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In "Environmentally Induced Illness," formaldehyde was mentioned as one pollutant affecting people. At least one important source of this is tobacco smoke. Further in the article, David Gould's case was cited — 10 injections daily to relieve effects of cigarette smoke, perfume and other allergens. The debate between allergists and indoor ecologists might be ended if it were considered that allergy may not be the only reaction that is being observed in people.

For instance, tobacco smoke is a common indoor air pollutant. More and more people are complaining about it — are more people allergic? We know that nicotine is a poison that can paralyze the cilia of the lungs. What other metabolic process can it interfere with — nerve impulses, enzymes, brain waves? Tobacco smoke contains up to 4,000 chemicals (which ones affect people?) and there are many thousands of new chemicals created each year.

One point that needs to be made about pollution is EPR — effective pollution range. Some people complain about perfume, but usually a few steps' distance will relieve the problem. With smoking, the range is extended to all parts of the enclosed area because the volume is so much greater. Length of burning time is important, too. Burnt toast pollutes the air, but people don't allow it to continue for 12 minutes.

Tobacco smoke and other pollutants — whether they affect by poisons, irritants or as allergens, or because they change the air's dryness, pH or ionization — should be studied in a broader view, such as ecology. Fighting over whether it is a true allergy doesn't help those who are affected by it.

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Used or abused?

In "Atom detection improves, on the surface" (SN: 8/18/84, p. 101), author Thomsen gets off to a poor start by claiming that the word "interface" is often "improperly used" nowadays. Our language isn't fixed in concrete, but rather is changing all the time. New words and new meanings for old words are created when people begin *using* them. There is nothing wrong with this; it is a natural process. Those oft-heard sermons about how poorly people use language today only serve to point out how little the sermons' authors really know about language.

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Plastics backer

"New Life for Old Plastics" (SN: 9/1/84, p. 140) provides excellent coverage of a fast-growing area of polymer technology. Unfortunately, the fact was omitted that the initiator and financial supporter of the program is the U.S. Department of Energy/ECUT (Energy Conversion Utilization and Technologies). Without their support there would be no program.

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Waves of the future

As a researcher in the area of microwaves and radar systems, I am very interested in the effect of long exposure to low levels of radio-frequency energy. "Microwaves: Hints of low-dose hazards" (SN: 8/18/84) indicates that there is some cause for concern, but I would like to point out that the frequency chosen for the study (2.45 gigahertz) is the microwave oven frequency, which was chosen for its resonance with water. As rats (and people) are largely water, this frequency would be expected to have the greatest chance of causing biological effects.

This experiment must be repeated using a variety of frequencies. People are exposed to most of the 1 to 10 GHz spectrum in the form of air-traffic-control radar, weather radar, earth stations ... and, of course, microwave ovens. Military systems often work in the vicinity of 17, 25, 35, 60 and 94 GHz. The higher frequencies are less often used at present, but will become more and more common in the near future.

Your article mentions the wavelength being chosen to be commensurate with the size of a rat. The wavelength of 2.45 GHz is about 4 inches, which I agree is about the size of a rat; however, the 70-inch size of a human would indicate that they are trying to predict the response a human would have to a frequency of 168 MHz. This is in the VHF band, and doesn't seem very appropriate to the question at hand. It has been my experience that "frequency scaling" is unreliable (at least in microwave-component development), and along with the other uncertainties I mentioned, perhaps the experiment should be repeated with substantially larger animals.

I also think it quite a sight to have 100 rats being raised in a bank of microwave ovens, all set on "defrost."

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