



Article from

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# Interview with John M. Bragg (Jack)

By Carlos Fuentes

**T**his is a special interview with an accomplished actuary. In addition to an outstanding career, John M. Bragg managed to serve the profession as president of the Society of Actuaries, developed technical tools, material for examinations, wrote award-winning articles and made many more contributions. A Renaissance person, his interests include physics, water-color painting, music, history and more. Now in his mid-90s, Bragg is about to publish his important article “Human Health Based on Quantum Mechanics—and the resulting New Health Contingencies,” which no doubt the actuarial community will read with interest. We are honored to have the opportunity to interview such an accomplished actuary.

1. You have enjoyed a long and successful actuarial career. Can you tell us why you decided to become an actuary?

“First of all, I want to congratulate the section for its good work and for giving me this opportunity to be interviewed!

“At age 19, I was a physics major. But a miracle happened on the front steps of the arts building. I was suddenly recruited for life into the actuarial profession! I haven’t seen a dull day

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since. I was impressed by the thought that I could become a professional in this important developing field which deals with the real needs of people.”

2. Can you give us an overview of your career, emphasizing milestones and experiences that helped you succeed?

“There have been many milestones. Just one of them was moving to the United States in 1956. (My wonderful wife, Joan, had said ‘what are you waiting for? The bags are already



packed!’) The move immediately put me into the center of all things actuarial. The experiences gained with my two insurance companies (Great West Life and Life of Georgia) were absolutely vital in teaching me how to do things right. They got me a lot of consulting work later.

“Coping with inflation was an early milestone, leading to the ‘Cost-of-Living Policy’ and my 1986 book *Protecting Against Inflation and Maximizing Yield*. Then, smoking/nonsmoking differences came along and led to tremendous success with the ‘Bragg Life Tables—BLT’s, 1981—2013.’ Policy form approval was also big and was reputation-based.

“Right now, old age mortality and morbidity are my current big milestones. The latest report is ‘Old Age V.’ I have also given a lot of seminars, worldwide, on numerous topics.

“The personal actuary movement has been a success ever since 1998. It is a very much needed service. Its many aspects include health expectancy and health status of individuals.

“I’ll relate just one story about it:

“We have a small club with only five members. Membership is open only to people who run for president and have had their health expectancies published. The members are Obama, McCain, Hillary Clinton, Johnson and Trump. All of these passed the health expectancy test with flying colors; all are gaining ‘benefit of survivorship’ as they go on. (The next club openings will be in 2020.)

“We were overjoyed in 2016 to be contacted by the fact checker of *The Washington Post*. He sent us our news release for 2008 and wanted to know if we would be doing the same for the 2016 candidates. We said we had just completed them! People need to know that their presidents will be healthy. We felt that this was a pretty good public service by the actuarial profession.” The link is [https://www.washingtonpost.com/news/fact-checker/wp/2016/09/08/actuarial-math-trump-has-a-slightly-higher-chance-of-dying-in-office-than-clinton/?utm\\_term=.1320a272471d](https://www.washingtonpost.com/news/fact-checker/wp/2016/09/08/actuarial-math-trump-has-a-slightly-higher-chance-of-dying-in-office-than-clinton/?utm_term=.1320a272471d).

3. Please tell us about your tenure as president of the SOA.

“I was president of the SOA 1975–1976. A lot of time was spent trying to deal with the bitter fractures in the profession. Two new sects had even popped up: ASPA and The Enrolled Actuaries. One big personal success I had was persuading the Joint Board to accept the SOA’s pension exams rather than subjecting our kids to two sets of exams. I also had something to do with starting the ‘Sections’ which have been a complete success without creating the horrors of separate organizations.”

4. In June, 1966 you wrote “Prices and Commissions Based on the Theory of Games.” Can you describe how you used game theory to tackle these actuarial problems?

“At that time, game theory was just being developed by Nash (of *A Beautiful Mind* fame) and others. So, I looked into it. It turned out to be extremely capable of coming up with the optimal price which was acceptable to both buyer and seller and the correct way to approach commissions, overhead, profit, competition and control. Such problems had plagued actuaries and others for years. Furthermore, the paper attempted to put down a lot of bad practices that seemed to be going on.

“Geoffrey Crofts, FSA, encouraged and helped me with that game theory paper. Geoff had originally been my student, but had now become responsible for hundreds of actuarial careers worldwide. (Also, he had married his wonderful wife, Jean, who just happened to be my own wife’s best girlfriend. We introduced them.) Geoff still encourages me all these many years later. I also had my wonderful cadre of actuarial students at Life of Georgia.”

5. Do you think game theory and other strategic tools such as scenario analysis and futurism can be useful to actuaries? Or could it be that these disciplines are better suited for those who intend to manage a company or a department such as MBAs?

“I most emphatically believe that all these disciplines are essential for actuaries. The managers should embrace these disciplines also, but they usually operate just on instinct, which is often quite good. The managers do trust their actuaries. The actuaries need to realize that they are the real plan designers, regardless of any ‘reporting arrangements’ that may exist. Another most essential point: the actuaries should become the managers. (That’s what eventually happened in my own career!)”

6. Some famous mathematicians read your article and became aware of your work. Can you tell us about that experience?

“Sylvia Nasar wrote the magnificent *A Beautiful Mind* book about Nash. She eventually saw my game theory paper. She said it was fascinating and that I was ‘way ahead of the curve.’ She gave a copy to Nash who was tickled. (Incidentally, Sylvia had originally been an actuarial student, which I consider to be wonderful.) It is most unfortunate that Nash and his wife were killed in a taxi accident in 2015.”

7. In 1974 you wrote “The Future of the Actuarial Profession as Viewed in AD 1974.” The outlook of the actuarial profession is a matter of importance now as it was then. Can you summarize your findings? What are your current views about the profession? What are your views about the future of the profession?

“My 1974 paper concluded that the outlook for the profession was bright. That turned out to be true. (There were about 5,000 actuaries then; now there are about 26,000.)

“Maybe the 1974 paper really created the modern actuarial profession. That 1974 paper is still relevant. We still need greater professionalism and better ways to be futurists. (‘predictive analysis’ is the current catch phrase.) And we are still in our ‘Time of Troubles.’”



Right now, the profession needs a big morale boost. We are not number crunchers. We're the plan designers. We do have that overall view, which is so badly needed. The profession needs to find better ways to get jobs and funding; there will be a successful response to that challenge also. Based on that belief and the tremendous need for our services, the future of the actuarial profession is still bright!"

8. In "The Future of the Actuarial Profession as Viewed in AD 1974" you demonstrate command of history and literature. You use it to, among other things, develop a solid structure for your observations. Do you think that, realistically, a strong background in non-technical areas pays off in a professional career? Maybe sometimes it does and sometimes it doesn't?

"I believe that a strong background in non-technical areas is essential for a professional career—and most especially for an actuarial career. (There are no cases where 'sometimes it doesn't').

"Backgrounds can differ, and that's OK. Just have one! Maybe I could say something about my own background interests and how they came about. The list has gotten to be pretty long: history; literature; music (piano, trombone and choir); water-color painting (especially kids portraits); physics, astronomy (resulting from my celestial navigation during WWII), golf and sailing. I am both an opera buff and a baseball fan. The literature interest, which is relevant to the paper, arose through the help of a very good professor of English (Ted Spivey) who gave classes at our church.

"Another thing about outside interests: don't claim that you are an expert. You know the wonderful field in which you are expert!

"Another point: be on boards and not just actuarial boards. You'll be surprised to discover that people on boards really don't know each other. Especially, they don't know people on other boards. You become the connecting link. Your communication skills will benefit immeasurably.



To put things in a nutshell: be proud of the profession. Do a good job. Realize the public trusts you. Continue to be worthy of that trust.

“You’ll also be surprised to discover that all of those good ideas, which you need, just seem to pop up out of your background.”

9. In addition to the two ground-breaking articles you have discussed, we know you have been working on new ideas. Do you care to describe some of them?

“We are in quite a mess right now about health and health care, especially at older ages. Actuarial solutions are badly needed. So, I am working on a draft paper titled ‘Human Health Based on Quantum Mechanics—and the resulting New Health Contingencies.’ You shouldn’t be surprised because, after all, I was a physics major when that miracle occurred on the front steps of the arts building. It has just taken me 77 years to get back to quantum mechanics.

“So far, the results are extremely fascinating. Talk about predictive analysis! Talk about an amazing new track to run on! I appreciate the help I’m getting from Carlos Fuentes, editor of this section’s newsletter.

“I hope to get the paper published this year, and that it will become useful. Among other things, the paper deals with the entirely new subject of “recovery” which is the only good way to go.”

10. Is there any advice that you feel would be valuable to actuaries, young or experienced?

“I guess I have already come up with a lot of advice. However, to put things in a nutshell: be proud of the profession. Do a good job. Realize that the public trusts you. Continue to be worthy of that trust. ■

Carlos Fuentes, FSA, MAAA, is president of Axiom Actuarial Consulting. He can be reached at [carlos-fuentes@axiom-actuarial.com](mailto:carlos-fuentes@axiom-actuarial.com).

## ABOUT JOHN M. BRAGG

### Education and Professional Designations

- Educated in Canada and Scotland
- FSA, fellow of the Society of Actuaries, 1949
- ACAS, associate of the Casualty Actuarial Society, 1957
- M.A.A.A., Member of the American Academy of Actuaries, 1965
- EA, Enrolled Actuary, 1976
- B. Comm. Hons., University of Manitoba, 1943
- Navigator, RCAF, 1944–1945

### Experience

- Great-West Life Assurance Company, 1945–1956
- Life Insurance Company of Georgia 1956–1978,
- President & CEO, 1975–1978
- John M. Bragg and Associates, Inc., 1978 and continuing
- Series of five Bragg Life Tables (BLT’s), 1981–2013
- A leading authority on the subject of mortality and health experience; specialized in the effect of smoking, and in mortality and health at older ages.

### Professional Contributions

- President, Society of Actuaries, 1975–76.
- Various actuarial profession committees and programs from 1949 and continuing.
- Abolished racial pricing, Civil Rights era.
- Author of “Health Insurance Claim Reserves and Liabilities,” 1963 (This was on the actuarial exam syllabus for many years).
- Author of “Prices and Commissions Based on the Theory of Games,” published May 1966 in the Journal of Risk and Insurance.
- Developed Socio-Economic methods.
- Author of “The Future of the Actuarial Profession as Viewed in 1974 AD” published in TSA.
- Author of regular “Putting it Together” column in the National Underwriter.
- Author of book: Protecting Against Inflation—and Maximizing Yield, published 1986 by Georgia State University.
- Developed the cost of living policy.
- Developed the role of the personal actuary.
- Developed the concepts of health expectancy and health status 1998 to present.
- Authored and co-authored numerous papers in actuarial publications.

*Editor’s Note: Most unfortunately, Geoffrey Crofts passed away on March 14, 2017, days after the interview with Bragg. Crofts’ contributions to the profession are living testament of his dedication and professionalism.*