ready suffers because of social discrimination. Recent statistics from the Institute of Electronics and Electrical Engineering (IEEE Spectrum, Sept. 1975) show that, even in professional careers, orientals have an annual salary $1000 *less* than blacks and American Indians, and $2100 less than whites.

In contrast, the crime rate of orientals is *one-tenth* that of whites and *one-hundredth that of blacks;* also their average education rate is higher than any other race in the country.

It is very unfortunate that first-class citizenship in terms of advanced education and least crime rate are not rewarded. To call attention to this doubly discriminated status, should orientals speak up noisily against their traditional moral—or should they make conspicuous problems, such as increasing the crime rate by a factor of two hundred?

AKIRA HASEGAWA
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Short life for physicists

I was much interested in the letter in your July issue (page 11) from John Davis, concerning the possibility of a shorter life expectancy for physicists. As a regular reader of the obituaries in PHYSICS TODAY, I was also impressed by the relative frequency of deaths at quite early ages. However, I resisted the conjecture (I made no studies) that there was indeed a shorter life expectancy, if only because I'm sure I've read some authoritative statistics to the effect that scientists in general were among the longest lived. With archeologists leading, if I remember correctly, physicists were in a satisfactory position.

The question then arises: do your obituaries make up a fair sample? Presumably you are limited to active members of AIP (and similar societies), prominent (or erstwhile prominent) nonmembers, and others you hear about by indirect or informal channels.

But there may be a significant number of physicists or ex-physicists who do not fit these categories. Many men (or persons) may have active, even productive, although undistinguished, careers and drop from sight, as far as the physics community is concerned, in their forties or fifties. This may be more common at present (though it will have a delayed effect on the subject under discussion). The reason for this is that about 1% per year leave physics *not* by death or retirement, as mentioned in Lee Grodzins's report on the employment situation (see W. K. H. Panofsky's article, June, page 23). I imagine this category as distinct or only partially overlapping the middle-aged dropper-from sight category. The point is, obviously, that many in both categories may go on to live to ripe old ages, and never appear in a PHYSICS TODAY obituary.

Therefore, I repeat: how fair a sample of physicists and ex-physicists are those appearing in your obituaries?

GERALD CONRAD
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THE AUTHOR COMMENTS: Gerald Conrad's remarks are well taken. How good is the obituary column as a source of the needed data? Is it a biased sample?

Since the publication of my letter, S. M. Luria has kindly sent me a copy of an analysis[1] of the deaths of scientists reported in *Science* from January 1958 through January 1968 categorized by major field, radiation experience and sex.

Luria found the mean age at death for archaeologists to be 77 ± 11 years, for physicists 64 ± 16. Radiation workers from all fields had 62 ± 14. Luria also found striking differences in the shape of the mortality distributions.

Luria discussed the significance and also questioned the validity of the obituary sample. But apparently no better data are available.

Reference

1. S. M. Luria, Report Number 609, Naval Submarine Medical Research Laboratory, Box 900, Naval Submarine Base New London, Groton, Connecticut 06340. Also ref. Public Health Reports, 84, 661–664 (1969).

JOHN F. DAVIS
University of Utah
Salt Lake City, Utah

Synchrotron radiation

I should like to make some comments to the letter by G. C. Baldwin "Origin of synchrotron radiation" (January, page 9).

As far as I know, the term describing the energy loss connected with the radiation of energy by the moving charged particle was first introduced into the equation of electron motion in a magnetic induction accelerator by W. W. Jassinsky [J. Exp. Theor. Phys. (USSR) **5**,983, 1935; Arch. für Elektrotechnik, **30,** 590, 1936]. (It is true that after introducing this term Jassinsky neglected it in further calculations.) D. Kerst in his first detailed paper (Phys. Rev. **60,** 47, 1941) cited Jassinsky's article.

In 1945 the paper by L. Arzimovich and I. Pomeranchuk appeared: "The radiation of fast electrons in the magnetic field" (J. Phys. USSR **9**,267, 1945: see also J. Exp. Theor. Phys. USSR **16,** 379, 1946). This paper should have been cited by Baldwin because Arzimovich and Pomeranchuk calculated the

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spectral and angular distributions of the "synchrotron radiation" and proved the absence of interferential quenching of one electron by the radiation of other electrons orbiting in a circle. This calculation obviously precedes Blewett's (Phys. Rev. **69,** 87, 1946). It should be noted that the work of Arzimovich and Pomeranchuk was well known to many physicists and was cited, for example, in the papers by J. Schwinger (Phys. Rev. **75,** 1912, 1949) and F. R. Elder, R. V. Langmuir, H. C. Pollock (Phys. Rev. **74,** 52, 1948).

A. P. GRINBERG
A. F. Ioffe Physico-Technical Institute
Leningrad, USSR

Cat Doggerel

Who killed Schrödinger's cat?
Is this truly where physics is at?
Is all our power and intellectual pride
Hung up upon this catricide?

Why does this heinous felony feline
Cause such confusion to be mine?
Why can't I more clearly see
What each psi function says to me?

Who did this dastard act so shabby
On some poor and cuddly tabby?
Was it a wave or was it a thing
That was behind the lethal sting?

Doesn't there exist a philosopher's stone
That will clarify and thus atone?
Till then we can only hope and pray
Nobody rats to the ASPCA.

HAROLD J. MOROWITZ
Yale University
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A physicist in politics

Your October editorial entitled "The most fundamental problem" called attention to the need for greater dialogue between scientists and political leaders, and for greater participation by scientists in the political process. Few scientists get elected to state or national legislatures, and so their personal presence and insights are not significant factors in the legislative process—certainly not comparable to lawyers' influence, to name another profession.

Most scientists are as ignorant of the political process, as politicians are of scientific processes. Many scientists could perform a great public service by becoming educated regarding the political process going on around them—by personal participation in it. Reading about it is similar to reading a book on how to swim. You learn how to be politically effective through participation.

My personal experience suggests that we scientists may play a significant role