



SOCIETY OF ACTUARIES

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Editor . . . . . ANDREW C. WEBSTER Correspondence should be addressed:  
 Associate Editors . . . COLIN E. JACK *The Actuary*  
 FREDERIC SELTZER Mail Drop 13-2, 1740 Broadway  
 JONATHAN L. WOOLEY New York, N. Y. 10019  
 Tel: (212) 586-4000

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 Deschênes, Secretary, and Ms. Anna M. Rappaport, Treasurer.

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## EDITORIAL

THE PROGRAM for the Society's 1976 Annual Meeting offers a multitudinous array of subjects to attract the attending actuary. To make choices from this smorgasbord is not easy and moreover any individual attempting to sample all the sessions he could physically attend, would find himself suffering from mental indigestion and acute physical fatigue. Let the attendees remember that sessions are like books, and, to parody Bacon: some sessions are to be tasted, others to be swallowed and some few to be chewed and digested, . . . . Some sessions may be attended by deputy and extracts made of them by others but that would be only the less important sessions . . . .

Choices are always difficult even for The Editor who has carefully studied the program. Possibly the one session within his reach and intellectual grasp is the second half of the session on *Cost Comparisons and Policy Language*. In the halcyon days to come when all consumers understand the cost comparisons they may still ask: "Why the complicated policy?" The easiest answer is to blame somebody else and the actuary can blame the lawyers (and possibly the state insurance laws.) He should avoid even suggesting that, if left alone, he could produce a simpler policy because he might be challenged so to do.

A correspondent recently suggested that the actuaries might invent, or should already have invented, a series of hieroglyphics to help explain the insurance policy to the consumer and actuarial science to the authorities. This suggestion has merit for one definition of hieroglyphics is that they are "conventionalized pictures used chiefly to represent meanings that seem arbitrary and are seldom obvious." We feel sure that they would be more popular than the suggested explanatory booklet and the children could color the pictures on rainy days.

The lawyers might be willing to accept some of the blame for the complicated document that is an insurance policy. They might agree with the Scottish jurist who, in the dedication of his *Institutions of the Law of Scotland*, wrote, "A quaint and gliding style, much less the flourishes of eloquence (the ordinary condiment and varnish, which qualify the pains of reading) could not justly be expected in a treatise of law which, of all subjects, doth require the most plain and accurate expression."

The policy form today is not distinguished for "a quaint and gliding style" but the substitute therefor could hardly be described as "the most plain and accurate expression."

Maybe out of this session will come some suggestions that will help all involved to take even a little step toward clarity in the language of insurance contracts.

A.C.W.

## AIRPLANE HIJACKING AS VIEWED FROM INSIDE THE PLANE

by Peter W. Plumley

In this age of elaborate airport security, what are the actuarial odds against being hijacked? One in a million, perhaps, or maybe even less.

If the thought of being hijacked had even crossed my mind at all, these odds would have reassured me as I boarded TWA Flight 355 on my way back to Chicago from New York on the evening of September 10. Yet, an hour later, Flight 355 would turn towards Montreal, the first stop on the way to a final destination of Paris. I was one of the 92 passengers on the first successful hijacking in the United States in three and a half years. The plane had been taken over by five persons, two of whom had bombs (later discovered to be fake) strapped around them. (The old actuarial joke concerning the odds against there being two bombs on the same plane suddenly had lost its humor).

The hijackers assured us that they did not plan to hurt us, and would release us, probably in Paris, once their demands were met. I felt that I had perhaps a 95% probability of getting to see Paris, courtesy of TWA. Unfortunately, there was that 5% chance that they would blow up the plane and its remaining passengers. On that basis, I applied a little ruin theory, and didn't like the odds. So, when given the opportunity, I got off in Newfoundland, and a few hours later was on my way back to Chicago and the FBI, the New York police, and the news media — and, of course, U.S. Customs and Immigration, always on the job. (At least, they didn't ask me the purpose of my trip to Canada).

The story of the hijacking occupied the headlines for three days and need not be retold here. However, one develops some new perspectives after an experience such as this.

First, I suddenly became acutely aware of the difference between working with statistics and being one. Those one-in-a-million odds don't help much if you're the one.

Second, there appeared to be a decided difference in the underlying philosophy between TWA and the govern-

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## TWA Flight #355

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ments, particularly the French, as to how to handle the hijacking. TWA appeared to be primarily interested in the safety of their passengers, and only secondarily interested in punishing the hijackers and discouraging future hijackings. The governments, on the other hand, appeared to have these priorities reversed, in that they seemed to be willing to put the passengers on Flight 355 in relatively more danger in order to capture the hijackers and discourage future hijackings. Although the government approach may, over the long run, place the fewest lives in danger, those on Flight 355 understandably preferred the TWA approach.

Third, this particular hijacking raised some interesting ethical issues. No one, least of all the victims, wants to encourage this type of dangerous and illegal activity. Yet these persons were by their admission fighting for freedom for their homeland, and their cause may have been just, even though the methods they used to publicize it resulted in the lives of innocent persons being endangered. *From their point of view*, the endangering, or even loss, of the lives of some innocent persons could be justified if the end result were freedom for millions.

In this regard, one must at least respect the courage, if not the judgment, of these hijackers. We in the United States have a free press in which to express our grievances. They did not, and so they chose what they believed to be the most effective means available. They had no weapons, and probably no intention to injure anyone. They must have known that they would not escape punishment. Yet they were willing to face lengthy prison sentences in order to publicize a cause they believed in.

The responsibility of society is to protect me and others by punishing them and making every effort to prevent future hijackings. This is as it should be. Yet the ethical issue remains: To what extent does the end justify the means? The answer may well depend on whether

## 1976 OASDI TRUSTEES REPORT

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## Estimates Of Population Size and Composition

The following table shows future U.S. population in selected years under each of the three "alternative" assumptions used in the Report. The figures are for (a) ages 20 to 64, i.e., approximately the normal work-span, (b) ages 65 and over, the retirement-span, and (c) to complete the population picture, the ages below 20.

## United States Population (in millions)

Age-Group	1975	Alternative I			Alternative II			Alternative III		
		1990	2010	2050	1990	2010	2050	1990	2010	2050
a. 20 to 64	122	148	170	200	148	167	156	147	165	137
b. 65 & over	23	29	33	51	29	33	50	29	33	49
c. Under 20	78	75	86	109	70	70	68	69	62	52
(b + c)	101	104	119	160	99	103	118	98	95	101
(a + b + c)	223	252	289	360	247	270	274	245	260	238
Dep. Ratio										
Old-Age	19%	20	19	26	20	20	32	20	20	36
Total	83%	70	70	80	67	62	76	67	58	74

First, a discussion of some of the messages conveyed by these figures, then a description of the demographic assumptions that produced them.

With respect to total United States population — a + b + c — the three alternatives result in very large differences as we move into the Twenty-first Century. One of the three pictures marked growth, one forecasts stability, and one portrays marked decline — the reader can take his or her pick. The two dependency ratios give grist for reflection; the old-age ratio is the ratio of b to a, while the total dependency ratio is the ratio of (b + c) to a. Although the first of these ratios appears headed for what some would consider a drastically adverse rise, the second of them should create no alarm whatever.

Population trend is determined by the net influences of mortality, migration, and fertility. On mortality the Report is regrettably unspecific beyond saying that mortality rates are assumed to "continue to follow the general trends established over the period 1950-1973 (resulting) in an overall reduction . . . of about 15 percent from 1973 to 2050." It is mentioned that "Mortality at the very young ages and at the ages over 55 is projected to improve relatively more than at the in-between ages." Annual net immigration is assumed to remain constant at 400,000 persons.

The key to what will happen to population growth is the fertility rate, some figures for which are displayed in the following table. The function displayed is the total number of children a woman will have during her entire child-bearing period if the age-by-age birth rates for the year remain unchanged.

one is a Croatian national or a passenger on TWA Flight 355.

As I prepared for my next plane trip, I was reassured by the actuarial fact that, if the odds against being hijacked once were a million to one, the odds against being hijacked twice were a trillion to one. Yet one thing disturbed me about this statistic. The passenger in the seat behind me on TWA Flight 355 had told me that it was the third time he had been hijacked!

## Actuarial Meetings

- Nov. 11, Baltimore Actuaries Club
- Nov. 11, Denver Actuarial Club
- Nov. 17, Seattle Actuarial Club
- Nov. 17/18, Actuaries Club of the Southwest
- Nov. 17/18, Southeastern Actuaries Club
- Nov. 30, Boston Actuaries Club