws of chance. . . ." [*Causality and Chance in Modern Physics* (Van Nostrand, Princeton, N.J., 1957), p. 3]. Probably it is accurate to say that an exclusive use of only determinism or only statistics will make understanding of a scientific endeavor more difficult. Perhaps this is a useful principle of dualism in the interpretation of physics.

Finally, as to Manos' comment, "if the world is basically deterministic," I am of the opinion that we should view the world with any model which is capable of exercising our brains, with some resultant esthetic pleasure, and which shows signs of allowing us to reap material rewards.

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Terrestrial Ostracodes

Ostracodes were recently described at a scientific convention, to a wife who was not a biologist, as "microscopic clams each with a shrimp inside." For almost 200 years they have been known as living and as fossil aquatic bivalved crustaceans that inhabit fresh, brackish, and marine waters.

Menzel [*Arch. Hydrobiol. Planktonk.* **11**, 478 (1916)] described ostracodes from wet moss, but the first known terrestrial species, *Mesocypris terrestris* Harding, 1953 [*Ann. Natal Museum* **12**, 359 (1953)] was described from ordinary damp forest humus obtained at an altitude of 500 feet in the Knysna forest, South Africa. The discovery of these terrestrial forms was incidental to the processing of soil samples in a Berlese funnel in order to collect myriapods and small arachnids. In a later paper, Harding [*Bull. Natl. Inst. Sci. India No. 7* (1955), pp. 104–106] suggested that the water in the form of vapor in a humid atmosphere is sufficient to maintain the terrestrial ostracodes.

Chapman [*Nature (Paris), No. 4706* (1960), p. 121] recorded the presence of ostracodes of the same genus in New Zealand from six localities that range in elevation from 800 to 3200 feet and from a variety of environment, such as