

**ACTUARIAL RESEARCH CLEARING HOUSE
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THE ACTUARY:

Educational Background and Social Relationships

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HC500**

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This paper was written in partial fulfillment of the requirements to graduate with College Honors at Lebanon Valley College.

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Note: Financial support for this project was supplied by the Du Pont Company.

In the beginning of my college career I did not consider what would be waiting for me upon my graduation. Questions such as how long it would take me to complete all the actuarial exams or how studying for the exams might effect my social relationships never entered my mind. At the end of my freshman year, however, I began to wonder. This questioning of my future was provoked by an Honors Independent Study presented by Stacey Brundin. She surveyed persons who had attended Lebanon Valley as Actuarial Science majors or those who were Mathematics majors, but were currently working in the actuarial field. She questioned the participants in regards to their social relationships. It was then I decided that I would like to further her study.

I decided that I wanted to survey a more general population of actuaries. The study I decided to do is based on my desire to know how my background will help me in the future and how my future career will effect my life. However, the study is not only beneficial to myself, but to the general population of actuaries. The data will be useful to actuaries new to the field and interested in how long they will be studying for exams or how their career will effect marriage and family. It will also be beneficial to those people who are considering the actuarial profession. The road to being an actuary is long and arduous but the rewards make the time spent worth it.

My survey is two-fold. I want to know the educational background of actuaries and how this background has effected their careers. By this I mean I want to see if things such as the major studied or the attendance of graduate school

effected the time to attainment of Associateship and Fellowship in the Society of Actuaries. Secondly, I want to know if being in the actuarial profession has any effect on marriage and family, as well as to know if marriage and family has any effect on the career.

To begin my study I arranged with the Society of Actuaries (SOA) to obtain a random sample of members. To be a member of the Society one must complete the first half of the exams on the SOA exam syllabus. Although the SOA has members who are Canadian, I requested that my sample consist only of United States residents, due to the personal aspect of the study. I plan to stay in the United States, and including Canadians might vary my results which could possibly not reflect the experiences I will have as a United States resident. The sample I received contained 399 members. Of these, two were returned to me unopened from the post office. The generally accepted practice is to exclude unopened surveys for calculating return rate; therefore I based my return rate on a random sample of 397. I received 314 completed surveys. This is a return rate of 79.1%. I discovered in a research methods textbook that this rate is quite good. The textbook, "Methods of Social Research", quotes Babbie as saying:

I feel that a response rate of at least 50 percent is *adequate* for analysis and reporting. A response rate of at least 60 percent is *good*. And a response rate of 70 percent or more is *very good*. The reader should bear in mind, however, that these are only rough guides, they have no statistical basis, and a demonstrated lack of response bias is far more important than a high response rate. (p. 169)¹

¹Kenneth D. Bailey. Methods of Social Research. 3rd Edition. New York: The Free Press, 1987. p. 169.

I doubt there is much response bias in my data, because of the randomness of the participant selection and the general uniformity of the results. In my opinion, the high rate of return is due to the type of participants involved and the statistical nature of the study. Actuaries tend to be mathematically oriented and statistical studies interest them. Therefore, the persons who received the surveys were likely to complete them. The high interest in the survey by the participants is demonstrated by the fact that 173 of them requested to see the results of my study. This is 55.1% of the participants.

Before describing the results, I will discuss the statistics used. I used sample percentages, mean and median. The percentage is found by taking the number of people in a particular subdivision and dividing by the total number of people. The mean is calculated by adding all the numbers in the group and dividing by the number of numbers in the group. The median is the middle number when the data is sorted from smallest to largest. In the graphs I have used, the percentages shown may not match the percentages I state in the paper. This is because the program I used bases the percentage on the total number shown in the graph, and my percentages are based on total sample size. The total sample size is larger than that in the graph in some questions due to the fact that some respondents left some questions blank. Appendices B and C summarize all the data and includes the number of respondents who did not reply to a given question.

The first section of the survey consists of personal data, including sex, age and marital status. My sample consists of 256 males and 58 females. I expected

to see a higher percentage of males, so 81.5% male participants did not surprise me. The SOA could not provide male-female ratio data; however, I do know that there are fewer women in the profession. The women who are in the profession are newer to it than the men, and the proportion of women is on the rise. This hypothesis is supported by data throughout the study. I have divided much of the data into male and female categories. Though the sample sizes are too small to draw any major conclusions, the division of sexes can show where there might be difference that should be further studied.

The age data shows what I expected. The women are more concentrated in the younger intervals than the men. The age range for the men is 23 to 79 while the women is 22 to 72, but the 72 year old woman is the only woman over the age of 54. As shown in Figure 1, the highest percentage of men (18.8%) is in the 40 to 44 age interval, and the majority of the men (74.6%) are between the ages of 25 and 49. The mean age for the men is 41.9, and the median is 40. The women are younger with the highest percentage (29.3%) being in the 30 to 34 age interval. The majority of the women (72.4%) are between ages 25 and 39. The mean age for the women is 34.4, and the median age is 33. The ages of the sample are shown in Figure 2. The highest percentage of participants (19.4%) are in the age 30 to 34 range, and the majority (67.5%) are between ages 25 and 44. The overall mean age is 40.6, and the median is 38.5.

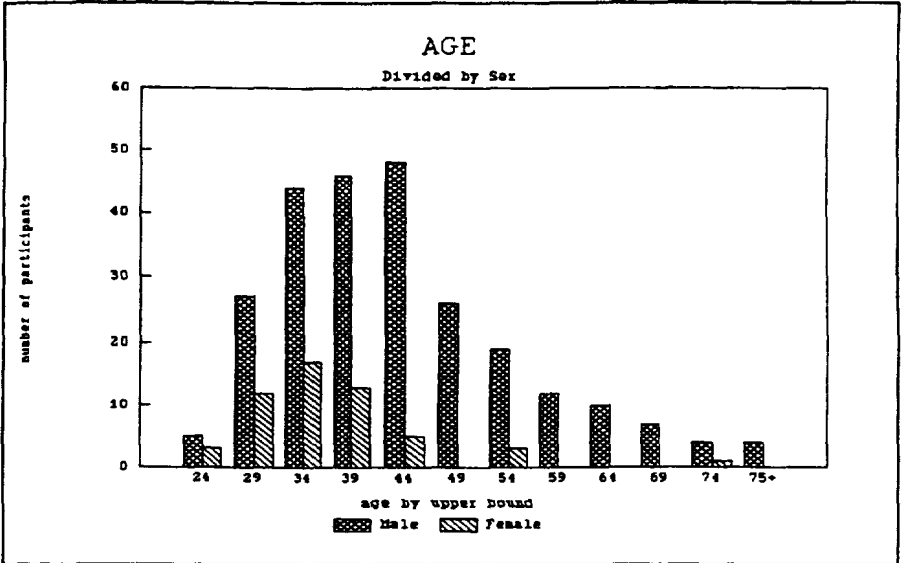


Figure 1

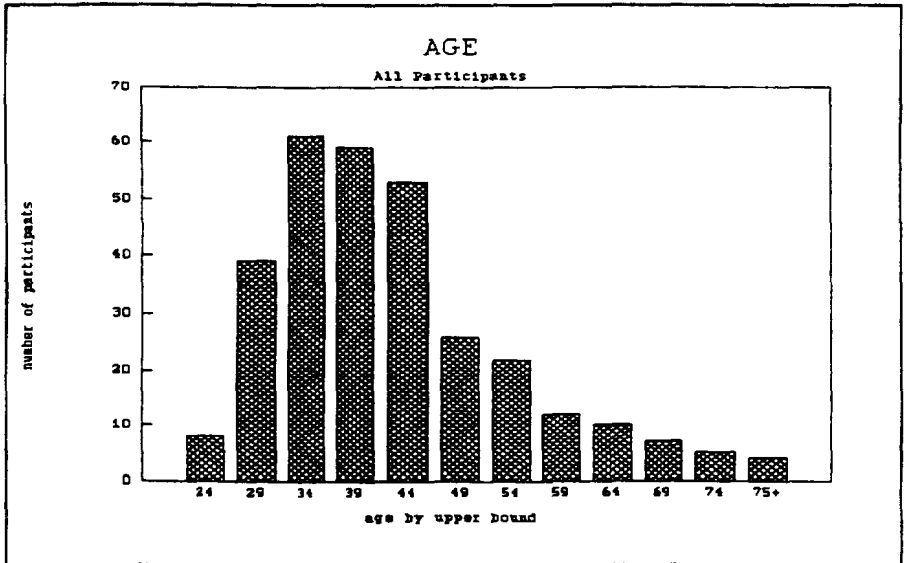


Figure 2

In the choices for marital status I included the categories of engaged, divorced and widowed. I wanted to be sure the single people are strictly single as opposed to engaged but waiting to marry or divorced but considering themselves single. This will be outlined in more detail later. The highest percentage of males (79.3%) and females (74.1%) are married. Of the remaining men, 14.1% are single, and the rest (6.3%) are in one of the other categories. For the women, 17.2% are single, and 8.6% are in one of the other categories. This is shown in Figure 3. The overall numbers are almost the same as those for male and female separately, as shown in Figure 4.

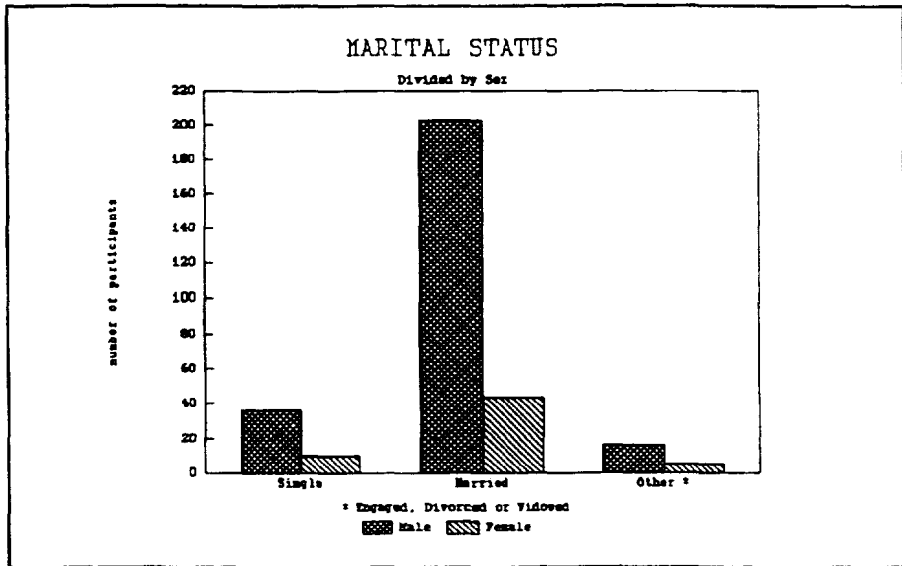


Figure 3

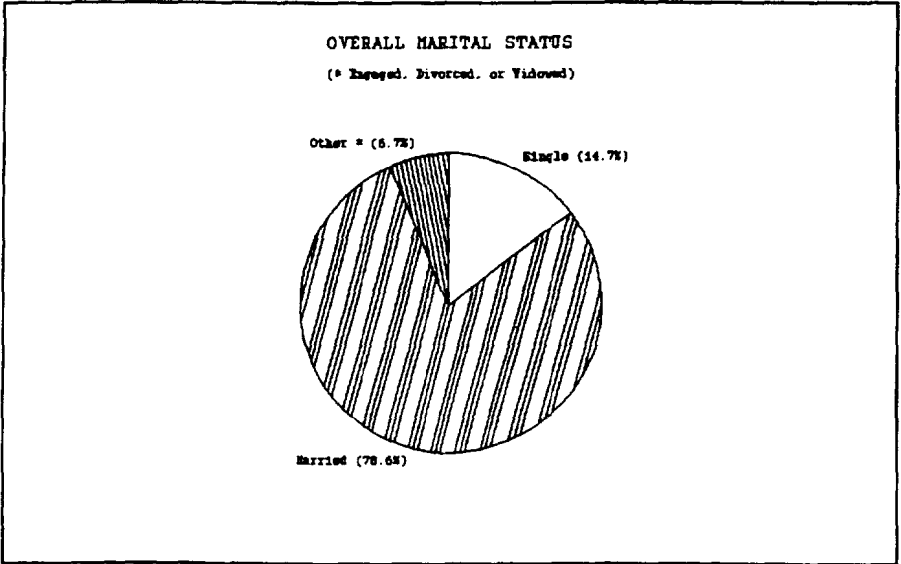


Figure 4

I will now consider the educational background questions. The first question asks what college was attended. There are 180 colleges indicated and 5 people either did not attend college or did not indicate where they attended. I have divided the colleges into seven categories. They are listed below:

1. large public university
2. medium size public university
3. private research university
4. private (primarily) undergraduate college
5. business college
6. Canadian
7. non-North American

The highest percentage of the population (36.3%) attended colleges in category one. The category which contains of the largest number of colleges (47 or 26.1% of all colleges indicated) is type four, the private (primarily) undergraduate college. Figure 5 shows the number of participants in each college category as well as the number of colleges in each category. Of the 180 colleges listed, 32 are indicated by the SOA as having actuarial science courses. Of these 32, 15 are type one and were attended by 28 people who received an Actuarial Science major, 5 are type two with 5 graduates in Actuarial Science, 5 are type three with 8 graduates, 2 are type 4 with 2 graduates, 1 is type five with 4 graduates and 4 are Canadian colleges with 5 graduates in Actuarial Science. 2 respondents obtained Actuarial Science majors from schools not listed in the SOA list. The list of colleges is in Appendix D.

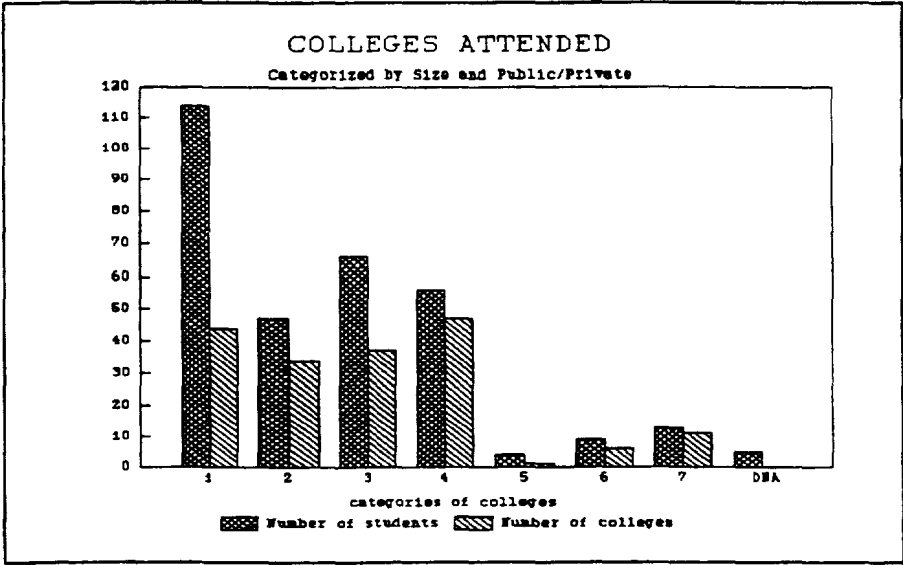


Figure 5

The second question on the survey involves year of graduation. Again, dividing the men and women, the highest percentage of men (17.6%) graduated between 1980 and 1984, with a majority (62.9%) who graduated between 1965 and 1984. The mean graduation year for the men is 1971, and the median is 1973. The range for the men is from 1933 to 1989. The women are more concentrated, with only six women who graduated before 1970. The highest percentage of females (32.8%) graduated between 1980 and 1984. Between 1975 and 1984, 60.3% of the women graduated from college. The mean graduation year for the women is 1978, and the median is 1979. The graduation years for men and women are shown in Figure 6. In the overall statistics, the highest percentage (20.4%) graduated between 1980 and 1984, with a majority of 54.8% graduating between 1970 and 1984. The graduation years ranged from 1933 to 1990, the earliest is a male and the most recent, a female. The overall mean graduation year is 1973 and the median is 1975. The overall percentages are shown in Figure 7.

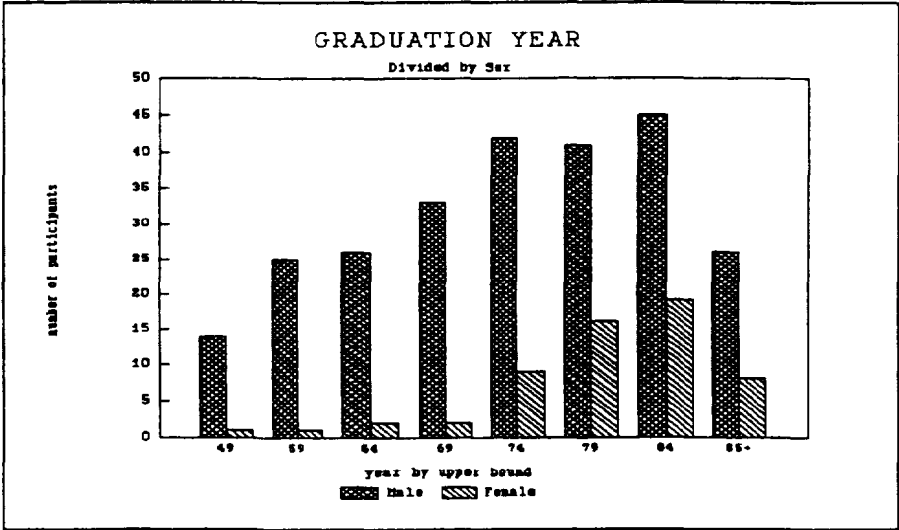


Figure 6

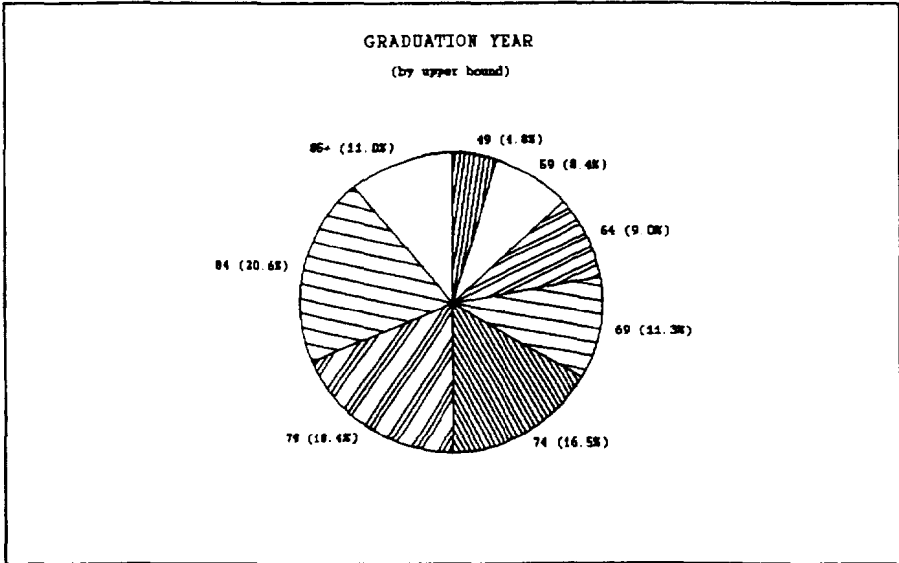


Figure 7

The next item is the person's undergraduate major. The choices on the survey are Actuarial Science, Mathematics, and Other. I requested specification if the Other category was chosen. I found several people with double majors that included either Mathematics or Actuarial Science as one, 3 people even indicated a double major of Mathematics and Actuarial Science. Therefore, on my graphs I have included "Double" as a fourth category to indicate these people. Figure 8 shows the majors indicated by the participants divided into male and female categories. The majority of men (59.4%) and women (55.2%) majored in Mathematics. The men had only a slightly higher percentage (16.8%) in the Actuarial Science category as in the Other category (16.0%). The women, however, had less Actuarial Science majors (8.6%) than Other majors (19.0%), but had a total of 10 Double responses, constituting 17.2% of all the women. The total population figures can be seen in Figure 9. Again, the majority of participants (58.6%) majored in Mathematics. The Actuarial Science total of 15.3% of the total group is only slightly less than the Other total, constituting 16.6% of the total group. A list of the other majors indicated can be found in Appendix E.

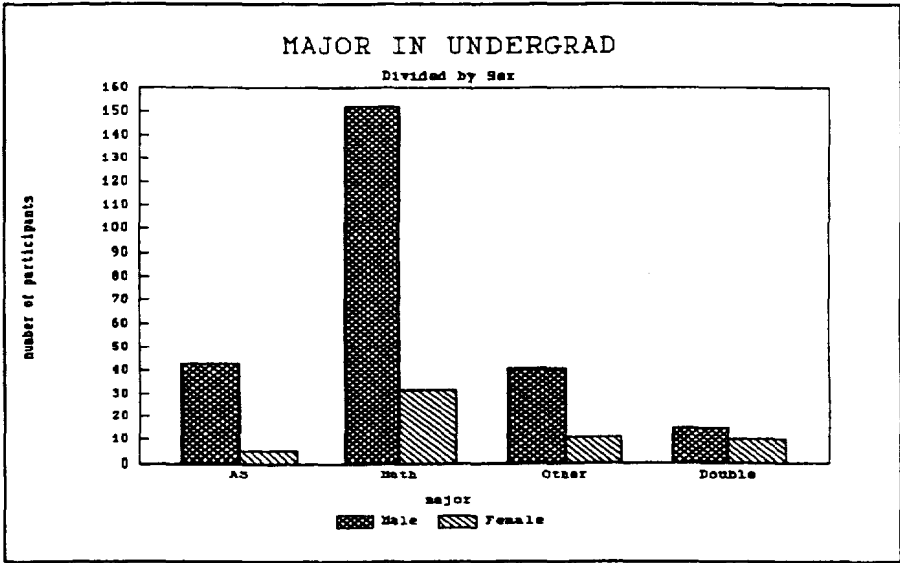


Figure 8

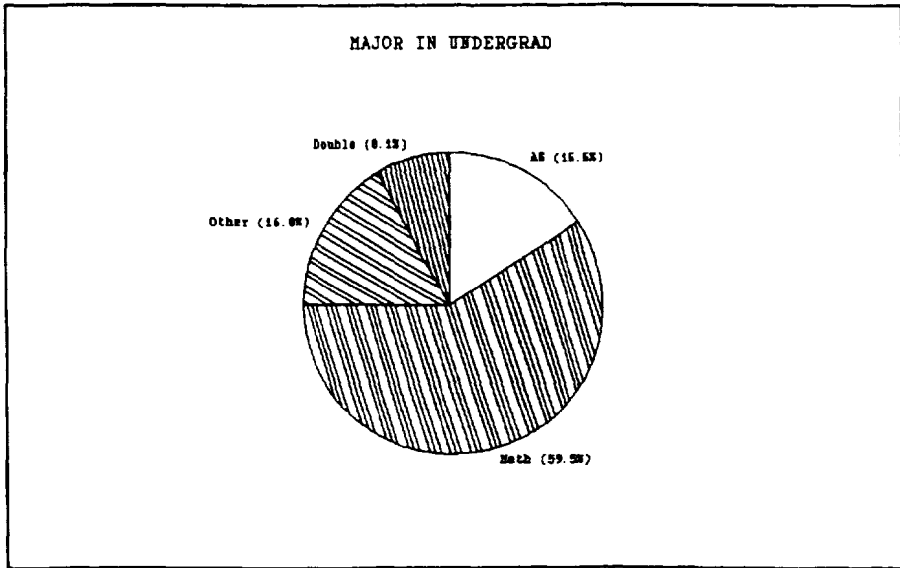


Figure 9

Following the completion of an undergraduate degree, 108 of the participants furthered their education in graduate school. Of these 108, 88 (81.5%) are male. This constitutes only 33.4% of all the males in the sample. The graduate school attendance is almost the same for the females, at a rate of 34.5% of the females in the sample. As for the degree obtained, respondents were given the following choices: MBA, Mathematics MA, Mathematics PhD, Actuarial Science MA, Actuarial Science PhD and Other. The Other category again requested specification. For graphing purposes I have numbered these categories starting with 0 for MBA up to 5 for the Other category. I also included a number 6 category for those still attending graduate school. Of the men who obtained a graduate degree, 30.7% obtained a Mathematics MA and 33.0% obtained an Actuarial Science MA. Three of the male respondents indicated they are presently attending graduate school. The women obtained a higher percentage of Mathematics MA (35.0%) but less Actuarial Science MA (15.0%). The women obtained a higher percentage in the Other category too, at 15.0%. The number of degrees in each category is shown in Figure 10, segregated by male and female. The degrees obtained overall are shown in Figure 11. For all the degrees obtained, the highest percentage are Mathematics MA (31.5%), followed by Actuarial Science MA (29.6%) and the Other category (21.3%). The list of other graduated degrees that were indicated can be found in Appendix F.

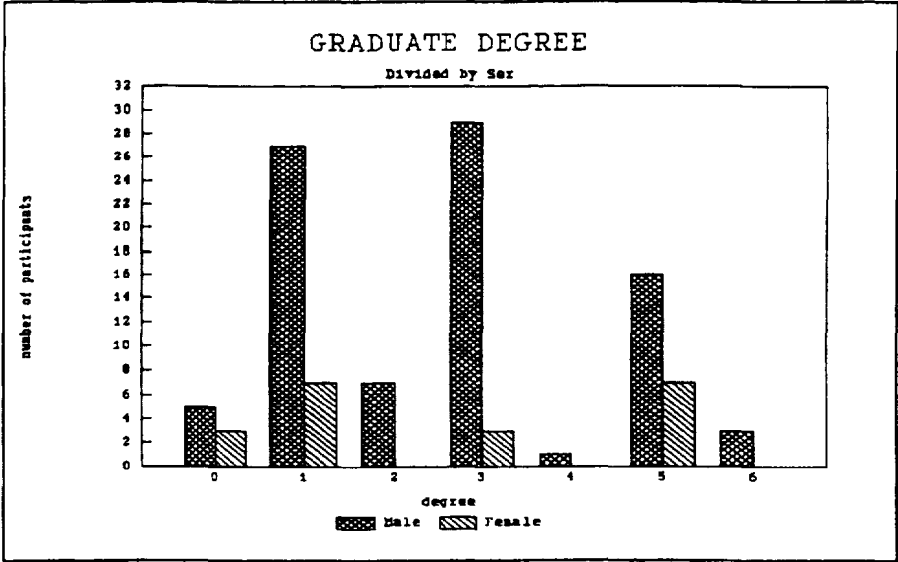


Figure 10

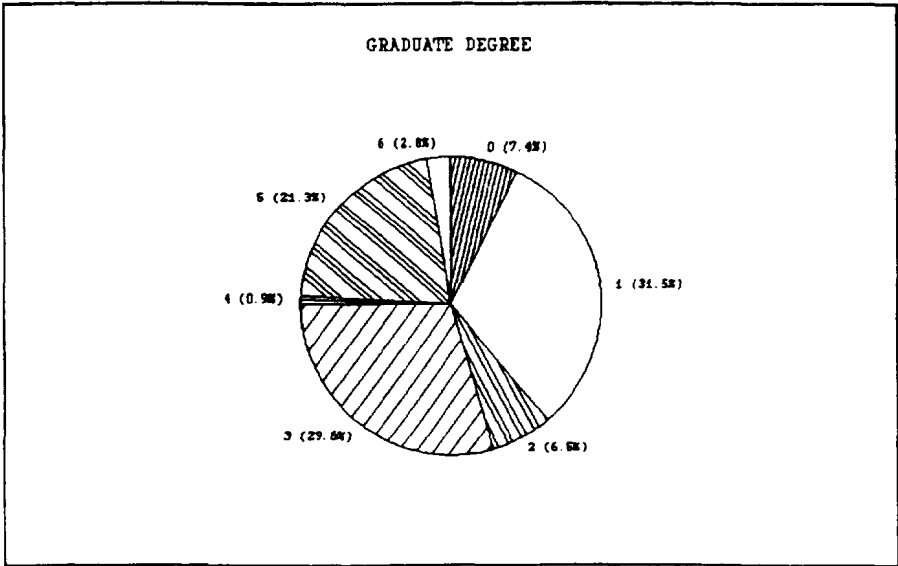


Figure 11

The next question asked the participant what year they attained Associateship. As mentioned before, Associateship is attained after completing the first half of the exams on the SOA syllabus. An Associate is designated by the letters ASA. Again, as I suspected, the women have generally attained their ASA status more recently than the men. The highest percentage of men (19.9%) attained their ASA between 1975 and 1979. The majority of the men (84.4%) attained ASA between 1965 and 1991. They range as far back as 1941. The mean year of ASA attainment for the men is 1976 and the median is 1978. Of the women, only 12 attained ASA before 1980; and of these 12 only 4 are before 1975. There is a gap of 23 years between the earliest female ASA (1944) and the next ASA in 1967. This again reflects that the women are newer to the profession. The ASA attainment interval with the highest percentage (32.8%) is the interval from 1980 to 1984, with the majority of females (79.3%) obtaining their ASA between 1980 and the present. The mean year for the women is 1983 and the median year is 1984. It is interesting to note that the percentage of women (17.2%) who attained their ASA in 1990 or 1991 is almost double that of the men, (8.2%) although the sample is too small to draw any firm conclusions. Figure 12 shows the number of ASA attainments in each interval for the men and women. Overall, the highest percentage range (20.1%) is the years 1985 to 1989, with the 10 years prior to that not much lower. The total mean year is 1977 and the median is 1979. The total numbers are shown in Figure 13.

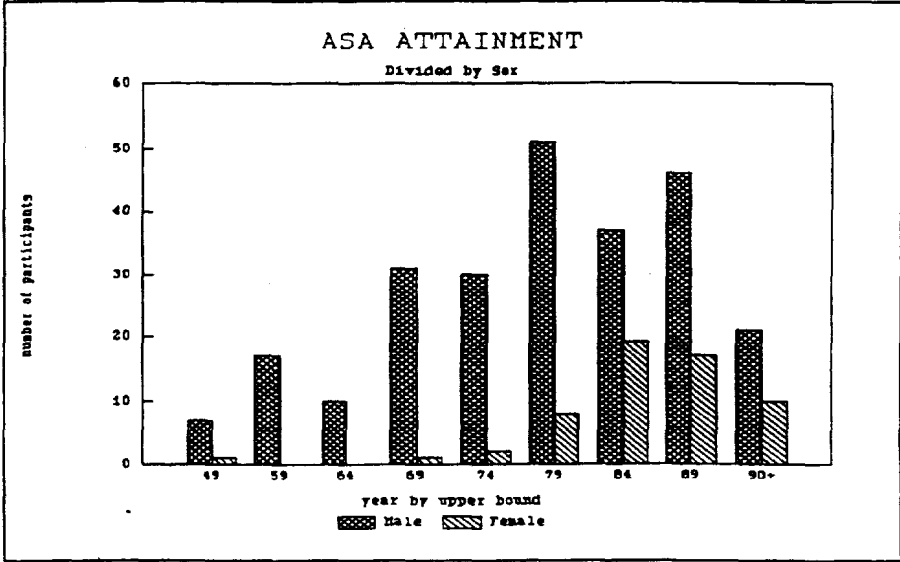


Figure 12

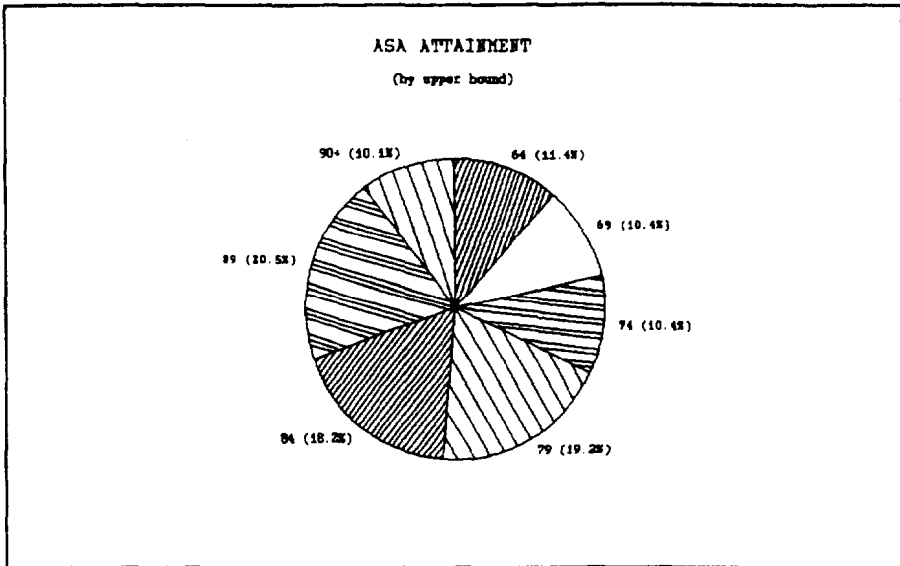


Figure 13

I next asked for the year of Fellowship attainment. Fellowship in the SOA, denoted FSA, is attained by completing all of the exams in a given tract. Briefly, tracts are concentrations in different areas of insurance. Once attaining ASA status the actuary must choose a tract. Of the men 154 are Fellows; this is 60.2% of all the male respondents. The earliest a male in the sample attained FSA is 1945. In the years 1975 to 1979, the highest percentage of males (24.7%) attained FSA. The majority of the men (78.6%) attained FSA between 1970 and present. The mean year of FSA attainment for the men is 1975 and the median is 1978. Of the women only 5 attained FSA prior to 1980. The earliest, and only one before 1970, is in 1948. In total 26 women in the sample have attained FSA status. The highest percentage of female FSA attainment is between 1985 and 1989. With 46.2% in this category, almost half the women who have their FSA attained it since 1985. The mean year for the women is 1983 and the median is 1985. These numbers are shown in Figure 14. In the total group of FSA's, there is the same number of people in the 1975 to 1979 interval as in the 1980 to 1985 interval, with 22.8% in each range. The majority of the FSA's (67.2%) attained their status since 1970. The mean year for all FSAs is 1976 and the median is 1979. The total numbers are shown in Figure 15.

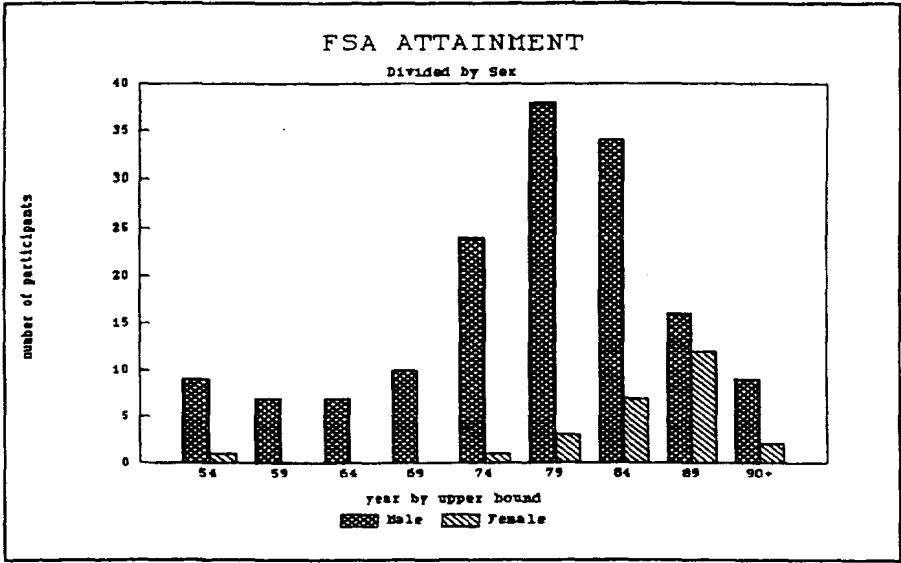


Figure 14

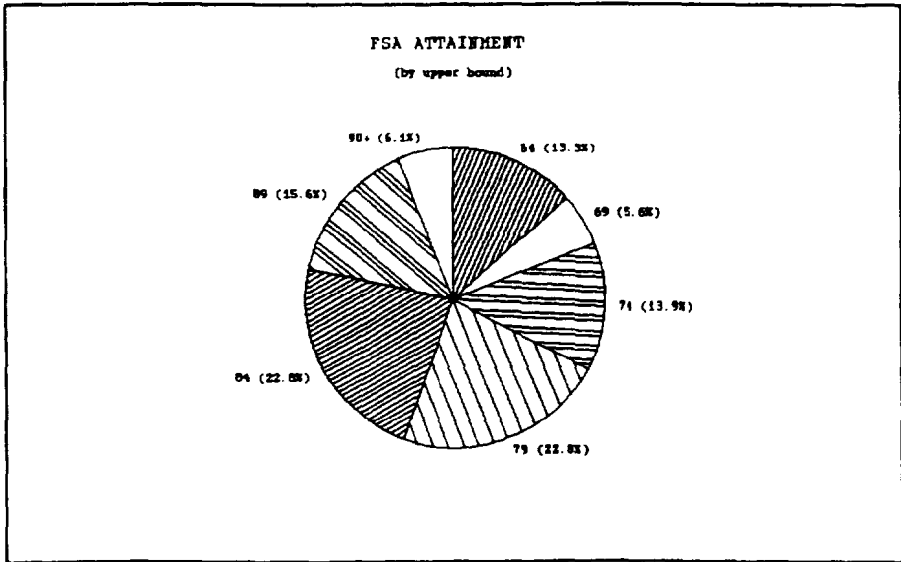


Figure 15

The next question on the survey asks when the participant learned about the actuarial profession. The choices are: before entering college, while attending college, and after graduating. For the men, 43.0% learned about it while in college, 35.9% learned of it before college and 21.1% learned of it after graduating. The women show a little difference in their answers. While the highest percentage (36.2%) answered, "while in college," the next highest percentage (34.5%) learned about it after graduating and only 27.6% learned about the profession before college. The total responses are approximately the same as the males. 41.7% learned of the profession while in school, 34.4% before college and 23.6% after college. These results are shown in Figure 16.

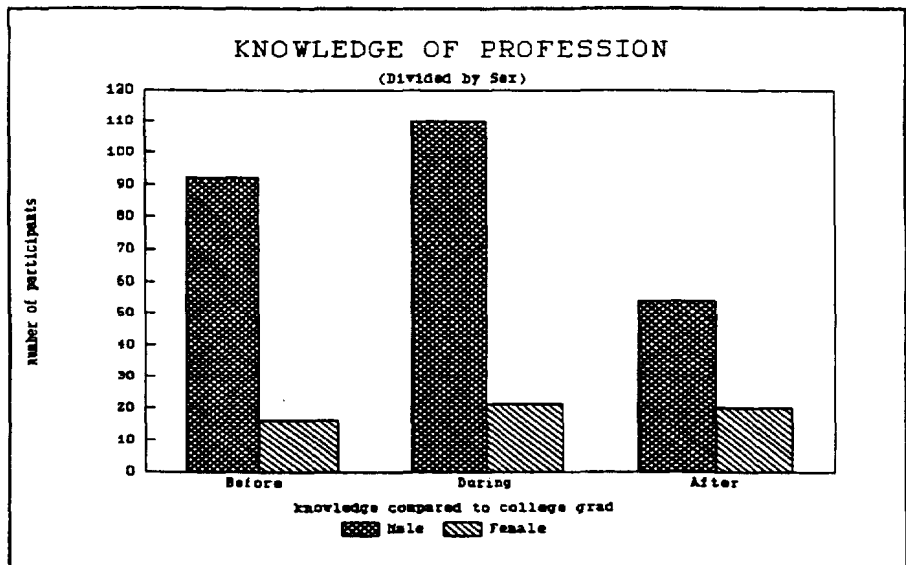


Figure 16

The next question asked when the participant passed their first actuarial exam. The choices being: before graduating college, after graduating but before taking an actuarial position, and after beginning an actuarial position. 53.9% of the men passed it before graduating from college, and 43.1% of the women passed it before graduating. The rest of the men were almost evenly distributed between the last two choices and the women have a slightly higher percentage (31.0%) in the "after beginning an actuarial position" category than in the second category (25.9%). These numbers are shown in Figure 17.

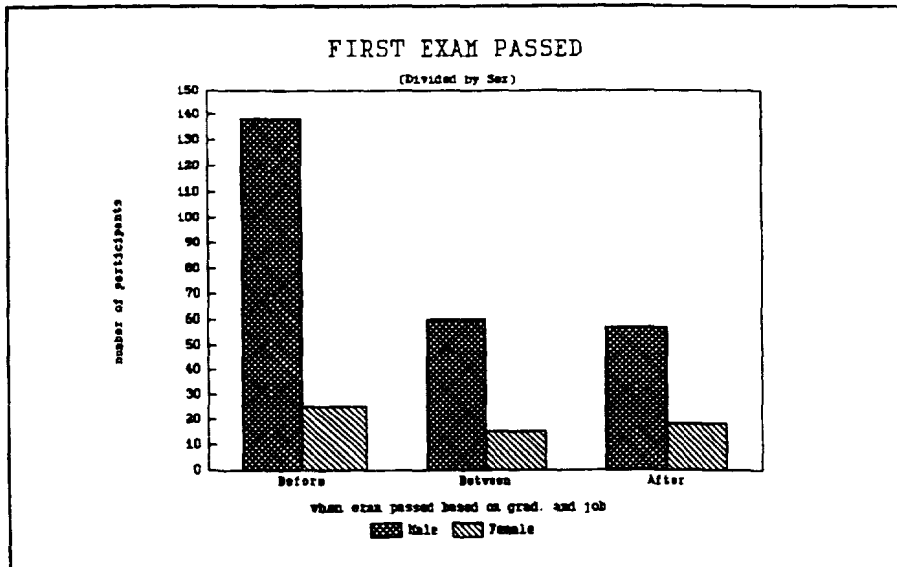


Figure 17

I also asked the participants if it was necessary to have the first exam passed to obtain their first actuarial position. This is, for the most part, an opinion question. Most employers do not specify the need for an exam during the interview process.

Over half the respondents answered no to this question. This was true for the men and women separately also. It is interesting that 238 respondents said they passed the first exam before taking an actuarial position, but only 144 thought it was necessary to obtain their actuarial position.

The last set of questions in the education section of the survey began with the statement: "if you knew then what you know now...." The first question in this set asked whether the respondent would have attended a different college. Most of the participants (80.6%) said "no". The second question asked if the respondent would have chosen a different major. Most participants (80.6%) again said "no". And the last question asked if the respondent would have chosen a different field of work. Once again a high percentage (84.7%) said "no". Since the participants are actuaries and most of them majored in either Mathematics or Actuarial Science, it is not surprising that they would not have chosen a different major. The question of a different field of work is supported by the results of a later question. I will expand on this last question at the time I reach the later question.

The next area of questioning deals with marriage and family. The first question asked if the participant delayed marriage due to their career. Of all the respondents only 8.0% answered yes, though more women (15.5%) than men (6.3%) gave this answer. When asked if they delayed having children, 20.4% answered yes. Again the women's rate of 46.6% is much higher than the men's yes responses (14.5%). This is most likely due to the fact that women have more to lose when having a child. They will probably lose more study time than their husbands would, and, thus, would prefer to wait until reaching FSA or at least ASA before having children. I also asked how many children each participant has, and

how many they would like to have. The average number of children the participants already have is 1.6, with a median of 2. The average number of children the participants would like to have is 2.2, again with a median of 2. The extra marital status categories supplied shows 3 engaged persons and 17 divorced persons. The comments from these people did not suggest any special conclusions. Some divorced people said it was due to the career, and others said it was not. I would be interested in getting a larger sample of divorced actuaries to see if there is a connection between divorce and the profession.

The last two questions deal with the continuation of the exam process. The first question asked non-FSAs if they are still taking exams. 57.5% answered positively. Of those that said no, only 20.4% said they plan to continue in the future. While this is a small percentage, overall only 39 non-FSA's said they will not be continuing exams in the future. This is only 12.4% of the total number of participants. This is consistent with the fact that only 28 or 8.9% of the participants said that if they knew then what they know now, they would have chosen a different field of work. Most people do not choose the actuarial profession unless they are ready to devote themselves to the profession. The last part of this question is study time at home and work for non-FSAs. The average amount of study hours at work is 8.4 per week and at home is 15.7 per week. The only variation in either of these numbers between the women and men is that the women indicated an average of 17.5 hours per week at home and the men only 15.3 hours per week.

The last question asked if the participant ever discontinued exams for marriage and family reasons. Only 12.7% of the total participants said yes. But, again as in

the delay of marriage and children, there is a higher percentage of women (25.9%) than men (9.8%) who answered yes.

Thus far I have described the general statistics, taken directly from the survey. Now I would like to look at some more indirect information. One of the things in which I am interested is travel time from graduation to Associateship and to Fellowship. Travel time is a term used by the SOA to refer to the time it takes one to attain Associateship from passage of the first exam, as well as Fellowship. I have not measured travel time in quite the same way, in that I used graduation year as the starting point because my survey did not include the question of when the participant passed their first exam. The average time from graduation to Associateship for all participants is 5 years, and from graduation to Fellowship is 8.4 years. But I wanted to know a little more. So I divided these travel times into two categories. The first is for those who majored in Mathematics or Actuarial Science and knew of the profession before or during their college years. The second category is for those who graduated with another major and learned about the profession after graduating from college. These two categories do not cover everyone, but did help to make some distinctions between education and travel time. For those in the first category the time from graduation to Associateship, 3.93 years, is shorter than the overall average given above, and the time from graduation to Fellowship is also shorter at 7.64 years. For those in the second category, the times are a longer with 8 years between graduation and Associateship and 11.3 years between graduation and Fellowship. The men and women separately almost match the general numbers in the first category. The only major difference is the women seem to go from graduation to Associateship about a half year quicker, at

7.1 years. For the second category however, the numbers differ for the graduation to Associateship travel time for both men and women. The women average 7 years and the men, 8.5 years. But in favor of the men, they reach Fellowship from graduation in 10.75 years, while the women take 11.3 years.

There is much more data manipulation I could do with the information I have. I did not even develop any statistics from the short answer questions. I would like to see the percentages of participants that had trouble with different exams. I also would like to know if there is any connection between knowledge of the career, major, travel time, and many of the other categories on the survey. Because of the differences I found between the males and females, I would like to study the idea of "math anxiety" as a possible explanation for the low percentage of female actuaries. This would require another survey and some research. But in the time and space I have, I have done all I can.

From this study one can see there is, in general, a difference in the opinions of the men and the women. The women are newer to the profession. They are more likely to delay marriage and children due to the demands of an actuarial career. They tend to make themselves study harder to pass the exams more quickly so that they can start their family.

In conclusion, I hope that my work proves interesting and useful to those in the profession. I also hope spouses of actuaries will find my results useful in understanding what the actuary is going through. And lastly I am sure it will be of interest to those persons presently in college and considering an actuarial career.

APPENDIX A

INDEPENDENT STUDY SURVEY

Instructions: Please check only one choice for questions with choices listed. For open answer questions feel free to write as much as you want. If you wish to clarify any answers, turn the survey over and write the question number and your comments.

PERSONAL DATA

Sex: male___,female___

Age: _____

Are you presently: single___? engaged___? married___? divorced___? widowed___?

May I call you if I need to clarify any answers or acquire more information? yes___, no___

Name: _____

Phone number: _____

Best time to call: _____

EDUCATION

1. College/University graduated from: _____

2. Year graduated: _____

3. Did you graduate with a major in: Actuarial Science___?
Mathematical Science___?
Other(specify)_____?

4. Did you attend graduate school? yes___, no___
a. If yes, where did you attend? _____
b. What degree did you obtain? MBA___
Mathematics MA___, PhD___
Actuarial Science MA___, PhD___
Other(specify) _____

5. Date achieved associateship: _____

6. Date achieved fellowship: _____

7. When did you learn about the actuarial profession?
before entering college___
while attending college___
after graduating___

8. When did you pass your first actuarial exam?
before graduating college___
after graduating, but before taking an actuarial position___
after beginning an actuarial position___

9. When you began your first actuarial position was it necessary to have an exam passed? yes___, no___

10. Which exam(s) did you find most difficult?
11. Why do you believe you had difficulty?
12. Which of your college courses best prepared you for the exams?
13. Which of your college courses do you feel has had direct applications in your actuarial career?
14. If you knew then, what you know now:
- a. Would you have attended a different college? yes___, no___
 - b. Would you have chosen a different major? yes___, no___
 - c. Would you have chosen a different field of work? yes___, no___

SOCIAL LIFE

15. Did (are) you delay(ing) marriage due to your career? yes___, no___
16. How many children do you have? _____
17. Did (are) you delay(ing) having children due to your career? yes___, no___
18. How many children do you plan to have? ____
19. If you are not a Fellow, are you still taking exams? yes___, no___
- a. If no, do you plan to continue taking exams in the future? yes___, no___
 - b. If still taking exams, how many hours per average week do you study during the two to three months before an exam sitting: at work___? at home___?
20. Did you ever discontinue taking exams for marriage and family reasons? yes___, no___

Please comment on how your career affected marriage and family for you, or vice versa:

Please feel free to expand on any answers you have made above, or make any other comments you feel might be pertinent on the back of the survey.

APPENDIX B

DATA TOTALS FOR INDEPENDENT STUDY

| | |
|---------------------|-------|
| Total returned | 314 |
| Total sent/received | 397 |
| Return rate | 79.1% |

| Sex | Total Percentage | |
|--------|------------------|-------|
| Male | 256 | 81.5% |
| Female | 58 | 18.5% |

| Age | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| 24 and younger | 5 | 2.0% | 3 | 5.2% | 8 | 2.5% |
| 25 - 29 | 27 | 10.5% | 12 | 20.7% | 39 | 12.4% |
| 30 - 34 | 44 | 17.2% | 17 | 29.3% | 61 | 19.4% |
| 35 - 39 | 46 | 18.0% | 13 | 22.4% | 59 | 18.8% |
| 40 - 44 | 48 | 18.8% | 5 | 8.6% | 53 | 16.9% |
| 45 - 49 | 26 | 10.2% | 0 | 0.0% | 26 | 8.3% |
| 50 - 54 | 19 | 7.4% | 3 | 5.2% | 22 | 7.0% |
| 55 - 59 | 12 | 4.7% | 0 | 0.0% | 12 | 3.8% |
| 60 - 64 | 10 | 3.9% | 0 | 0.0% | 10 | 3.2% |
| 65 - 69 | 7 | 2.7% | 0 | 0.0% | 7 | 2.2% |
| 70 - 74 | 4 | 1.6% | 1 | 1.7% | 5 | 1.6% |
| over 75 | 4 | 1.6% | 0 | 0.0% | 4 | 1.3% |
| Missing ages | 4 | | 4 | | | |

| Marital Status | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| Single | 36 | 14.1% | 10 | 17.2% | 46 | 14.6% |
| Married | 203 | 79.3% | 43 | 74.1% | 246 | 78.3% |
| Other * | 16 | 6.3% | 5 | 8.6% | 21 | 6.7% |
| Unknown | 1 | | | | 1 | |

* Engaged, Divorced, or Widowed

| Type of College Attended | Total grads | % of Total Respondents | # of Colleges Category | % of Total Colleges |
|---|-------------|------------------------|------------------------|---------------------|
| Large public university | 114 | 36.3% | 44 | 24.4% |
| Medium size public university | 47 | 15.0% | 34 | 18.9% |
| Private research university | 66 | 21.0% | 37 | 20.6% |
| Private (primarily) undergraduate college | 56 | 17.8% | 47 | 26.1% |
| Business college | 4 | 1.3% | 1 | 0.6% |
| Canadian | 9 | 2.9% | 6 | 3.3% |
| Non-North American | 13 | 4.1% | 11 | 6.1% |
| Did not attend/did not indicate | 5 | 1.6% | | |

| Graduation Year | Male | % of Males | Females | % of Females | Total | % of Total |
|-----------------|------|------------|---------|--------------|-------|------------|
| prior to 1949 | 14 | 5.5% | 1 | 1.7% | 15 | 4.8% |
| 1950 - 1959 | 25 | 9.8% | 1 | 1.7% | 26 | 8.3% |
| 1960 - 1964 | 26 | 10.2% | 2 | 3.4% | 28 | 8.9% |
| 1965 - 1969 | 33 | 12.9% | 2 | 3.4% | 35 | 11.1% |
| 1970 - 1974 | 42 | 16.4% | 9 | 15.5% | 51 | 16.2% |
| 1975 - 1979 | 41 | 16.0% | 16 | 27.6% | 57 | 18.2% |
| 1980 - 1984 | 45 | 17.6% | 19 | 32.8% | 64 | 20.4% |
| 1985 or after | 26 | 10.2% | 8 | 13.8% | 34 | 10.8% |
| Unknown | 6 | | | | | |

| Major | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------------|------|------------|---------|--------------|-------|------------|
| Actuarial Science | 43 | 16.8% | 5 | 8.6% | 48 | 15.3% |
| Mathematical Science | 152 | 59.4% | 32 | 55.2% | 184 | 58.6% |
| Other | 41 | 16.0% | 11 | 19.0% | 52 | 16.6% |
| Double-math as one | 11 | 4.3% | 8 | 13.8% | 19 | 6.1% |
| Dbl-act. sci as one | 2 | 0.8% | 1 | 1.7% | 3 | 1.0% |
| Dbl-act sci and math | 2 | 0.8% | 1 | 1.7% | 3 | 1.0% |
| Unknown | 5 | | | | 5 | 1.6% |

| Attended Grad School | Total % of Total | |
|----------------------|------------------|-------|
| Male | 88 | 81.5% |
| Female | 20 | 17.9% |

| Grad Degree | Male | % of Males | Females | % of Females | Total | % of Total |
|-----------------------|------|------------|---------|--------------|-------|------------|
| MBA | 5 | 5.7% | 3 | 15.0% | 8 | 7.4% |
| Mathematics MA | 27 | 30.7% | 7 | 35.0% | 34 | 31.5% |
| Mathematics PhD | 7 | 8.0% | 0 | 0.0% | 7 | 6.5% |
| Actuarial Science MA | 29 | 33.0% | 3 | 15.0% | 32 | 29.6% |
| Actuarial Science PhD | 1 | 1.1% | 0 | 0.0% | 1 | 0.9% |
| Other | 16 | 18.2% | 7 | 35.0% | 23 | 21.3% |
| Still Attending | 3 | 3.4% | 0 | 0.0% | 3 | 2.8% |

* % based on number who attended grad school - 88 male, 20 female, 108 total

| ASA | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| 1949 and prior | 7 | 2.7% | 1 | 1.7% | 8 | 2.5% |
| 1950-1959 | 17 | 6.6% | 0 | 0.0% | 17 | 5.4% |
| 1960-1964 | 10 | 3.9% | 0 | 0.0% | 10 | 3.2% |
| 1965-1969 | 31 | 12.1% | 1 | 1.7% | 32 | 10.2% |
| 1970-1974 | 30 | 11.7% | 2 | 3.4% | 32 | 10.2% |
| 1975-1979 | 51 | 19.9% | 8 | 13.8% | 59 | 18.8% |
| 1980-1984 | 37 | 14.5% | 19 | 32.8% | 56 | 17.8% |
| 1985-1989 | 46 | 18.0% | 17 | 29.3% | 63 | 20.1% |
| 1990+ | 21 | 8.2% | 10 | 17.2% | 31 | 9.9% |
| Unknown | 6 | | | | | |

| FSA | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| 1954 and prior | 9 | 5.8% | 1 | 3.8% | 10 | 5.6% |
| 1955-1959 | 7 | 4.5% | 0 | 0.0% | 7 | 3.9% |
| 1960-1964 | 7 | 4.5% | 0 | 0.0% | 7 | 3.9% |
| 1965-1969 | 10 | 6.5% | 0 | 0.0% | 10 | 5.6% |
| 1970-1974 | 24 | 15.6% | 1 | 3.8% | 25 | 13.9% |
| 1975-1979 | 38 | 24.7% | 3 | 11.5% | 41 | 22.8% |
| 1980-1984 | 34 | 22.1% | 7 | 26.9% | 41 | 22.8% |
| 1985-1989 | 16 | 10.4% | 12 | 46.2% | 28 | 15.6% |
| 1990+ | 9 | 5.8% | 2 | 7.7% | 11 | 6.1% |

| FSA Attainment | Total | % of Total |
|----------------|-------|------------|
| Males | 154 | 60.2% |
| Females | 26 | 44.8% |

| Knowledge of Profession | Male | % of Males | Females | % of Females | Total | % of Total |
|-------------------------|------|------------|---------|--------------|-------|------------|
| Before entering college | 92 | 35.9% | 16 | 27.6% | 108 | 34.4% |
| While attending college | 110 | 43.0% | 21 | 36.2% | 131 | 41.7% |
| After graduating | 54 | 21.1% | 20 | 34.5% | 74 | 23.6% |

| First Exam Passed | Male | % of Males | Females | % of Females | Total | % of Total |
|---------------------------|------|------------|---------|--------------|-------|------------|
| Before graduating college | 138 | 53.9% | 25 | 43.1% | 163 | 51.9% |
| After grad, before job | 60 | 23.4% | 15 | 25.9% | 75 | 23.9% |
| After actuarial job | 57 | 22.3% | 18 | 31.0% | 75 | 23.9% |

| Exam Necessity | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| Yes | 118 | 46.1% | 26 | 44.8% | 144 | 45.9% |
| No | 136 | 53.1% | 31 | 53.4% | 167 | 53.2% |

* this is generally an opinion question if the exam was necessary for an actuarial position

The next set of numbers deals with the question: If you knew then, what you know now...

Part A: would you have attended a different college?

Part B: would you have chosen a different major?

Part C: would you have chosen a different field of work?

| Part A | Male | % of Males | Females | % of Females | Total | % of Total |
|--------|------|------------|---------|--------------|-------|------------|
| Yes | 45 | 17.6% | 5 | 8.6% | 50 | 15.9% |
| No | 200 | 78.1% | 53 | 91.4% | 253 | 80.6% |

| Part B | Male | % of Males | Females | % of Females | Total | % of Total |
|--------|------|------------|---------|--------------|-------|------------|
| Yes | 37 | 14.5% | 11 | 19.0% | 48 | 15.3% |
| No | 207 | 80.9% | 46 | 79.3% | 253 | 80.6% |

| Part C | Male | % of Males | Females | % of Females | Total | % of Total |
|--------|------|------------|---------|--------------|-------|------------|
| Yes | 23 | 9.0% | 5 | 8.6% | 28 | 8.9% |
| No | 216 | 84.4% | 50 | 86.2% | 266 | 84.7% |

The next two questions deal with dealing marriage and family for career/exam reasons.

| Delayed/Delaying Marriage | Male | % of Males | Females | % of Females | Total | % of Total |
|---------------------------|------|------------|---------|--------------|-------|------------|
| Yes | 16 | 6.3% | 9 | 15.5% | 25 | 8.0% |
| No | 223 | 87.1% | 46 | 79.3% | 269 | 85.7% |

| Delayed/Delaying Children | Male | % of Males | Females | % of Females | Total | % of Total |
|---------------------------|------|------------|---------|--------------|-------|------------|
| Yes | 37 | 14.5% | 27 | 46.6% | 64 | 20.4% |
| No | 201 | 78.5% | 28 | 48.3% | 229 | 72.9% |

The next two questions deal with the non-FSA respondents.

| Still Taking Exams | Male | % of Males | Females | % of Females | Total | % of Total |
|--------------------|------|------------|---------|--------------|-------|------------|
| Yes | 58 | 56.9% | 19 | 59.4% | 77 | 57.5% |
| No | 41 | 40.2% | 13 | 40.6% | 54 | 40.3% |

| Continue Later | Male | % of Males | Females | % of Females | Total | % of Total |
|----------------|------|------------|---------|--------------|-------|------------|
| Yes | 6 | 14.6% | 5 | 38.5% | 11 | 20.4% |
| No | 32 | 78.0% | 7 | 53.8% | 39 | 72.2% |

The last question is: Did you ever discontinue exams for marriage and family reasons?

| | Male | % of Males | Females | % of Females | Total | % of Total |
|-----|------|------------|---------|--------------|-------|------------|
| Yes | 25 | 9.8% | 15 | 25.9% | 40 | 12.7% |
| No | 229 | 89.5% | 42 | 72.4% | 271 | 86.3% |

APPENDIX C

| AGE | Male | Female | Total |
|-----------------|------|--------|-------|
| Mean | 41.9 | 34.4 | 40.6 |
| Median | 40 | 33 | 38.5 |
| GRADUATION YEAR | Male | Female | Total |
| Mean | 1971 | 1978 | 1972 |
| Median | 1973 | 1979 | 1975 |
| ASA | Male | Female | Total |
| Mean | 1976 | 1983 | 1977 |
| Median | 1978 | 1984 | 1979 |
| FSA | Male | Female | Total |
| Mean | 1975 | 1983 | 1976 |
| Median | 1978 | 1985 | 1979 |

TRAVEL TIME (GRAD = GRADUATION)

| GRAD TO ASA | Male | Female | Total |
|-------------|------|--------|-------|
| Mean | 5 | 5.3 | 5 |
| Median | 4 | 5 | 4 |
| GRAD TO FSA | Male | Female | Total |
| Mean | 8.4 | 8.5 | 8.4 |
| Median | 8 | 8.5 | 8 |
| ASA TO FSA | Male | Female | Total |
| Mean | 3.8 | 4 | 3.8 |
| Median | 3 | 4 | 3 |

The next two sections are travel times for two special categories. Category 1 is for those respondents who graduated as a mathematics or actuarial science major AND knew of the profession before or while attending college. Category 2 is for those respondents who graduated with an other major and learned of the profession after graduating from college.

CATEGORY 1

| <u>GRAD TO ASA</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
|--------------------|-------------|---------------|--------------|
| Mean | 3.9 | 3 | 3.9 |
| <u>GRAD TO FSA</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
| Mean | 7.7 | 7.1 | 7.6 |

CATEGORY 2

| <u>GRAD TO ASA</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
|--------------------|-------------|---------------|--------------|
| Mean | 8.5 | 7 | 8 |
| <u>GRAD TO FSA</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
| Mean | 10.8 | 11.3 | 11.3 |

STUDY TIME PER WEEK

| <u>AT WORK</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
|----------------|-------------|---------------|--------------|
| Mean | 8.3 | 8.4 | 8.4 |
| Median | 7 | 6.5 | 7 |
| <u>AT HOME</u> | <u>Male</u> | <u>Female</u> | <u>Total</u> |
| Mean | 15.3 | 17.5 | 15.7 |
| Median | 15 | 16.5 | 15 |

APPENDIX D

A * in the SOA column indicates the college is on the Society's list of schools with actuarial programs. The ASM column is the number of graduates with Actuarial Science Majors.

| SOA | TYPE 1 COLLEGES | Graduates | ASM |
|-----|----------------------------------|-----------|-----|
| | 1 Baylor University | 1 | |
| | 2 City College of NY | 2 | |
| * | 3 Georgia State University | 4 | 3 |
| | 4 Georgia Tech | 3 | |
| | 5 Iowa State University | 2 | 1 |
| | 6 Michigan State University | 1 | |
| * | 7 Ohio State University | 1 | 1 |
| * | 8 Oregon State University | 1 | |
| * | 9 Penn State | 3 | |
| * | 10 Purdue University | 2 | |
| | 11 Queens College, CUNY | 3 | |
| | 12 Rutgers University | 1 | |
| | 13 SUNY, Albany | 2 | |
| | 14 SUNY, Binghamton | 1 | |
| | 15 SUNY, Brookport | 1 | |
| | 16 SUNY, New Paltz | 1 | |
| | 17 SUNY, Oneonta | 1 | |
| | 18 SUNY, Stoney Brook | 2 | |
| | 19 U of Alabama | 1 | |
| | 20 U of Arkansas | 1 | |
| | 21 U of California, Davis | 1 | |
| | 22 U of California, Irvine (UCI) | 1 | |
| | 23 U of California, Riverside | 1 | |
| * | 24 U of Connecticut | 4 | 2 |
| | 25 U of Florida | 2 | |
| * | 26 U of Illinois | 10 | 8 |
| * | 27 U of Iowa | 8 | 3 |
| | 28 U of Kansas | 3 | |
| | 29 U of Kentucky | 1 | |
| * | 30 U of Massachusetts | 1 | |
| * | 31 U of Michigan | 9 | 6 |
| | 32 U of Michigan, Ann Arbor | 1 | |
| * | 33 U of Minnesota | 1 | |
| * | 34 U of Nebraska, Lincoln | 8 | |
| | 35 U of New Mexico | 1 | |
| * | 36 U of North Carolina | 4 | 1 |
| * | 37 U of Texas, Austin | 7 | 1 |
| | 38 U of Utah | 1 | |
| | 39 U of Washington | 3 | |
| * | 40 U of Wisconsin | 10 | 3 |
| | 41 Univ of State of NY | 1 | |
| | 42 US Naval Academy | 1 | |
| | 43 York College of NYC U | 1 | |
| | Total | 114 | 29 |

| SOA | TYPE 2 COLLEGES | Graduates | ASM |
|-----|----------------------------------|-----------|-------|
| --- | | ----- | ----- |
| * | 1 Ball State University | 3 | 3 |
| | 2 Brooklyn College, NYC | 6 | |
| | 3 Calif State U, Fresno | 1 | |
| | 4 Calif State U, Long Beach | 1 | |
| | 5 College of William and Mary | 1 | |
| | 6 Drexel University | 2 | |
| | 7 Miami University | 2 | |
| | 8 Michigan Technological Univ | 1 | |
| | 9 Montana State University | 1 | |
| | 10 Montclair State College | 1 | |
| | 11 Moorhead State University | 1 | |
| * | 12 NJIT | 1 | 1 |
| | 13 Northern Illinois University | 1 | |
| | 14 Southern Ill U, Carbondale | 1 | |
| * | 15 Southern Illinois University | 2 | |
| * | 16 Temple University | 3 | 1 |
| | 17 Tennessee Technological Univ | 1 | |
| | 18 U of Cincinnati | 1 | |
| | 19 U of Colorado, Denver | 1 | |
| | 20 U of Dayton | 2 | |
| | 21 U of Hawaii | 1 | |
| | 22 U of Illinois, Chicago | 1 | |
| * | 23 U of Louisville | 1 | |
| | 24 U of Maine | 1 | |
| | 25 U of Nebraska, Omaha | 1 | |
| | 26 U of New Hampshire | 1 | |
| | 27 U of S Maine | 1 | |
| | 28 U of Texas, El Paso | 1 | |
| | 29 U of Wisconsin, Milwaukee | 1 | |
| | 30 U of Wisconsin, Oshkosh | 1 | |
| | 31 U of Wisconsin, Stout | 1 | |
| | 32 Virginia Military Institute | 1 | |
| | 33 Western Illinois University | 1 | |
| | 34 Western Washington University | 1 | |
| | Total | 47 | 5 |

| SOA --- | TYPE 3 COLLEGES | Graduates | ASM ----- |
|------------|---------------------------------|-----------|--------------|
| | 1 Adelphi University | 1 | |
| * | 2 Brigham Young University | 2 | |
| | 3 Brown University | 2 | |
| | 4 California Institute of Tech | 1 | |
| | 5 Carnegie Mellon University | 2 | |
| | 6 Columbia University | 1 | |
| | 7 Cornell University | 2 | |
| | 8 Dartmouth College | 1 | |
| * | 9 De Paul University | 1 | |
| * | 10 Drake University | 6 | 5 |
| | 11 Duke University | 1 | |
| | 12 Emory University | 2 | |
| | 13 Fordham University | 1 | |
| | 14 Furman University | 1 | |
| | 15 Harvard | 3 | |
| | 16 Howard University | 1 | |
| | 17 Lehigh University | 1 | |
| | 18 Marquette University | 1 | |
| | 19 MIT | 4 | |
| * | 20 New York University | 4 | |
| | 21 Northwestern University | 3 | |
| | 22 Pace | 1 | |
| | 23 Princeton University | 3 | |
| | 24 Rensselaier Polytechnic Inst | 1 | |
| | 25 Stetson University | 1 | |
| | 26 St. Lawrence University | 1 | |
| | 27 Syracuse University | 1 | |
| | 28 Tufts University | 1 | |
| | 29 U of Chicago | 1 | |
| | 30 U of Notre Dame | 1 | |
| * | 31 U of Penn | 4 | 3 |
| | 32 Valparaiso U | 1 | |
| | 33 Vanderbilt University | 1 | |
| | 34 Villanova | 1 | |
| | 35 Washington University | 2 | |
| | 36 Worcester Polytechnic Inst | 3 | |
| | 37 Yale University | 2 | |
| | Total | 66 | 8 |

| SOA | TYPE 4 COLLEGES | Graduates | ASM |
|-----|----------------------------------|-----------|-----|
| --- | | ----- | --- |
| | 1 American International Col | 1 | |
| | 2 Amherst | 2 | |
| | 3 Bates | 1 | |
| | 4 Bowdoin College | 1 | |
| | 5 Bryn Mawr College | 2 | |
| * | 6 Butler University | 1 | 1 |
| | 7 Calvin College | 1 | |
| | 8 Carleton College | 3 | |
| | 9 Carthage College | 2 | |
| | 10 Central College of Kentucky | 1 | |
| | 11 Charter Oak College | 1 | |
| | 12 Chestnut Hill College | 1 | |
| | 13 Clark University | 1 | |
| | 14 College of Wooster | 1 | |
| | 15 Concordia College | 1 | |
| | 16 Davidson College | 1 | |
| | 17 DePauw University | 2 | |
| | 18 Eastern College | 1 | |
| | 19 Fairfield University | 1 | |
| | 20 Franklin and Marshall College | 1 | |
| | 21 Gettysburg College | 1 | |
| | 22 Grinnell College | 1 | |
| | 23 Gustavus Adolphus College | 1 | |
| | 24 Harding University | 1 | |
| | 25 Harvey Mudd College | 1 | |
| | 26 Hope College | 1 | |
| | 27 Hunter College | 1 | |
| | 28 Illinois Benedictine Col | 1 | |
| | 29 Knox | 1 | |
| * | 30 Lebanon Valley College | 1 | 1 |
| | 31 Oberlin College | 2 | |
| | 32 Occidental College | 1 | |
| | 33 Olivet Nazarene University | 1 | |
| | 34 Pacific Lutheran University | 1 | |
| | 35 Randolph-Macomb College | 1 | |
| | 36 Smith College | 1 | |
| | 37 St. Benedict's College | 1 | |
| | 38 St. Joseph's University | 1 | |
| | 39 St. Olaf College | 1 | |
| | 40 St. Thomas College | 1 | |
| | 41 Swarthmore | 3 | |
| | 42 Taylor University | 1 | |
| | 43 Thiel College | 1 | 1 |
| | 44 Trinity College | 1 | |
| | 45 Warner Pacific College | 1 | |
| | 46 Western Maryland College | 1 | |
| | 47 Williams | 1 | |
| | Total | 56 | 3 |

SOA

Graduates ASM

| --- | | | |
|-----|---|----|---|
| | TYPE 5 COLLEGE | | |
| * | 1 College of Insurance | 4 | 4 |
| | TYPE 6 COLLEGES | | |
| | 1 Bishop's University, Lennoxville, Canada | 1 | |
| * | 2 Laval University | 1 | 1 |
| | 3 McGill University, Canada | 2 | |
| * | 4 Toronto | 1 | 1 |
| * | 5 U of Manitoba | 2 | 2 |
| * | 6 U of Western Ontario, Canada | 2 | 1 |
| | Total | 9 | 5 |
| | TYPE 7 COLLEGES | | |
| | 1 Beijing Inst. of Posts and Telecommunication, China | 1 | |
| | 2 Cambridge University, England | 1 | |
| | 3 Chung Yuan College, Taiwan | 1 | |
| | 4 Fu Jen Catholic University | 2 | |
| | 5 National Taiwan University | 2 | |
| | 6 Trinity College Cambridge, England | 1 | |
| | 7 Trinity College Dublin, Ireland | 1 | |
| | 8 U of Taiwan | 1 | |
| | 9 U of the Philippines | 1 | |
| | 10 U of the Witwatersrand Johannesburg, S Africa | 1 | |
| | 11 University College Swansea, Wales, UK | 1 | |
| | Total | 13 | |

APPENDIX E

Other Undergraduate Majors

A number in parenthesis indicates the number of people who studied that major.

MAJORS

Accounting
Art/Interior Design
Biology
Biostatistics
Business
Business Administration (3)
Business Statistics (2)
Chemistry (3)
Communications
Computational Mathematics
Economics (9)
Elementary Education
Engineering
Engineering Sciences
English
Finance and Systems Engineering
Industrial Engineering (2)
Journalism
Management Science
Mathematics Education
Naval Science (R.O.T.C.)
Physics (3)
Political Science
Psychology (6)
Social Science
Statistics (3)

DOUBLE MAJORS

Business and Actuarial Science
Business and Mathematics
Computer Science and Mathematics
Computer Science and Actuarial Science, Minor: Business Administration
Economics and Mathematics (5)
Economics and Russian and East European Studies
Economics and Mathematics, Minor: Actuarial Science

English and Mathematics (2)
History and Mathematics
Insurance and Actuarial Science
Physical Science and Mathematics
Physics and Mathematics (3)
Professional Education and Mathematics
Pure Mathematics and Statistics
Secondary Education-Mathematics and Statistics
Statistics and Mathematics

TRIPLE MAJORS

Applied Math, Engineering and Physics
Accounting, Actuarial Science and Mathematics

APPENDIX F

Other Graduate Degrees

A number in parenthesis indicates the number of people with that degree.

Applied Science PhD

Biomathematics MS

Economics MA (2)

Industrial Management MS

J.D. (Law) (2)

Mathematics Education MAT (2)

Political Economy MA

Psychology PhD

Quantitative Analysis MS

Statistics MS (6)

Statistics MS (*minor Economics*)

Commerce PhD and Mathematics MA

Education and Mathematics MA (2)

History and Actuarial Science MA

Psychology MA and EDM in Education

Insurance and Economics PhD, Mathematics MA, Actuarial Science MS, and MBA

APPENDIX G

Comments

EDUCATION

A participant who graduated with an Engineering Sciences majors says, "Obviously, a liberal arts education is valuable for any professional career including actuarial work. I don't see a mathematics major as being of particular value since the work is really less mathematical than the early exams might lead you to believe. Business courses would probably be of some value..."

"While it is obvious that the core education should be mathematically/technically oriented, it is also important to have considerable exposure to business and arts. Good communication skills and ability to work with both technical and non-technical people greatly enhances your career."

"When I was in college I got a BS in math and met all the additional requirements to get a teaching certificate. In retrospect, my time would have been better spent taking business courses."

In response to the question of choosing a different major, a female Mathematics major states, "I would not have chosen a different major but I would have taken different elective classes. Most of my classes were math or economics classes which helped prepare me for the technical aspects of the career...having a variety of classes from various disciplines prepares you to be a better thinker and decision maker which is one of the most important aspects of any career." And in following the question of which college courses had direct application in the career she says, "Philosophy - ability to reason and organize thoughts...Actuaries are relied on to make key financial decisions (or provide upper management with the information needed to make the decision) for insurance companies. The ability to think and communicate is as essential as the required technical abilities."

CAREERS IMPACT ON SOCIAL RELATIONSHIPS AND VICE VERSA

"I believe it is extremely difficult for working women to have time and energy to maintain a career, study for exams and raise a family. The exams demand a commitment of several hours per day of studying. I don't think I could have been as successful in passing exams if I had already been married."

"I have always been very lazy about studying, so there was never any problem with the exams interfering with our personal time. (Of course, I paid the price by taking 12 years to get my FSA!)"

"I made a choice between a wonderful career and a healthy family. I chose the latter one."

"I'm a mother of two young boys. As such, working full-time as well, it has been very difficult for me to devote time to the exams. Since I will not let exams take priority over my marriage and family, my exam passing has suffered....best advice - take exams while in school and new in the working world. And devote the time it takes to pass!"

A divorced man says, "If I had it to do over, my career would receive less attention and personal relationships more."

A male age 30 says, "I believe having a family made me study harder in order to finish as soon as possible."

"Found it difficult taking exams and having a family. I delayed taking exams several times because of the stress on myself and my family."

"I tried to maintain a priority of "family first, exams second". While this did not enable me to complete the exams in record time, in the long run it seemed the saner approach (if having two children before starting the exams and adding two more along the way can be called "sane"). ...Given the thrust of your survey, it might not be a bad idea to include attitudes/feelings of "significant others" of actuaries (the true innocent bystanders of the actuarial exam grind)"

"The time required to prepare for exams while holding a full-time job placed a definite strain on my family life. Such family stress does not strike me as unusual for people pursuing professional careers, but the length of time over which the actuarial exams stretch is unusual."

"There is definitely a trade-off between marriage/family and exam studying/career. The appropriate balance must be determined by each person."

"A monastery would be the ideal setting for exam preparation."

A 25 year old married female says, "I don't know how it would be possible for a woman to work, take exams and have children. As a result I want to be an FSA before being a mother."

"I was fortunate because my family always supported my career and the studying I needed to do. However, I found it extremely difficult, really impossible, to put studying before family commitments."

"I believe passing exams requires commitment from the actuary's family as well as from the actuary. The commitment is for a long period of time."

A 25 year old female says, "My career did not affect my marriage/family. However, my older male bosses (with wives who stay at home and older children) do not understand sick children, daycare problems"

"Studying for the exams had a negative effect on marriage and family relationships at the time. A proper balance is both personal and necessary. There are times when priorities in life need to be changed. If you do not, there may be a heavy price to pay. If you survive the exam period, the rewards can be very satisfying."

"The exam process is quite stressful for both the individual taking the exam and their "significant other". Often there is a trade off between passing exams and family."

A 39 year old married female says, "I was married the entire time I took the exams. I had 2 children while taking the exams. An individual's self determination weighs far heavier on exam results than marriage or children."

"Exam taking required extraordinary patience on the part of my spouse!"

This man listed two effects the career has had on his marriage, "1. Hard for wife to put up with time spent on exams rather than her. 2. career meant great income for family - wife could put up with that (grin)"

"I don't get to spend as much time with my family since there is always an exam to study for. There is only time to relax in May and November after the exam."

"It almost cost me my wife because I spent time working or studying rather than spending it with her."

"Marriage caused some decrease in commitment towards my career and passing exams. Having children definitely has made me hang up exams for a while."

"I am still single. When I talk to most actuaries, I hear stories of how the spouse (non-actuary) took up golf to prevent the marriage from falling apart while the actuary "holed-up" for 3 to 7 years to finish off the exams. This certainly is a scary prospect."

In commenting on how the profession has effected his social life a 25 year old male comments, "It definitely has made dating difficult. It's hard to have a normal social life and take exams. (No wonder so many actuaries are lacking in social skills...yawn!)"

A divorced female states, "My career, especially with exams, added extra pressure to my marriage. The time constraints of working full time and studying for exams make it difficult to have the time and energy to pursue or maintain good interpersonal relationships."

"Taking the exams was truly a sacrifice by both myself and my wife. My wife endured through all my exams. She often comments that she should have gotten honorable mention on my diploma from the Society."

A female and mother of three children comments, "We made the decision to have our children early in my career. It has been difficult to find personal time to study, but I certainly wouldn't trade my family for the four exams I don't yet have. If I had to do it over again, I probably would choose a career in something else. I have enjoyed the work in actuarial science, but have also felt frustrated when I haven't been able to get through exams."

"Being married certainly made it more difficult to carve out the time to properly prepare for the exams. My wife had to understand and make allowances for the time commitment involved, but we looked at it as an investment in my future career."

"My career helped my marriage since it provided job stability and a relatively high salary. This career therefore gave my family and myself a feeling of security. I also feel pride in my profession as does my family. I feel this is a respected profession which does much social good."

REWARDS OF THE CAREER

"Financial rewards of my profession enhanced the marriage."

"Rewarding career made for comfortable family life."

"The personal satisfaction and financial security that the actuarial profession has provided me, has also provided a strong base for my marriage and family."

"The significant time commitment involved in taking exams means less time is available to be spent with family (especially children). However, significant career advancement associated with passing exams provides the (financial) resources to avail oneself and one's family of recreational, educational opportunities."

"Successful professional career, financial success and family accord go hand in hand."

"There is a feeling of accomplishment that coupled with financial reward makes it easier to undergo the hard study time taken away from my family."