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# The Actuary

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## NEW DIRECTOR OF RESEARCH

Mark G. Doherty is now the Society's Director of Research, succeeding James L. Cowen who vacated that post in May.

Mark, in his thirties, is an M.S. in mathematics, statistics and operations research from Xavier University, and an M.B.A. from Virginia Polytechnic Institute. His background includes teaching, management consulting, and most recently research for the natural gas industry that required studies interestingly comparable to studies done in actuarial work.

Members who attend our Florida meeting will have an opportunity to meet and welcome Mr. Doherty there.

*E.J.M.*

## HALE-&HEARTY HEFT

*by Frederic Seltzer*

Metropolitan Life, into public service health education for over a century, has been producing since 1942 tables that show the weights at which mortality is lowest. Their purpose is to promote sound concepts of weight control.

Originally, adjectives such as "desirable" or "ideal" were applied to these tables, but no longer so. Weights associated with lowest mortality mustn't be confused with weights at which morbidity is lowest, weights at which job performance may be optimal, or weights for which appearance is judged best. Furthermore, these weights weren't calculated from samples of the entire population but from insured lives, excluding people known to be suffering from major diseases such as cancer, diabetes or heart impairments.

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## REFLECTIONS ON PHILADELPHIA— APRIL 1983

*by George D. Gwilt, F.F.A.*

*Ed. Note: Mr. Gwilt is President of the Faculty of Actuaries. This welcome contribution was solicited.*

Outsiders can sometimes see what is hidden by familiarity from those inside a group. That I was an outsider at the Society's Philadelphia meeting doesn't imply that I can unerringly point to every unclothed emperor—to do that I would have to know precisely which emperors appeared (erroneously) to Society members as clothed. But you might, just conceivably, be interested in what an "innocent eye" saw during those two April days when I was made so welcome by your President and others.

### Premiums by Sex

That legislation prohibiting different sets of premiums for males and females was on the point of being passed struck me as extraordinary. There is indeed a worldwide movement aimed at reducing many forms of sex discrimination. In the U.K., employers are required to give people equal opportunities regardless of sex. Membership conditions of pension schemes must not depend on sex. For a time there was argument whether contributions or benefits should be equal but the authorities, so far, have stepped back from the brink and haven't required simultaneous equality of benefits and contributions.

There is nevertheless a disturbing draft directive of the European Economic Community now being considered, that would impose more rigid requirements of equality: it would require money-purchase schemes to provide the same benefits to men and women for the same contribution. Clearly, this must be firmly resisted.

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## VOGEL JOINS EDITORIAL BOARD

We announce with pleasure the appointment of Julius Vogel as an Associate Editor. Mr. Vogel enjoys the distinction of having written an article for our very first issue (March 1967); he went on to become Society President in 1979-80. He is Chief Consulting Actuary in Alan M. Thaler & Associates, stationed in Summit, New Jersey.

## NON-ROUTINE ACTIONS BY BOARD OF GOVERNORS, MAY 1983

*by Kenneth T. Clark, Secretary*

1. The Board took under study a report from the Committee on Specifications for Monetary Values for the 1980 CSO Tables. Copies of the report are available from the Society office.
2. The Board approved formation of a Pension Section, and its By-Laws.
3. The Board reversed its prior decision on status of Associates in our Sections. Associates will now be entitled to vote and to hold office therein.
4. The Board revised the second paragraph of Article IX of the By-Laws to provide a more flexible waiver of dues system, and then adopted a policy for implementation. The policy covers waivers for those disabled or retired, full time students, in military service, and for certain other members.
5. The Board adopted a policy authorizing sale of the Society's mailing list to persons or organizations offering goods and services of particular interest to actuaries. Members will be given the opportunity to have their names omitted from such lists.

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## Hale & Hearty

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### Change Over Past Two Decades

The latest of these tables, "1983 Metropolitan Height and Weight Tables based on Lowest Mortality" derived from the *Build Study* 1979 of the Association of Life Insurance Medical Directors of America and the Society of Actuaries, show material differences from their immediate predecessors calculated from the corresponding 1959 study of these same two bodies. Today's adults can weigh more than their 1959 counterparts and still expect favorable longevity. But it's still true as it has been—it is better to be lean than plump.

The 20-year weight increases (for greatest longevity) are not uniformly distributed throughout the tables. For short men the average such increase was 13 pounds; for men of medium height, 7 pounds; for tall men, only 2 pounds. The corresponding increases for women registered 10, 8, and 3 pounds respectively. Over these years there have been substantial advances in public health and nutrition and changes in life style—immigration too may have affected the mix of body types.

### Contrast With Other Studies

Studies with contrary findings have appeared, but most of them come from populations that include impaired lives and hence may measure the combined effect of weight and disease rather than weight alone. Duration of observation is also important because the influence of weight on mortality is substantially deferred. Many of the studies that seem contradictory to ours had follow-up periods of 10 years or less.

*Ed. Note:* Readers who haven't acquired one of the pocket-size plastic cards that display the two 1983 tables, for men and for women, may find the following formulas, derived by this Ed., handy. They produce results within the weight ranges of the 1983 Metropolitan Tables:

Frame	Men	Women
Small	126 + 2.5 k	111 + 2.5 k
Medium	128 + 3 k	119 + 3 k
Large	135 + 3.5 k	131 + 3 k

"k" being the number of inches that height exceeds 5 feet.

It's explained that weights are in indoor clothing, and heights include shoes with 1-inch heels. No instructions on selecting the right frame size appear, but having seen Metropolitan's Chief Medical Director on the Today Show measuring Jane Pauley's elbow, we know there is a scientific way to do this. Applicable ages are 25 to 59 only. Heights for men range from 5 feet, 2 inches to 6 feet, 4 inches; for women, from 4 feet, 10 inches to 6 feet, 0 inches.

*Ed. P.S.:* Mr. Seltzer explains that frame size is ascertained by measuring the space between two prominent bones that make their appearance on either side of your elbow when you have (i) extended your arm with fingers straight, (ii) bent your forearm upward at a 90° angle, and (iii) turned the inside of your wrist toward your body. Frame is classified as Medium if the following relations apply:

Height Range	5'4"-5'7"	5'8"-5'11"	6'0"-6'3"
Elbow Breadth—M	2 $\frac{5}{8}$ -2 $\frac{7}{8}$	2 $\frac{3}{4}$ -3	2 $\frac{3}{4}$ -3 $\frac{1}{8}$
—F	2 $\frac{3}{8}$ -2 $\frac{5}{8}$	2 $\frac{3}{8}$ -2 $\frac{5}{8}$	2 $\frac{1}{2}$ -2 $\frac{3}{4}$

### Reflections

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And there have been complaints by women of unfair treatment in comparison with men under permanent health insurance contracts. One or two such cases have been settled out of court, so no legal principle has been established. In another case a female dentist, supported by the Equal Opportunities Commission, is arguing that the higher premiums she must pay are not supported by adequate statistical evidence. Present legislation does allow discrimination if it is actuarially justified. Long may that situation continue.

### Peering Ahead

I was intrigued by the existence of a futurism group in the Society. The Faculty has no such group and I doubt that we would contemplate starting one. This doesn't mean that actuaries in Scotland don't worry about the future, but rather that each of us will deal with the problems in his or her own way. The Society's group covers a wide spectrum of approaches, ranging from the scientific to the mystical. To me the most important principle seemed to be that one must not forecast by mere extrapolation of trend lines from the past; one must be prepared to make radical direct assumptions about the future. For example, the population trends of a decade ago extended would—in the comparatively short time-scale measured in mere hundreds of years—produce a world population mass exceeding the total mass of matter in the universe; this

tells us that any sensible projection must assume specific change in this trend.

Another mistake is the all too easy practice of assuming that current high interest rates are of the same nature as those in the 4% range of non-inflationary times. Today's rates contain within them not only the real return demanded by borrowers but also recompense for inflationary erosion of capital. So, an explicit assumption of future inflation must be made.

I imagine the futurism group will help to concentrate people's minds on matters such as these. I do hope, though, that not too much time will be spent on such potentially sterile topics as ESP or eastern mysticism. As a discipline for the mind such studies may have merit but as a means of determining action now in anticipation of future events I judge them dangerous.

### The Sessions

The meetings themselves seemed to me to provide an 'embarras de richesse'. The sessions necessarily overlapped, making choices necessary. The lack, or sparseness, of advance written contributions made it especially requisite to absorb ideas on the spot, a useful discipline but one to which I'm not wholly attuned. Little time was wasted, however.

The conference struck me as very well organized, I could only hope that if a similar operation were held in the U.K. it would run as smoothly. In Edinburgh or London we rarely if ever have meetings of the same sort as yours. Ours allow for a full and lasting record of the proceedings—useful for posterity but making perhaps for a duller occasion. Yours is livelier but largely ephemeral.

I much enjoyed my official visit to Philadelphia and look forward to seeing many of you again at the Congress in Australia next year. □

### Board of Governors

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6. The Board approved a new textbook on actuarial mathematics to replace Jordan's *Life Contingencies*. It will go into use gradually, starting with the May 1984 examinations.

7. The Board approved a restructuring of the examinations, transition to start next year. A descriptive notice has been sent to students. □