

Interview with Fritz J. Scheuren: Statistical Mentsch¹

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Fig. 1. Fritz Scheuren (middle) with Arthur Kennickell (left) and Ivan Fellegi (right) – probably 1998 Linkage Conference.

Fritz Scheuren stepped down from his position of Editor-in-Chief to the *Statistical Journal of the IAOS* after the March 2016 issue. To thank him for his service and stepping in to the role of Editor-in-Chief at a critical time, the IAOS Executive Committee members requested that we include in our Oral History series, an interview with Fritz Scheuren. There was an earlier interview with him in the September 2011 issue of *Amstat News* [16].² This new interview will expand on that piece and bring out more of his views on family, statistics, and life in general.

In preparing for the present interview, I have found that he has been involved in many different activities and created networks to support others throughout his professional career. He has served as the President of

¹The views and opinions expressed in the conversation are those of the interviewee and do not necessarily reflect the policy or position of the *Statistical Journal of the International Association for Official Statistics* nor IOS Press.

²I would like to personally thank Megan for this earlier interview. It gave me a start on understanding Fritz for this interview.



Fig. 2. Fritz Scheuren (left) with Katherine Condon (middle) and Daphne Gaskins (right) at Reiter's Books, April 2016.

the American Statistical Association (2005), as well as been a co-founder of Statisticians without Borders (SwB), to name just some of the positions and activities he has held. He has given of himself to many people (family, students, and colleagues) and causes. His enthusiasm in these activities is contagious. Many have commented on his warmth and how down-to-earth he is, as well as being inspired by his passion for statistics and humanity. Murphy's [16] piece focuses on "his commitment to improving the lives of others" and notes that "it is evident through his human rights projects, volunteer work and leadership activities." Statistics being his career path, he uses it to benefit humanity – and chose while President of the American Statistical Association the theme "use our discipline to enhance human welfare" – and part of the American Statistical Association mandate.

The first face-to-face interview with Fritz Scheuren was conducted on April 8, 2016 by Katherine Condon

at Reiter's Books³ located in Washington, DC at the corner of 19th & G Street, NW.⁴ At the beginning of the conversation, Fritz and Katherine sat with Daphne Gaskins of Reiter's Bookstore, to organize the foundation of this conversation regarding his life as another "accidental statistician."⁵ We talked amongst the books of this wonderful bookstore, as other patrons were also enjoying the bookstore and chatting.

Because we had a set of questions to guide our conversation and this interview, Fritz was well ahead of me in getting down to business on talking about the influences that shaped him to "accidentally" become the statistician and human being he is today.

It's a joy for me to talk about myself again, and as you will see, if you haven't already realized, I am "full of it".

And so, this interview began. However, before we got down to the questions, Fritz wanted to mention several books that he thought were important to laying the foundation of this conversation. The first was a book about the Celts [6], and as he said

It honors a people who have been badly treated by history. One of the themes in my life is to help the little guy, to evening it up. . . . Not by putting the big guy down, but even-ing up the playing field [for the little guy].

This theme of helping people also came out in Murphy [16], in which she wrote,

Perhaps he is dedicated to helping people because, despite having a loving family, Scheuren's childhood was difficult. Growing up in Boston, Massachusetts, he lived in the Projects, [i.e., public housing] with his mother, and sister, Marie, and attended Boston College High School. Every day, he walked across a dump to get to school, and those were the days when open burning was still permitted. "I enjoyed school", he said, "but because of my poverty and where I lived, it was also challenging."

³Established in 1936, Reiter's is one of a few woman-owned independent booksellers in the world that is focused on bringing scientific, medical and technical books directly to the community. From finance, economics, math and medicine to design, architecture, politics and policy, there is a diversity of reading materials, as well as puzzles, games and toys for children of all ages. <http://www.reiters.com/>.

⁴Communication between Fritz Scheuren and Katherine Condon (the interviewer) continued through the fall of 2016.

⁵Referring to George Box's memoir entitled *An Accidental Statistician* – which Fritz and I talk about later in this conversation.



Fig. 3. Fritz with his sister Marie, Circa 1946.

The next book he mentioned was the autobiography of George Box [5], because as Fritz commented, Box also came to the world of statistics accidentally. Fritz said,

I too didn't start off as a statistician. My father wanted me to be an engineer.⁶ So, first of all I studied civil engineering, but then I didn't want to do that. I then went off to do English [as a high school English teacher], but then I didn't want to do that. Then I got a job as a statistician and it turned out that it was something that I was pretty good at.

Fritz went on to say that,

My father could be cranky at times, but he used to get up early in the morning, as do I. While everyone else was still asleep, he would make decaf for himself and sometimes he would take a small [sausage] and he would turn on the gas stove and cook [the sausage] over the flame. And I would too. We would eat that in the morning and we would talk during those early morning times. I miss those moments in life. . . . I am the only one of the seven who really got to know [our] father because I was first. Then my mother got sick after my sister was born

⁶Fritz was the first born of his father's seven children. Thus, the importance of "following in his father's footsteps" and go into the field of engineering. During the conversation, I could relate to this as I am a "first born" and did not follow in my father's footsteps. We had a good laugh at this. However, we also agreed that while we may not have followed in our father's footsteps, our fathers are proud of our accomplishments.

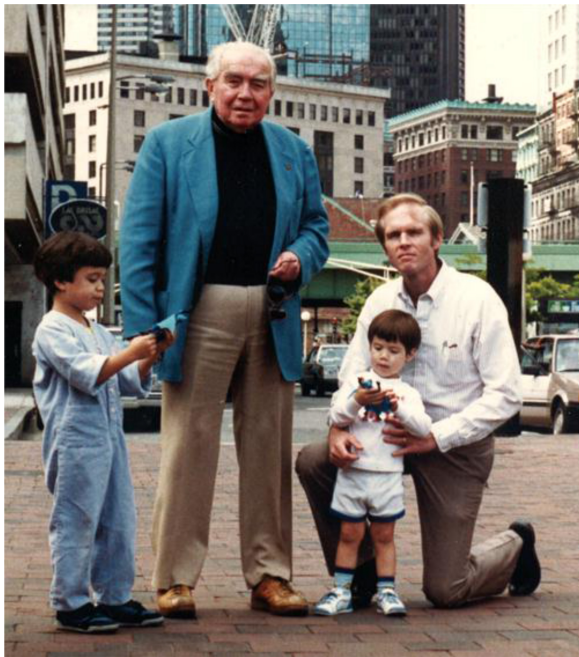


Fig. 4. John Scheuren stands with Fritz and his grandsons (John and James) in Boston, Circa 1987.

and my father went to war [World War II]. Then he came back. After that well, ... they are both gone now and I miss them both. Anyway, their values are what I try to live by in my life.

This reminded him of a story that he wanted to tell – from the German “genug ist genug” or “enough is enough” – to be illustrative

So, I'm going to marry this woman [his wife] and she is Chinese. So, I go to my mother and tell her that I want to marry Elizabeth. My mother replied, “I have only one question, what religion is she?” I told her and it was the right answer for my mother. So, I then go to my father to tell him that I want to marry Elizabeth. He responds, “I have only one question, what school did she go to?” That was also the right answer. My father went to MIT, my wife went to MIT, but I did not go to MIT. [He didn't go to MIT as it was during the Vietnam War era and said he was very stubborn about a lot of things.]. My father asked a follow-up question, “Was that undergraduate or graduate?” I responded “undergraduate.” This also pleased him. Sadly, the one thing my father didn't live long enough to know was that his grandson who is named after him also went to MIT undergraduate. He did know that my first-born son was named after him, as I called him



Fig. 5. Fritz with his wife, Elizabeth, and sons James (left) and John (right), celebrating a recent birthday at home (no date).

at 2 AM to tell him – waking him up. He was actually quite pleased. While my father already had lots of grandsons, this was the first one that was named after him.

Turning to the final book – *The Art of Stillness* [14] which Fritz stated is a very important concept for him.

The word “stille” in German does not only mean “silence” like in “Silent Night, Holy Night” but “quiet” like a very deep spiritual meaning, to be open to receive God. This is a very feminine concept. ... Men don't really understand this concept ... but they could learn it. Anyway, I'm working on it. But, I keep realizing that I don't really know much about anything.

It was at this point that we decided to take the picture for this article with Daphne Gaskins at Reiter's Books.

After the picture taking Fritz and I got down to business to answer those questions about how Fritz became the human being that he is, building on his experiences through his life. His recent health issues have made him more aware of the fragileness of life; and, as he said, “my incompleteness.”

As mentioned earlier, Fritz had a difficult start in life, but he persisted. Murphy [16] distilled his transition from high school to college and his first attempt at a career as follows,

After high school, [he] thought he wanted to become a teacher, so he attended Tufts University and majored in English literature. By the time, he graduated, however, he didn't think he was developed enough as a person to teach, so he looked for a technical job.

During our conversation for this piece, Fritz and I talked about his experience in English literature in college. I asked him what period of English Literature he had been most interested in and he said that he particularly enjoyed the 17th century English Literature that reflected the intense ferment of the time in all areas of life and which also registered a “heightened focus on and analysis of the self and the personal life.”⁷ Given the foundation Fritz established earlier in this conversation, I was not surprised that this period of literature resonated with him.

I continued by asking Fritz whether he had been interested in statistics or mathematics during high school.

Yes and no, my father expected me as first born to become an engineer just like him. However, a little later as a matter of rebellion, I decided to become an English teacher and not go to MIT – where he went – but instead I went to Tufts. I scored 100% on the National Teacher’s exam – which even surprised my parents.

I followed up this question, by asking whether there was a particular event or person that had an impact or shaped him into the person he is today. Fritz thought for a moment, before he responded. I could tell that this was a hard question for Fritz to answer as everyone he has come in contact with has shaped him into the person he is today.

After some thought, Fritz was reminded of a Japanese word “Kaizen” which he translated to mean “continuous improvement.”⁸ He likened the experiences he has had through his life as all being “Kaizen” moments and helping him be a better person. For him, everyone he meets provides him with a “Kaizen” moment.

One of Fritz’s statistical heroes is W. Edwards Deming, who is also associated with the term “Kaizen.”⁹ During the 1930s, Deming was an advisor at the U.S. Census Bureau (Bureau). He developed sampling tech-

niques that are still used today by the Bureau. Starting with the 1937 test survey, the Bureau used sampling techniques and other statistically based survey techniques.¹⁰ Statistical sampling within decennial censuses was implemented for the first time with the 1940 Census.¹¹ Thereafter, sampling became a fixture of the decennial censuses through the end of the twentieth century when the American Community Survey became the instrument used to gather “long form information.”

*Sampling made it possible to ask additional detailed questions of the population without unduly increasing cost or respondent burden. Enumerators asked a random sample of the population (approximately 5 percent) a set of extra questions. The Census Bureau then used the sample to extrapolate demographic data for the entire United States.*¹²

Deming also introduced statistical process control (SPC)¹³ techniques to improve census results. Arguably this may have been one of the first uses of statistical methods of quality improvement in a white-collar environment.¹⁴

In 1946, Deming left U.S. Government to be an independent consultant; and, eventually, to join the faculty of New York University Graduate School of Business. One of his first independent consulting jobs in 1946 was to go to Japan “to study agricultural production and related problems in the war-damaged nation.”¹⁵ In 1960, Deming was awarded the 2nd Order Medal of the Sacred Treasure by the Emperor of Japan – for the introduction and implementation of statistical quality control techniques to Japanese industry. Later in the 1980s, American industrialists, seeing the spectacular rise of Japanese industry after World War II tried to emulate the Japanese business practices¹⁶ –

¹⁰“This test survey not only estimated the scope of unemployment in the United States during the Great Depression, but it also served as a “check” on a larger-scale, voluntary census effort attempting to measure the same thing. SOURCE: http://www.census.gov/history/www/innovations/data_collection/developing_sampling_techniques.html.

¹¹In 1943, Deming published a book entitled *Statistical Adjustment of Data* [9].

¹²http://www.census.gov/history/www/innovations/data_collection/developing_sampling_techniques.html.

¹³For more information regarding statistical process control (SPC) methods, see: https://en.wikipedia.org/wiki/Statistical_process_control.

¹⁴SOURCE: <https://deming.org/theman/timeline>.

¹⁵SOURCE: <https://deming.org/theman/timeline>.

¹⁶Ford Motor Company hired Deming to assist in jump-starting the quality movement in the auto industry during the late 1980s.

⁷Norton Anthology of English Literature Online <https://www.wwnorton.com/college/english/nael/17century/welcome.htm>.

⁸For more information about this term, see: <https://en.wikipedia.org/wiki/Kaizen>.

⁹You may also find information about Deming and his work at <https://deming.org>. In addition, see also: https://en.wikipedia.org/wiki/W._Edwards_Deming. Deming’s papers are available at the Library of Congress, <http://www.loc.gov/tr/mss/text/deming.html>.



Fig. 6. Deming in his home study in the attic, 1930s (Photo courtesy of The W. Edwards Deming Institute®).

and immortalized June 24, 1980 on the television show “NBC White Paper” with the words “If the Japanese can do it, why can’t we?”¹⁷

Deming did not confine his expertise to industrial consulting, he was also invited to many academic institutions for his expertise as well. J. Stuart Hunter (Princeton University), who received ASA’s Deming Lecturer Award in 2009, introduced his talk with a historical look at Deming’s career and recounted the times Deming visited Princeton University. Summarizing the introduction to Hunter’s Deming Lecture, as follows, Hunter recalled the joy Deming took in playing with Hunter’s kids. However, Hunter also recounted that Deming’s demeanor changed when he was in a professional setting where he would challenge those presenting their work. In Hunter’s words, it was Deming’s pattern to be

... a kind person who was very demanding on those with power and responsibility (whether they be [professionals], executives or CEOs).¹⁸

In the Encyclopedia of Mathematics, Deming was described as follows:

Long recognized as a leading proponent of statistical sampling and approaches to quality improvement, Deming led major efforts to bring statistical

¹⁷See https://en.wikipedia.org/wiki/If_Japan_Can..._Why_Can't_We%3F. for more information about this quote.

¹⁸For more about this particular lecture, see <https://blog.deming.org/2016/07/a-historical-look-at-demings-career-lecture-by-j-stuart-hunter/>.

approaches and methods to bear on problems in government, science and industry.¹⁹

His connection to science, in addition to government and industry, came through later in the same piece on Deming’s accomplishments.²⁰

In 1934, Deming published, jointly with the UC Berkeley Physicist Raymond T. Birge, an influential paper “On the Statistical Theory of Errors.” This review paper brought the methods of Fisher, Neyman and Pearson (q.v.), and Jeffreys (q.v.) to a broad audience of American physical Scientists. It was reprinted with additional notes in 1937 by the Graduate School of the USDA,²¹ and it served effectively as a textbook for over a decade... This material also made its way into Deming’s mimeographed lecture notes on least squares which first appeared in 1938, which he later turned into the 1943 book [Statistical Adjustment of Data [9]].²²

Overall, Deming can be described as

a visionary, whose tireless quest for the ‘truth’ and unwavering belief in ‘continual improvement’ led to a set of transformational theories and teachings that changed the way we think about quality, management and leadership. Throughout his career, he remained a gentleman devoted to family, supportive of colleagues and friends, and always true to his word and beliefs.²³

Nor did Deming limit his mission of pursuing quality to work arenas, but also realized it in other aspects of his life. For example, in a memorial written in the American Society for Quality, Deming was remembered for,

[polishing] his skills as an organist and music composer. His version of the national anthem, which addresses people’s inability to hit all the notes, serves as a metaphor for one of his points for management: don’t blame the singers (workers) if the

¹⁹https://www.encyclopediaofmath.org/index.php/Deming,_W._Edwards.

²⁰This was a surprising connection for me [the interviewer], as I am a grand-daughter of a physicist whose Ph.D. advisor was this same Raymond T. Birge.

²¹Recently, this school has been renamed o “Graduate School USA” – <http://www.graduateschool.edu/>.

²²https://www.encyclopediaofmath.org/index.php/Deming,_W._Edwards.

²³<https://deming.org/theman/overview>.

*song is written poorly (the system is the problem); instead, rewrite the music (fix the system). In life and in art, Deming simply wanted to make it easier for people to sing.*²⁴

When I showed this anecdote to Fritz, he confirmed it up and said that he too had heard this anecdote, because his first real boss – Staunton Calvert – lived near and knew Deming and was very musical himself.

As an aside, Fritz chose the picture of Deming (above) taken in the 1930s as it reminded Fritz of his own early days in government in the 1960s. Fritz said,

It's so quaint now to see Deming with a pen/pencil and paper. Reminds me of the No. 2 pencil I used myself when I first came to the Service [IRS] in the 60's. Having an electronic computer on your desk was unthinkable then. The PC had not yet been dreamed up.

Until the UNIVAC 1 at Census, statistical computers were people, usually young women. Earlier people/computers had mechanical tools mostly manual calculators.

Moving on to Fritz's career development in his post-undergraduate years and the start of his career in statistics. Murphy [16] wrote that his first technical job was as a management intern for the Internal Revenue Service. Murphy [16] went on to describe the circumstances of the time, using Fritz's words.

They wanted to hire a statistician, and because I was not one, they paid for classes. . . I immediately began taking statistics courses [part-time] at The George Washington University (GWU), and after nine years of night school, I eventually earned my PhD.

It was in 1966, that he saw how his work as a statistician could help others when he helped develop, along with Staunton Calvert and Jim Smith, the first IRS estate multiplier wealth estimates.²⁵ Fritz described this work while talking with Murphy [16] as follows.

²⁴http://asq.org/about-asq/who-we-are/bio_deming.html.

²⁵The estate multiplier technique has been around for a while. It was invented in the U.K. With this technique, estimates of the wealth of the living population from the estate tax return data filed for the deceased can be estimated. <https://www.irs.gov/pub/irs-soi/13pwcestatereturn62.pdf>.

The estimates. . . looked at the wealth of the rich. Paradoxically, that made me realize how big was my survivor's guilt for escaping the Projects. So, I joined Jim at the Office of Economic Opportunity (OEO) and began working on the War on Poverty – the other war we lost in that era. [The “other war” being referred to was, of course, the Vietnam War.]

In addition to his work on poverty and government poverty reduction programs while at OEO, Fritz also worked part time for the Social Security Administration (SSA). Fritz moved over to SSA full-time in 1973 when OEO ended. At SSA, he led a team of statisticians which produced an 11-volume series on interagency data linkages. In 1979, Fritz became SSA's chief mathematical statistician. In 1980, he returned to the IRS to become the Director of Statistics of what is now the Statistics of Income Division (SOI).²⁶ During his tenure as Director, Fritz “transformed the organization and revitalized the program. . .” with the help of a “great group of colleagues . . . such as Tom Pet-ska, Mike Leszcz, and Susan Hinkins” [16]. Fritz recalled during his interview with Murphy [16] that the “biggest technical problem we overcame was achieving transparency while maintaining statistical disclosure protection.” He continued that the second greatest success he had,

. . . was in achieving growing interagency cooperation, this time in support of the Federal Reserve Board's Survey of Consumer Finances (SCF). Supporting the SCF was another way for me to study the U.S. tax/transfer system and the nature of U.S. income/wealth inequality (Murphy, 2011).²⁷ [NOTE: Fritz still works on the SCF today and some of this work is highlighted in a special issue of SJAOS (March 2017).]

His varied career at several agencies in the United States federal government covered a particularly dramatic period of American history with the Civil Rights movement, the War on Poverty, and the Vietnam War. This made me ask what of the many projects or work

²⁶For more information about SOI see <https://www.irs.gov/uac/soi-tax-stats-statistics-of-income>. In addition, see Scheuren, 2016 and Scheuren, Forthcoming.

²⁷Fritz was recognized for his efforts at SOI in 1995. He was given the Julius Shiskin Award for Economic Statistics for his groundbreaking work in the construction of microeconomic files. This Award is given in recognition of unusually original and important contributions in the development of economic statistics or in the use of statistics in interpreting the economy. For more information – http://www.amstat.org/sections/bus_econ/shiskin.html.

that he had done, was the most special to him or gave him the greatest satisfaction.

This was difficult for Fritz to answer. As we developed this interview, he turned the conversations we had on his work to talk about his involvement through the years in the Civil Rights Movement, not just through his work as a statistician, but as a human being. Fritz told me that he had been involved in the Civil Rights Movement in Boston before he came to Washington, D.C. However, it has been while living in Washington, D.C. that he has been most involved, he even was at the famous March on Washington, when the Reverend Dr. Martin Luther King, Jr. spoke on August 28, 1963.

With regard to that event, Fritz recounted that he walked down from All Soul's Unitarian Church on 16th Street in Washington to the March that day with many friends in a racially mixed group. He recalled that they ended up on a bluff (a bit of rise) on the non-river side of the Lincoln Memorial where he was able to look down on the Memorial just a few hundred feet in front of him.

He remembered seeing Dr. King on the steps of the Lincoln Memorial preparing to speak. Gospel legend Mahalia Jackson had just finished singing "How I Got Over" and was leaving the stage when she whispered something to Dr. King as she passed him – later to find she had said to him repeatedly "Martin, talk about the dream, talk about the dream."

Fritz could not hear her whispering, of course; but he recalled after she got behind and spoke to Dr. King one last time that Dr. King shut the open folder with his notes and gave his now famous "I Have a Dream" speech (<http://www.americanrhetoric.com/speeches/mlkihaveadream.htm>.)

This story about the March that Fritz told was, of course, about something that occurred well over 50 years ago, but Fritz had still more to say on much the same theme.

I was in class at Howard University, which is an all-Black School, the night that the Reverend King was killed. It was Holy Thursday; but when I went to work the next day, [Good Friday], we were sent home early as the rioting had begun in Washington and elsewhere around the country. It was truly a terrible time.

Fritz continued after a pause to say,

The curse or blessing of a long life is to see how much things change; and yet, how much stays the same. Anyway, more time passes, I was again near the Lincoln Memorial. It was November 11, 1982,

the day the Vietnam Memorial was dedicated. The Vietnam Memorial is roughly near the spot where I had stood back in 1963 for the March on Washington. Yet here I was, driving by that evening [in 1982] to take my wife Elizabeth to the hospital for the birth of our first son, John, [see Pic 5 earlier with his brother James, born two years later]

I later asked Fritz if there was a "take-away" from these two stories here. Fritz was not sure; but he finished it with another important link to Dr. King's speech – "Keep your eyes on the prize! Keep your eyes on the prize! Keep your eyes on the prize!" and then Fritz recalled the German phrase "Werde der du bist" – roughly translated into English as "Become, who you are"

Getting back to the original question, what of the many projects or work that he had done, was the most special to him or gave him the greatest satisfaction. It is clear through our many conversations that all the work Fritz has done has made him the human being he is today. Yet, it is also understandable that each of these efforts should be highlighted as to what he learned from them. In addition, Fritz also wanted to make clear that there are still more things/work he wants to do – that is, after having completed his tenure as Editor-in-Chief of SJAOS (which ended June 2016). Particularly important to Fritz is promoting even broader recognition of the work of W. Edwards Deming.²⁸

As a follow-up, I asked Fritz what he saw as some of the challenges facing statisticians currently working in government settings. He began by saying,

Wisdom is the goal; words are many; some are wiser than others; and some are just wise. After 31 years in government and 20 plus years in other roles, my challenge is to continuously strive to achieve at that next level.

It was here that Fritz reminisced about a former Director of Statistics of Income (SOI) program, Ernie Enquist.²⁹ In Fritz's words, Enquist was the greatest Di-

²⁸The American Statistical Association established an award in 1995 named for W. Edwards Deming and which recognizes and enhances awareness among the statistical community of the scope and importance of Deming's contribution. Fritz and I talked about the significance of this award later in this piece.

²⁹Ernest Enquist was the fourth Director of SOI. He served between 1953 and 1964. He brought the agency into the computer age.



Fig. 7. Personnel of the Statistical Division – Income Tax Unit, mid-1920s.

rector for SOI. It was “a huge blow for SOI” when he died suddenly of a heart attack.

He went on to say,

When I first become Director at SOI,³⁰ I looked around to see how it could be improved. The people were great, but the setting needed improvement to adjust to the changes in the times.

He recalled when he first arrived at SOI (back in the 1960s) that,

There was a picture of [the agency staff] from the 1920s [See Pic 7].³¹ It covered 3 pages when it was first published. The staff was mostly women, [PAUSE] mostly white women, with maybe 4–5 men – again all white. The organization had changed, when I took over in 1980. The clerks were mostly black women, but the professionals were still mostly white men. I tried to transform the or-

Dalton [7] wrote, “to achieve his vision, he doubled SOI staffing and reassigned manual statistical processing to the field. This transition allowed SOI to establish the first quality control program, to maintain integrity of data, and also enabled [more] focus on specialized areas like partnership returns, taxpayer usage studies, advance tabulations of individual data, capital gains, corporate foreign tax credit, sales of capital assets, depletion, and depreciation. . . [the work during Enquist’s tenure] laid the groundwork for most of what SOI now delivers.”

³⁰Fritz served as the Director of SOI from 1980 to 1993. Dalton [7] summarized the innovations that Fritz accomplished during his tenure as, “. . . convening the first meeting of the SOI Advisory Panel to involve academics, business representatives, and tax policymakers in SOI work processes. . . [In addition, during his directorship,] . . . he invested in human capital, seeing that economists and mathematical statisticians had the training necessary to meet the computer programming needs of the Division. Scheuren also spearheaded the TQO (Total Quality Organization) initiative at SOI.”

³¹We want to thank Emily Gross, Melissa Ludlum and Melissa Belvedere (Statistics of Income Office) for finding these three pictures. Despite their hard work, we were not able to find better quality pictures for this article.

ganization in terms of civil rights. I didn’t fully succeed. However, now, there are many more women of all cultural backgrounds at SOI.

Here he referred back to the piece he wrote for the 100th anniversary of SOI (Scheuren, 2016). He wrote of his endeavors to improve SOI,

. . . the approach might resemble metaphorically fording a stream that you cannot afford to bridge, building pile after pile of boulders spaced so that one can jump from one pile to another in the hope that one can eventually get to the other side without getting wet or at least without drowning.

This “roughly right” world, as the metaphor implies, takes a lot of statistical literacy skills, by everyone involved not just SOI staff but also all the various user and 16 producer communities that SOI is part of. We are all still learning this by doing it together.

Guided by a sense of adventure and not a map need not be all bad, even for a bureaucrat. We are all still young enough to enjoy this! Right? Anyway, what are our alternatives?

It was here that Fritz came back to my question regarding challenges facing statisticians working in government settings.

. . . we [statisticians] need to [always] strive to achieve another level through scholarship. However, doing this while caring about people is the complicated part.

Fritz was reminded of his piece celebrating SOI’s 100th anniversary [17].³² In this piece, he wrote about

³²Fritz is working on developing this piece further and hopes to have it published in SJAOS.



Fig. 8. Fritz (right) receiving the Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society with Rob Rodriguez (2012 ASA President).

what he saw the future endeavors of SOI should be,³³

In my view, SOI's future lies in partnerships with its customer and fellow data suppliers, linkages across disparate data systems, building differing units of analysis, in the cross-section and longitudinally.

Other possibilities for SOI's future role might be mentioned, even though these are complex and emotionally charged. For example, there are "turf" issues that could impede "satisficing" relationships for SOI. To be blunt, entities (individuals and organizations) outside IRS see very clearly the goal – maybe better than SOI does. But nearly all of us are likely to underestimate the distance to the goal and may not even see the rivers (or oceans?) that have to be crossed. There is usually the fog of detail to be seen thru/stumbled into and out of without taking a bad fall, losing one's way, or drowning.

Other official statistical organizations, not just SOI, have been coping with the 'Big Data' revolution. . . This, too, offers much for SOI to learn from and adopt and/or adapt what others are doing already or researching.

An important and groundbreaking endeavor that Fritz led while at SOI was the construction of micro

³³Later in our conversations after some thought, Fritz stated that generally these endeavors should also extend to all federal agencies.

economic files and the statistical use of administrative data for economic research. This work led to his being awarded the Julius Shiskin Award Memorial Award for Economic Statistics in 1995.³⁴

After many years working in the government sector, Fritz stepped down as Director of SOI and tried his hand full-time in the academic arena. Ever energetic, he had already begun teaching part-time while still head of SOI. So, the transition was smooth.

Fritz became a full-time visiting professor at his PhD. *Alma Mater*, The George Washington University (GWU). As a visiting professor, he taught the entire sampling sequence, and several other service courses. In addition, he set up the graduate certificate program in survey research, where he still even today has a small role.

He expanded his publication efforts. These now stand at over 500 Journal articles and chapters in several books. In these he wrote extensively both on applied and theoretical topics with respect to sampling and data collection. These works were primarily in a survey context with an emphasis on sample design and estimation, process quality, and the handling of missing data.

During the early part of this period, he also consulted widely on tax issues, which brought him in contact with Ernst and Young, LLP. Thus, this began his foray into the private sector. He was to rise to the position of National Technical Director and Principal, Statistical Sampling Economics Group. In that capacity, he worked in the National Tax Division on many State, as well as federal taxation issues. His extensive knowledge on the inner workings of SOI/IRS, made him an invaluable representative before regulatory and legislative bodies, including the U.S. Congress. He also designed samples that used existing client operating records for Ernst and Young.

After several years at Ernst and Young, Fritz then turned his statistical skills and attention more and more to social issues. He took a job as a Senior Fellow at The

³⁴The award is given in recognition of unusually original and important contributions in the development of economic statistics or in the use of statistics in interpreting the economy. Contributions can be in statistical research, development of new statistical measures or statistical tools, use of economic statistics to analyze and interpret economic activity, management of statistical programs, or application of data production techniques. http://www.amstat.org/sections/bus_econ/shiskin.html.

Urban Institute. There, he took overall charge of the National Survey of America's Family (NSAF). In this capacity, he served as the editor and a principal author of the 1997 and 1999 NSAF Methodology Series, of which there are 33 volumes!³⁵ NSAF was a major part of the Urban Institute's **Assessing the New Federalism** (ANF) project. From the survey, 300+ publications on welfare reform and related issues were published by the research community

Still not satisfied with his contributions to increasing social justice and human welfare, he moved on yet again in 2001 to become a Vice President and Senior Fellow at NORC at the University of Chicago, where he still works today.³⁶ Several important efforts drew him to this position. The first was an opportunity to lead a major effort to help the Department of Interior with its handling of Individual Indian Monies (IIM) Trust fund records.³⁷ This allowed him to use his considerable sampling and audit expertise with administrative records AND "help the little guy, to even it up..." – as he identified when we first sat down to talk.

Another important effort was with regard to the Survey of Consumer Finances (SCF). The SCF is a survey of U.S. households sponsored every three years by the Board of Governors of the Federal Reserve System, with the cooperation of the U.S. Department of the Treasury. The data from the SCF is used to inform a variety of policy issues (e.g., monetary, tax and consumer protection). It is a unique survey, as no other survey collects data on the household finances of a probabil-

ity sample of Americans. Again, the work on the SCF allowed Fritz to employ his considerable sampling and audit expertise in an administrative record setting AND simultaneously impact social issues, ranging from inheritance and charities; to income taxes and support; as well as educational loans; and work and pensions, to name just a few. The content of this survey is both highly sensitive and technical in nature. Fritz continues to work on the SCF.

In 2003, after the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule for the protection of individual health information had come into force, Fritz was among the pioneers developing the statistical tools and de-identification standards needed to comply with the new privacy requirements imposed on doctors, hospitals and insurers wishing to release data sets with patient information for research and marketing purposes.³⁸ Fritz had previously been involved in the development of statistical data protection tools for the US Government, for example, as a member of the Federal Commission on Statistical Methodology (FCSM) where he co-authored the original version of "Working Paper 22" This is a seminal paper on statistical disclosure limitation, and in applying his expertise to the newly introduced patient privacy laws, he helped shape the framework for disclosing de-identified medical information, an area which up to that point had received little attention.

To wrap up the discussion on Fritz's work-life accomplishments, I asked Fritz whether he had any words of wisdom for students preparing for work in the world of official statistics. Again, this was hard for Fritz to answer. However, I was able to take from his conversation with Murphy [16] the following two pieces of sage advice,

Our statistical discipline gives us a set of tools to better live our values. It is not the 'whole deal' though. So don't settle for just being a statistician, be a [Mensch], a complete person.

We American statisticians need to catch up with our times. Too many of us are working on dead problems from textbooks and not 'getting out from behind the desk,' as Deming advocated.

Later as we were editing this article, Fritz recalled that in preparation for his ASA Presidential address, he

³⁵For more information and publications, see: <https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/00216>.

³⁶Established in 1941 as the National Opinion Research Center (NORC), NORC at the University of Chicago has conducted ground-breaking studies, created and applied innovative methods and tools, and advanced principles of scientific integrity and collaboration. A timeline of its activities and partnerships can be found at <http://75.norc.org/#/2010>.

³⁷NORC played a major role in the settlement of the Cobell lawsuit that alleged mismanagement of IIM trust accounts. Their initial role was to design and select various samples of Indian Trust records dating back to 1890 as part of mediation efforts to arrive at a settlement, after the initial proposed sample was rejected by the Court. NORC continues to provide statistical expertise to the Office of Historical Trust Accounting (OHTA), which "was established in 2001 and its primary mission to oversee the historical accounting of IIM beneficiaries mandated by the Court in Cobell v. Norton" (<http://www.telophase.com/clients/department-of-interior/>). For more information about the settlement and Tribal Trust accounts, see: <http://www.indiantrust.com/faq>. NORC "has also performed a meta-analysis involving more than 900 other audit studies of Indian Trust records by previous analysts" (http://www.norc.org/PDFs/Annual%20Reports/NORC_Annual_Report_2006.pdf).

³⁸Fritz still continues to consult and work with Dr. Patrick Baier on HIPAA privacy protection matters. For more general information on HIPAA, see: https://en.wikipedia.org/wiki/Health_Insurance_Portability_and_Accountability_Act.

found invaluable inspiration from his 99 predecessors and their ASA Presidential addresses which he collected. Later, he worked to re-publish these addresses. He felt it was important to bring together these works in one centralized electronic collection accessible to current and future statisticians.³⁹ Fritz described these collected ASA Presidential addresses as,

...for the most part quite quotable, a few of the speeches are a bit dated. Nonetheless, they have lasting value and deserve this record.

Turning to Fritz's volunteerism activities and *pro bono* statistician work, much has already been written. Murphy [16] wrote that Fritz was initiated into human rights work by a phone call in 1994 from Tom Jabine.⁴⁰ During this phone call,

Jabine asked him to participate in an information gathering coordinated by the American Association for the Advancement of Science (AAAS). Scheuren's main role was to [evaluate] reports about civilian casualties from land mines in Cambodia and tell Herb Spierer from Columbia University whether they made sense. Why was it important for a statistician to read these reports? "Because statisticians provide objectivity to settings dominated by advocates," said Scheuren. It was Spierer who later told him one of the major downfalls of advocacy is overstatement. (Source [16])

As illustrated above, much of Fritz's early volunteerism as a *pro bono* statistician involved "sitting behind a computer." However, in 1999, Fritz was able to get out from behind his computer "to help count refugees fleeing from the former Yugoslavia" [16].

Patrick Ball at the AAAS was working on a project to survey the refugees from Kosovo. This is how Fritz traveled to Albania. Murphy [16] summarized this experience as follows,

When they arrived, people [from Serbia] were streaming across the Albanian border, yet the guards were unperturbed. "One of the border guards had loose sheets of paper in his hands on which he was writing down the family names and counting the members of each group as they went



Fig. 9. Fritz (left) with Julie Belanger (statistical consultant) and Patrick Ball (AAAS), 1999.

by," Scheuren recalled. "When he saw us looking at him, he raised the registrations over his head, as if he were saying, 'We are in control.' Patrick and I realized that, if we had those records, we could hold the perpetrators accountable. How to get them, then, became the issue.

Scheuren and Ball returned to the states, Fritz brought three scanners, which Ball took back with him to Albania. Risking his safety, Ball again went up to the border, secured the records, and scanned them. Those data became the main data set used at the later Hague war crime trials.

Learning about that this [Albanian] experience from Fritz, David Nolle of the U.S. State Department asked Fritz to design a survey of the Afghans in refugee camps in Pakistan. While Fritz did not personally go to Pakistan, he played an important role by designing the sampling and data collection plans used for the analysis [3]. As he noted in his ASA Presidential address,⁴¹ "the Afghan survey had to be done quickly and in secret to protect the identity of the contractor and those who did the interviewing" [16].

Murphy [16] quoted Fritz's description of the design as follows,

The refugee camps in Pakistan were complex and held three waves of refugees – some from the Russian invasion of Afghanistan, some from the Taliban takeover, and some from the North Atlantic Treaty Organization bombing. "When you are doing survey quality management in a situation like that," said Scheuren, "there are lots of challenges." Besides handling the survey in two languages, Nolle and Scheuren faced monitoring the contrac-

³⁹You can find this collection of ASA Presidential addresses and papers at: <https://www.asapresidentialpapers.info/2a.html>.

⁴⁰Later, when Fritz and I spoke about this encounter, Fritz added "Talk about a Mentsch, Tom certainly was one."

⁴¹Fritz served as President of the American Statistical Association in 2005. You can find a copy of his Presidential address at: <https://www.asapresidentialpapers.info/2a.html>.

tors from a distance. Six months after the fieldwork was done, they wrote a paper about their experience and presented it at the 2002 Joint Statistical Meetings [2] and later published in the book *Statistical Methods for Human Rights*, edited by Jana Asher, David Banks, and Fritz Scheuren [3].

While most of Fritz's volunteer work has focused on human rights issues overseas, more recently he has seen the value of statistical thinking closer to home, in the United States election process. He said he was inspired to volunteer in this area by his wife, Elizabeth who, at the time, was an election official in their home state of Virginia. After the messy 2000 Presidential election, Fritz "jumped in and slowly learned enough to help" [16]. Here, Fritz's volunteer work includes acting as poll-taker, as well as monitoring voting problems and voter behavior in the United States [16]. During his ASA Presidential address, Fritz stated then that, "if we are going to have better elections, statistical thinking is needed in much larger doses, so I ask you, who is there to do that job, if not us [real] statisticians?" [16].

Not only has Fritz been involved directly doing *pro bono* statistical projects for humanitarian issues, he has also been involved with others in founding a supportive network for statisticians focusing on humanitarian causes in a variety of ways. One such way has been Statistics without Borders (SwB).⁴²

I asked Fritz about his involvement as a founding father of SwB; in particular, if there was anything that he would like to share about his experience in the development of SwB, or other volunteer/ humanitarian causes that he has been involved in. While Fritz was loath to brag about all his good works over the years, many have commented on the value of his support and enthusiasm to their own efforts for volunteering.

For example, in a conversation in SJIAOS with Nilupa Gunaratna [20], she recalled that Fritz was instrumental in encouraging the Statistics graduate students at Purdue University to talk about their volunteering program, Statistics in the Community (STAT-COM), to others by writing articles for *Amstat News* [10,

⁴²SJIAOS has covered many different SwB projects during the past few years, as well as documented the development of the organization [5,20,21]. The history of SwB can be found in the *JSM Proceedings* [12]. If you are interested in discussing possible projects with SwB, you can complete a form at, <http://community.amstat.org/statisticswithoutborders/gethelpwithanewproject>. If you are interested in volunteering with SwB, you can find out more at <http://community.amstat.org/statisticswithoutborders/getinvolved>.



Fig. 10. Fritz (right) receiving his 2016 ASA Mentoring Award from Jessica Utts, current ASA President.

11], as well as make presentations to spread the word on their program.

Nilupa went on to say that in order to expand their organizational model outward to other universities, she led a ASA Strategic Initiative in 2006, supported by a Member Initiatives Grant. This led to a network of different but connected STATCOMs and developed an institutional home for all STATCOMs within the ASA. After completing her Ph.D., Nilupa is now a scientist doing research on health, nutrition, agriculture and related development issues mostly in Africa. She continues her volunteerism through SwB. While her "day job" would overlap in content and clients – which would raise ethical issues – she contributes to the overall organization of SwB, rather than individual projects. She currently serves as the SwB Communication Director.

When I asked Monica Dashen⁴³, another SwB volunteer about how Fritz has helped her, Monica recalled that she first met Fritz in 1995 at her arrival at the Bureau of Labor Statistics (BLS). However, she did not formally introduce herself until her recent project in Myanmar/Burma in 2014 (see [5]). She recalled,

As a SwB volunteer, I enjoy learning new things and applying my skills to new territories. However,

⁴³Personal conversation for this piece.

I have had some difficulties along the way and consulted Fritz. His uncanny ability to go to the heart of the problem quickly, along with his vast and thorough knowledge of the field makes his support invaluable. For example, I could not find reliable and current health care information for the Inle lake area of Myanmar at the start [of the project on maternal and infant health in the Inle Lake region]. Fritz quickly pointed that our pilot study should also include asking midwives, and auxiliary midwives about the number of births, deaths and vaccinations. I was dumbfounded by his insight and made it a point to include healthcare workers in the pilot. Such interviews provided points of expansion for our full-scale survey.

More recently, I described my struggle of mismatched refugee cases in a longitudinal study. In this study, street addresses could not be used as an identifier. Before I could even finish, Fritz suggested a two-block map of the neighborhood with landmarks. I quickly incorporated that idea into a manual.

Every one of us who have come in contact with Fritz can share a story of how he has helped us improve our project, find a solution to a field problem, or supported our efforts for volunteering. These are just two examples.

At the 2016 American Statistical Association (ASA) annual meeting, Fritz was one of the recipients of the 2016 ASA Mentoring Awards.⁴⁴ Fritz was recognized for his,

... career-long superior mentoring, tireless encouragement, generosity of time and knowledge and positive influence on generations of statisticians and nonstatisticians alike; inspiration that others mentor; commitment to excellence in motivating others and leadership by example; sincere interest in people and genuine encouragement to succeed; dedication to using statistics to better society and constant display of kindness to all around him; inspiration and willingness to seek out and help those who have had fewer opportunities; and passionate encouragement to generations of statisticians from

⁴⁴This award is given each year to a member of ASA “who has demonstrated extraordinary commitment to providing significant early-career support to statistics students, statisticians or statistical researchers. The award honours those recognized by their colleagues for their sustained efforts to champion the work and develop the careers of statisticians.”



Fig. 11. Fritz with Deming’s desk and comptometer at the offices of the American Statistical Association in Alexandria, VA – November 2016.

academia, government and business to be active in the ASA as part of their professional development and sense of community

In Fritz’s editorial farewell in the March 2016 SJAOS issue, he wrote about how he came to step in as Editor-in-Chief after the untimely death from a heart attack of the previous editor, Dr. Frank Nolan, in October 2012.⁴⁵ Fritz began by saying that he had been working on a second edition of a Springer book *Data Quality and Record Linkage Techniques* (co-authored with Tom Herzog and Bill Winkler).⁴⁶ He went on to discuss the lessons that he learned during his tenure as Editor-in-Chief. He said that the most valuable lesson he learned was, “**ASK FOR HELP.**” Due to his generosity of spirit to others, we are honored to step in and provide the assistance he requests.

While he may have stepped down from being the Editor-in-Chief of SJAOS, Fritz is still staying busy and there seems to be no end of energy on his part,

⁴⁵A brief obituary for Dr. Nolan can be found at: <http://content.iospress.com/download/statistical-journal-of-the-iaos/sji00756?id=statistical-journal-of-the-iaos%2Fsji00756>.

⁴⁶This project was put on hold during his tenure as Editor-in-Chief. Fritz intends to resume work on this second edition.

particularly given his statistical training and his desire to make a difference in the world. He continues to play a valuable role in SJAOS, such as in the September 2016 issue in which he worked with Steve Koczela to put together a selection of papers on the theme “Data Fabrication.”⁴⁷

He continues to volunteer [beyond what has already been described earlier] and branching out in his volunteer interests. One such example has been a project with regard to the charges of hacking of the 2016 presidential election.⁴⁸ Yet, Fritz had already developed an interest in the electoral process while assisting with validating the Haiti’s 2010 Presidential Election.⁴⁹ He branched out again with other volunteer statistical work in Haiti after the January 2010 earthquake. He did this work through Statistics without Borders (SwB).⁵⁰ He continued his efforts after the more recent devastation of Hurricane Matthew and worked again through SwB to conduct a nationwide household survey to explore: (a) aid distribution, particularly in the aftermath of Hurricane Matthew; (b) actual destruction caused by Hurricane Matthew; and (c) related health issues.⁵¹ Fritz worked tirelessly to secure funding for this project and the survey received support from the American Statistical Association and USAID. The results of this project are currently being written up for the sponsors.⁵² However, Dashen [8] has provided a written overview of the project and the following notes on what is next for the project. In terms of short term changes,

... some members of the Haitian diaspora recommend going directly to the people (e.g., delivering food and cash to those displaced people in shelters). Others recommend Christian Aid as an effective organization, along with Catholic Charities. For example, Christian Aid supports Haiti Survive, an NGO, that helps people rebuild their lives by giving them animals.

Dashen [8] concluded her field note with the following statement,

On the surface, it looks like the Haitians are rebuilding their lives five weeks after Matthew. Along the main road in the south, I spotted patched roofs, trucks loaded with food, and SUVs filled with western medical workers. These observations were consistent with the foreign aid reports I read. Getting off the main thoroughfare and walking around the communes on the first day, however, I was surprised to see the damaged homes and learn about the lack of aid.

Another volunteer project Fritz is supporting is the restarting of the library in Alexandria Egypt. Fritz generously donated 22 boxes of statistical books and journals from his own library. Initially, this effort was envisioned to build the world’s largest virtual library for research methods, however it soon became evident that it should also include as a compliment a book research methods library. Thus, in 2016, Fritz lead the effort to collect statistics books from leading statistical experts.⁵³ In the first shipment, over 100 statistical experts donated 6,711 books which were sent by cargo ship to the Euclid Library of Alexandria. Currently, this first shipment of books is being catalogued and processed to be included in the permanent collection at the Euclid Library of Alexandria.⁵⁴ A second shipment, even larger than the first, is planned for this summer (2017).

Finally, when we were still developing this interview piece, Fritz shared with me that one of the most important things still on his professional wish list, as he said, was to be selected to receive the ASA Deming Lecturer Award. Fritz found out recently that this wish

⁴⁷The issue can be found at: <http://content.iospress.com/journals/statistical-journal-of-the-iaos/32/3>.

⁴⁸Fritz chaired the seminar entitled “Possible Irregularities in the 2016 Presidential Election” on October 4, 2016, sponsored by the Washington Statistical Society and held at the Bureau of Labor Statistics Conference Center. For more information see: <http://washstat.org/seminars/2016/Possible%20Irregularities%20in%20the%202016%20Presidential%20Election.pdf>.

⁴⁹He was part of an Expert Mission of the Organization of American States (OAS) for the verification of the vote tabulation of the 2010 Presidential Election, which delivered its report in January 2011. For more information see: <http://www.haitilibre.com/en/news-2188-haiti-elections-who-were-the-experts-of-the-oas-mission.html>. Fritz continues to be similarly involved in the more recent elections in Haiti 2015-2016.

⁵⁰For more information on these projects in Haiti, see: http://community.amstat.org/statisticswithoutborders/swb_projects/currentprojects/haiti1. An article on this work was published in 2013 in ASA’s journal *Significance* [17].

⁵¹Fritz was not able to go to Haiti himself for this project, but recommended Monica Dashen to be SwB’s lead. Monica’s last SwB project involved a maternal and infant care survey in Myanmar and the Dec 2016 issue has a conversation regarding this project [5].

⁵²For more information, see Dashen, 2017. We hope to talk to Monica Dashen for a Conversation piece on this project.

⁵³For more information, see: <http://ssc.bibalex.org/helpdesk/introduction.jsf>.

⁵⁴Email communication between Ronald Laporte and Fritz Scheuren and electronic newsletter. There will be another book drive in July/August 2017. If you would like to join in this project, please contact Ronald Laporte (ronaldlaporte@gmail.com). For more information on this project, see: <http://bit.ly/2ivyBDe>.

is coming true for the 2017 Joint Statistical Meetings (JSM) in Baltimore, MD.⁵⁵ We hope anyone who is in the Baltimore, MD area at the beginning of August will consider attending the meeting to celebrate this honor for Fritz.

For those who don't know, the American Statistical Association established the Deming Lecture Award in 1995. To be selected for this award, "the individual has either made significant contributions in fields related to those in which Deming devoted his career—including survey sampling, statistics in the transportation industry, quality management, and quality improvement—or has made significant contributions through effective promotion of statistics and statistical thinking in business and industry." For more information, see: <http://www.amstat.org/ASA/Your-Career/Awards/Deming-Lecturer-Award.aspx>.

Deming-Lecturer-Award.aspx.

To conclude our interview, I asked Fritz if he had any words of advice to pass along to the new Editor-in-Chief, Kirsten West – recently retired from the U.S. Census Bureau. Fritz laughed and then said "Kirsten will be great and doesn't need any words of advice from me."

In addition, Fritz expressed over and over to me during the interview, as well as in follow-up conversations we had, that in handing over the baton of leadership for the *Statistical Journal of the International Association of Official Statistics* (SJIAOS), he wanted to make sure that Kirsten knew how much he appreciates and admires the dedication and work-ethic that she brings to the profession and to SJIAOS.

Further acknowledgements

To continue the theme of acknowledgement of others and given the limited number of pages for this interview – it was clear that there were many more people that Fritz wanted to honor and acknowledge, so I suggested this last section of acknowledgements and explanations of the pictures he chose to include in this text.

⁵⁵2017 JSM meeting will be held in Baltimore, MD on July 29–Aug 3, 2017. For more information about this year's conference, see: <http://www2.amstat.org/meetings/jsm/2017/>.

Fig 1:

First and foremost, Fritz wants to acknowledge the importance of Dr. Arthur Kennickell of the Federal Reserve and Dr. Ivan Fellegi, Chief Statistician between 1985 and 2008 at Statistics Canada. The original picture in the introduction to this article had been a stock professional photo of Fritz when he was the 100th ASA President. However, while we were doing the final edits to this article, Fritz asked that it be exchanged for the first picture shown, so that he could acknowledge Arthur and Ivan's importance in his life.

Fig 2:

This picture was taken at Reiter's Book store, near the George Washington University, where Fritz got his advanced degrees. Featured here, right beside Fritz, are the proprietor Daphne Gaskins and the main author of this note, Dr. Katherine Condon. The reason the word "main" is used is that much of this text is based on an earlier ASA article by Megan Murphy. I would like to thank Megan for this article which gave me a starting point for developing this new text.

Fig 3:

This picture was probably taken in a Boston department store at Christmas time in 1946. The war was over and his mother, who had been sick, was well again. His father, who had been in the Army, had come home (from Europe). Who cannot love this picture of Fritz with his sister Marie and her pig tails! Apparently, Fritz was beginning to lose his baby teeth by then too.

Fig 4:

This picture was taken by Fritz's wife Elizabeth on the ferry wharf in Boston and shows his father with the Boston skyline in background. Here his two sons, are still quite young: maybe two (James) and four (John). We do not have a picture of his mother with her grandchildren. Both of his parents sadly are now long gone.

Fig 5:

This is Fritz and his wife at home with their two (now fully grown) sons. Both got Master's degrees. John, the son next to Elizabeth, has just left the Air Force and is working as a government contractor. James, next to Fritz, is teaching at the University of Texas in Austin. Both are now a little taller than Fritz. And Fritz says, "they are, like their mother, a lot smarter."

Fig 6:

This is one of the pictures of Deming, early in his career, when he was working on the 1940 Decennial Census. Deming was to play a major role in the transformative 1940 Census. That census, incidentally, now open, occurred just before Fritz was born in September 1940. The photo is courtesy of The W. Edwards Deming Institute[®]. For more information, please see: <https://deming.org/theman/overview>.

Fig 7:

Here we have three archived pictures of the early days of the SOI Program. The all white, all male managers are in the central picture. There are maybe 6 or so. These were surrounded by all females, seemingly all white clerks, on the other two pictures, maybe 80 or so. Dr. White, the first Director, is in the center of the middle picture. By the time Fritz got to SOI in 1963 he remembers that there were perhaps 400 clerks, mostly black and perhaps 70 professionals mostly white but quite a few blacks too; Lil Dorsey and Walter Craig, very good friends of his, among them. He remembers no Asians or Hispanics in those days; but that too was to change by the time he got back in 1980. [I want to, again, acknowledge the helpfulness of Emily Gross, Melissa Ludlum and Melissa Belvedere of the Statistics of Income office for finding these three pictures.] For more information about the Statistics of Income office and their publications, see: <https://www.irs.gov/uac/soi-tax-stats-statistics-of-income>.

Fig 8:

Fritz (right) told me that he was surprised to receive the Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society. Rob Rodriguez, the 2012 ASA President (pictured here) gave him the award. For more information on this prize see: <https://www.amstat.org/ASA/Your-Career/Awards/Karl-E-Peace-Award-for-Outstanding-Statistical-Contributions-for-the-Betterment-of-Society.aspx>.

Fig 9:

Fritz (left) is pictured here with Julie Belanger (one of his students who was later to go to Albania) and Patrick Ball (AAAS). It was Dr. Ball who accompanied Fritz to Albania during the Yugoslav war.

Fig 10:

Jessica Utts the 2016 ASA President is pictured giving Fritz the first ASA Mentoring Award. This, like the

Peace award, was unexpected and Fritz told me that he felt it also undeserved. Fritz would like to thank all the individuals who supported and wrote letters to the ASA Mentoring Award Committee. For more information on this award, see: <https://www.amstat.org/ASA/Your-Career/Awards/ASA-Mentoring-Award.aspx>.

Fig 11:

Finally! Fritz and the desk that his statistical hero, W. Edwards Deming, used after he left the Census Bureau. It is at the American Statistical Association offices in Old Town Alexandria Virginia. Visible is Deming's comptometer that he took everywhere he spoke. It is sitting open on the desk. When I asked Fritz what this contraption was, Fritz very knowledgeably named the machine and then added that he wrote about this machine. "In my first TAS [The American Statistician] article some years ago now, when I did history columns!" The famous red and white beads (and scupper/paddle) that Deming also used to demonstrate the need to do "systems thinking" are also visible in the picture [18]. For more information about comptometers, see: <https://en.wikipedia.org/wiki/Comptometer>

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