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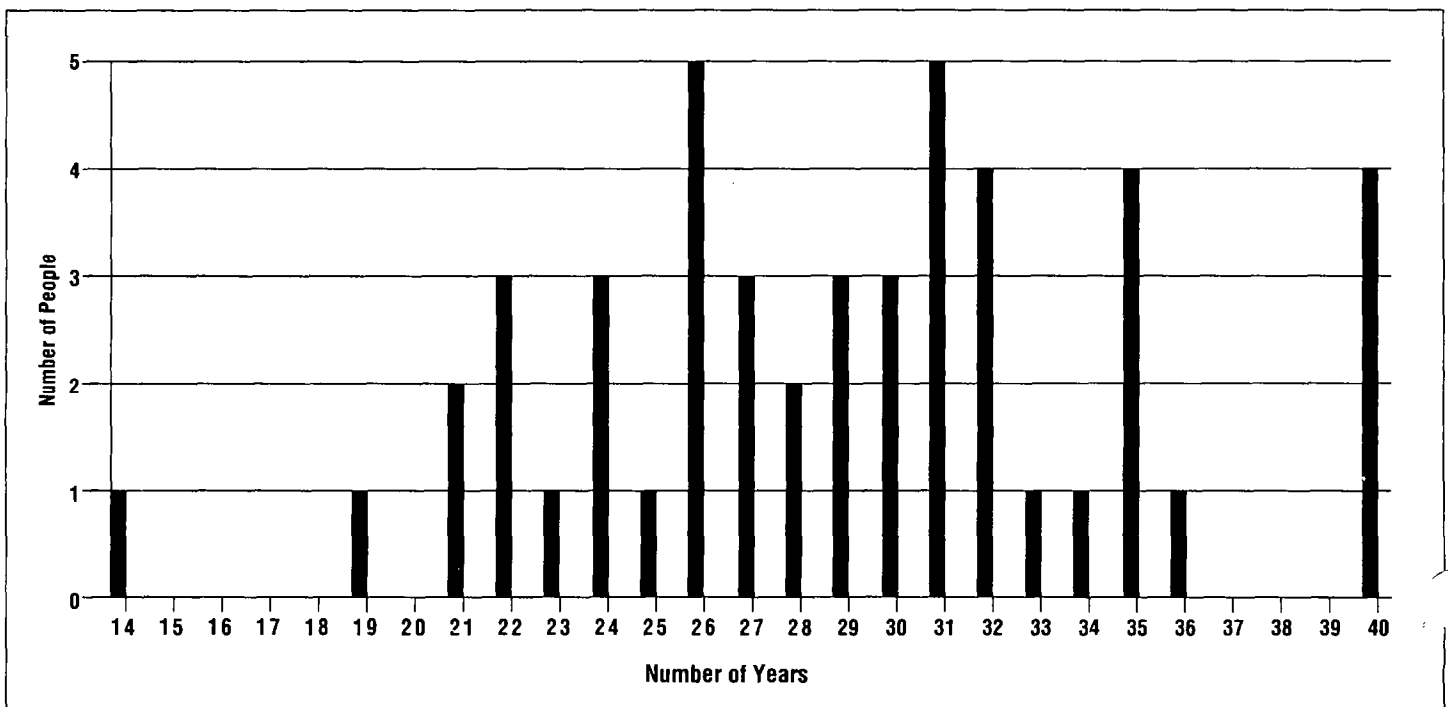June 1995 – Volume 29, No. 6

on the lighter side

What are the odds?

By Linden Cole

Someone on the SOA staff pointed out that when Bob Berin gives his presidential address at the Boston annual meeting in October, he also will be honored at the meeting as a 35-year Fellow. The person asked one of the staff actuaries the probability of that happening. We are appealing to our members to help answer that question.

Bob Berin is the 46th president of the SOA. Of his 45 predecessors, two were celebrating their 35th year as a Fellow when they gave their presidential addresses. Perhaps the probability is 2/45. On the other hand, Bob likes to stand up and be counted, so perhaps the probability used to be 2/45, but is now 3/46.

The distribution of SOA presidents by years since Fellowship at the time of their respective presidential addresses is shown on the chart below.

Does this chart shed any light on the situation? It would if we used the formula:
[total living members of Class of 1960]/[total living Fellows] = _____

That formula will give too small an answer, since it is clear from the distribution that the likelihood of anyone being elected president before his or her 21st year as a Fellow is very small. This suggests the formula:
[total living members of Class of 1960]/[total living Fellows through FSA 1975] = ____

This is probably closer to the truth than the simple fractions shown previously. In the modern world, after all, actuaries have finally realized that they deal with distributions, and their work has become more sophisticated.

On the other hand, maybe retired people have more time for things like being SOA president than nonretired actuaries, which makes them more likely to be willing to run. Or, perhaps they have gone on to other things and aren't interested at all. It's all very complicated.

If anyone would like to calculate this probability scientifically, it would certainly impress the SOA office staff. Meanwhile, the probability of this happening next year is awfully close to zero, since no one on the list of presidential candidates meeting the requirements is from the Class of 1961.

In both 1960 and 1961, the presidential address was given by someone in his 40th year as a Fellow. What is the probability of that happening again?

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Number of Years Between Achieving FSA & Serving as President