



Interview with Roxy Peck

Allan Rossman
California Polytechnic State University

Roxy Peck
California Polytechnic State University

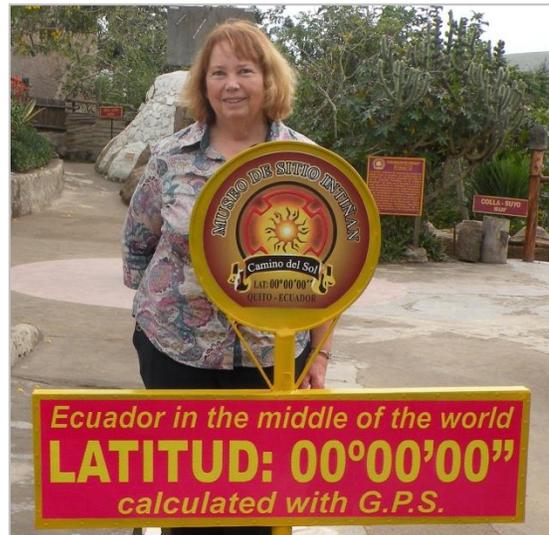
Journal of Statistics Education Volume 20, Number 2 (2012),
www.amstat.org/publications/jse/v20n2/rossmanint.pdf

Copyright © 2012 by Allan Rossman and Roxy Peck all rights reserved. This text may be freely shared among individuals, but it may not be republished in any medium without express written consent from the authors and advance notification of the editor.

Roxy Peck is Associate Dean Emerita and Professor Emerita of Statistics at California Polytechnic State University in San Luis Obispo. She is a Fellow of the American Statistical Association and a recipient of ASA's Founders Award. She received the USCOTS Lifetime Achievement Award in 2009. The following interview took place via email on May 7, 2012 – July 8, 2012.

Beginnings

AR: Hi, Roxy. Thanks very much for agreeing to be interviewed for JSE. I want to start by asking about how your interests developed in both statistics and education. Let's take those in separate questions. Which came first, your interest in statistics or education?



RP: I didn't discover statistics until my senior year in college. Even though I enjoyed mathematics in high school, it didn't occur to me to major in mathematics or statistics in college—it was during the hippie years of the late 60's and it seemed like everyone was studying political science or sociology. So I signed up as a social science major, and like all social science majors at the time, I put off my required statistics course until my senior year. By the time I discovered that I really liked statistics, I was one quarter away from graduating and wasn't about to change directions. I took a job with the State of California as a legal benefits counselor for

people who were injured on the job. Not a bad job, and typical of the kind of job that my degree in social sciences prepared me for. But after two years, I realized that I couldn't see myself working in that area for 30 years, and decided to go back to school. I originally intended to go back for a second bachelor's degree in statistics, but ended up staying five years and completing a Ph.D. in applied statistics.

One of the reasons I ended up staying for my Ph.D. is I discovered that in addition to loving statistics, I also *really* liked being a student and the university environment. In fact, if it weren't for the need to earn a paycheck, I would probably still be in school today. I worked as a teaching assistant my last few years in graduate school and also had an opportunity to teach a couple of classes at a nearby state university. I found that I really enjoyed teaching, and also realized that an academic career would give me the opportunity to stay in a university environment and was as close as I would be able to come to being a student and still get paid!

I was very fortunate to be offered a teaching position at Cal Poly, which had both an undergraduate major in statistics and a statistics department that was separate from the math department—both very unusual at primarily undergraduate universities at the time. Undergraduate statistics education was a priority there, and it was a perfect fit for me. My focus stayed on statistics education at the undergraduate level until the mid 90's when Dick Schaeffer got me involved with AP Statistics and K-12 statistics education.

AR: What were your first few years at Cal Poly like? What courses did you teach, and what was your approach to teaching?

RP: The department was fairly small then—just nine statistics faculty. There weren't many women on the faculty at the university, and none of the other full-time statistics faculty were women. In fact I was invited to join the "Cal Poly Wives Club!" But my colleagues in the department were very welcoming and created an environment that allowed me to find my own voice—something that I really appreciated.

I got to teach a lot of different courses in my first few years at Cal Poly. Because the Statistics Department taught all of the introductory statistics courses for students in other majors, a lot of the teaching was service courses for students in engineering, agriculture and business. But Cal Poly had a strong statistics undergraduate program and during my first years at Cal Poly I had the opportunity to teach a number of different courses, including sampling, nonparametrics, mathematical statistics, and to develop a course in discrete multivariate analysis.

When I first started teaching, I did the only thing I knew how to do—lecture. It wasn't until quite a few years later that I became intrigued with more active approaches to teaching. One year I went to a workshop at JSM taught by a fellow named Dick Scheaffer on activity-based learning and that same year I also learned about the idea of studio classrooms designed to allow the integration of lecture and lab experiences. That was a watershed year for me, and I really began to rethink my approach to teaching.

AR: Please tell us about some of your rethinking. What kinds of lab experiences or other activities did you begin to include in your teaching? How did you implement these activities?

RP: I started by visiting Bakersfield Community College where they had used money from a donor (described as a “spinster retired faculty member.” Note to Cal Poly: don’t ever describe me that way!) to build a statistics studio classroom that had students seated in pairs with computers at large conference style tables. I watched what they were doing with students and how engaged the students seemed to be. I also worked with Cal Poly’s Chemistry and Physics Departments who were in the process of building science classrooms that would allow the lecture and the lab component of introductory science classes to be taught in the same room so that students could move seamlessly back-and-forth between mini-lectures and science lab activities. Seeing how this might work for statistics, I then worked with Jim Daly, a colleague at Cal Poly, on an NSF proposal to equip a studio classroom and to experiment with a studio approach to teaching introductory statistics. When that grant was funded, we were able to set up the studio classroom. While we were limited somewhat by the floor plans of existing rooms that were available to us, we were able to set up a classroom that would accommodate a variety of pedagogies, including group work and lab activities. But, because of the shape of the room, what it was really not very easy to do in that room was a straight lecture, so I pretty much had to change what I had been doing entirely and come up with a pedagogy that didn’t rely on lecture.

It was a lot of work that first year, but very rewarding. I threw out all my old lecture notes and approached each class by thinking about how I wanted to use my limited class time and what I wanted students to take away from the class. I made the decision that I was going to expect students to actually read the textbook outside of class and that I was not going to spend class time on the more straightforward or mechanical things that they could get from the text. Instead I was going to use the class time for activities and brief exposition and focus on the conceptual aspects of the course content. People told me I was crazy and that students just don’t read textbooks, but I found that they didn’t read textbooks if they knew I was going to tell them what’s in the textbook when they come to class. If I didn’t do that, my experience was that they did read. (Of course a short three question quiz over the reading at the beginning of each class may have also helped!)

I also benefited from the work of others who were also moving in this direction at the time. Dick Schaeffer and colleagues published [Activity-Based Statistics](#), John Spurrier came out with [Elementary Statistics Laboratory Manual](#), and of course Allan Rossman and Beth Chance (maybe you know them...) came out with [Workshop Statistics](#). All of these resources, as well as some great technology resources that were also developed around that time, were influential in developing what I ended up calling an “eclectic approach” to teaching.

Textbook Projects

AR: Speaking of textbooks, you’re well known for the [Devore and Peck](#) text and more recently for the [Peck, Olsen and Devore](#) text. How did your involvement with authoring textbooks begin?

RP: I had not really thought about writing a textbook, but in my third year at Cal Poly, Jay Devore asked if I would be interested in co-authoring an introductory textbook with him. He had written a successful engineering statistics text and was interested in working on a second book, but didn’t want to tackle it on his own. I really had no idea what I was getting myself into or how

much work writing a textbook actually was. But Jay and I worked well together, and because his engineering book was successful, we didn't have any difficulty finding a publisher. Writing a textbook really makes you think about content and pedagogy, and I think that the experience helped to make me a better teacher as well. Our first edition was published in 1987, and we were one of the very first books to really embrace the use of real data throughout—something that I am proud of. It is much more common now, but was quite unusual at the time.

One of the dilemmas we faced in writing the book was how much probability we wanted to include and what the approach to probability should be. People were very divided on what they thought was the “correct” way to do probability in the introductory statistics course. After our third edition, we decided to do a second introductory text, the [Peck, Olsen and Devore](#) book, that was similar to our first book, but that took a more traditional approach to probability. And I guess that I must enjoy writing, because I have been working for the last several years on a new book that will be out later this year. In fact, I should be proofreading right now...

AR: Yes, I concur about how [Devore and Peck](#) embraced the use of real data throughout. I started my teaching career around that time and frequently went to your book for good examples of real data. Two follow-up questions: Back in those pre-internet days, how did you go about finding real data to include in the book? And what features other than real data do you think made Devore and Peck popular and successful?

RP: I spent about 6 hours a week for many months in the current periodicals section of the Cal Poly library. I would just pull journals and flip through them looking for interesting graphs or tables, or even just interesting article titles or journal titles. I remember coming across two journals that had titles I couldn't resist—*The Journal of Arid Environments* and *The Journal of Potato Research*. I was determined to find something I could use from those journals just so I could reference them in the book! Once I found something I thought might be useable, I would photocopy pages and take them home to try to work them into exercises and examples. It is much easier now!

Other features that I think made the book popular with many (and also unpopular with others) were that we used less formal notation and terminology than was common at the time, and we also took a less formal approach to probability.

AR: I want to ask about your new textbook project, but first let me ask about the [Peck, Olsen, Devore](#) (POD) text. How did Chris Olsen come to join your team, and are there more distinctive features to POD in addition to the different treatment of probability?

RP: I met Chris Olsen in 1998 when I became the chief reader for the AP Statistics program and started attending the meetings of the Test Development Committee. At the time, Chris taught AP Statistics in Cedar Rapids, Iowa. I was very impressed with his enthusiasm for the AP program, his knowledge of statistics, and his approach to teaching. When Jay and I started thinking about doing a second book with a more traditional treatment of probability, we decided to make the table of contents compatible with the AP Statistics course content so that the book would also be suitable for use in high schools that offered AP Statistics. We decided to ask Chris if he would join us as a co-author, and we were very fortunate that he said yes. In addition to authoring some

of the text material, he also developed extensive resources for AP Statistics teachers, many of whom were new to teaching statistics.

The main difference between [POD](#) and the [Peck and Devore](#) book is two chapters on probability. The one other difference is that the POD book also has Graphing Calculator Explorations at the end of most chapters, since the graphing calculator is the primary technology used in high school classrooms and in many community college classrooms as well.

AR: Please tell us about your latest textbook project, the one that you mistakenly believe that you should be proofreading right now instead of participating in this interview.

RP: Sorry. Did you say something? I was proofreading... This is a project I have been working on for quite a few years now, so it is great to have it nearly finished. Initially I wanted to see if I could write a text that would be accepted at community colleges. One criticism of my other books is that the required reading level is too high for many students at community colleges. One reviewer said my books have too many words, which reminded me of the “too many notes” comment in the movie *Amadeus*. I offered to take out every third word, but ... Anyway, I wanted to see if I could write something that would be viewed as accessible to students at that level. Also, I had been looking at research on students understanding of probability and became convinced that the way probability is covered in most introductory books (mine included) presents an unnecessary obstacle for many students. So I wanted to see if I could write a book that covered all of the traditional probability topics, including conditional probability and Bayes rule type problems but that avoided all of the formality and symbolism. I decided to see if I could implement a full treatment of probability without any formulas, using the hypothetical 1000 approach advocated by [Strogatz](#), [Gigerenzer](#), and others. And I almost succeeded—I did end up including the multiplication rule for independent events. I warned my editor when she sent that chapter out for review that I thought reviewers would either say “this is cool” or “What the \$#!% is this.” Fortunately, most of the reviewers were very positive about the approach.

AR: What is the title of this new book, so JSE readers can look for it?

RP: The title is [Statistics: Learning From Data](#), published by Cengage Learning.

Involvement with AP Statistics

AR: You mentioned your involvement with AP Statistics a bit earlier. How did that begin?

RP: In 1997, I talked to Dick Scheaffer, who was the first Chief Reader for AP Statistics. He was preparing for the scoring of the first exam, and he had just been informed that there would be about twice as many exams as they had prepared for. He was looking for people who were willing to come to the Reading on short notice. I didn't know much about the AP program at that point, but agreed to go. I thought I would go for one year and see what the program was about. I wasn't sure what to expect, and I thoroughly enjoyed the experience. About three weeks later I got a call from Jeff Haberstroh at ETS. When I heard the message on my answering machine, I was sure I must have messed up in some way—maybe I didn't “score consistently and according to the rubric.” But that wasn't why he was calling--instead Jeff asked if I would be interested in

the position of Chief Reader as Dick planned to serve one more year and then step down. So I spent a year “in training” with Dick and then served as Chief Reader for five years after that. I still continue to enjoy going to the Reading. I learn many new things each year I go. I think it is one of the best partnerships between K-12 and higher ed statistics faculty around, and both groups benefit from the interaction. My experience with AP Statistics is what really got me interested in statistics education at the K-12 level.

AR: For those familiar with the AP Reading, let me point out that Roxy’s meteoric rise from the role of Reader to Chief Reader-Designate in one year is a record that is very unlikely to be matched! You served as Chief Reader in years 3-7 of the program, and we recently completed the 16th year. What were some of the challenges and “growing pains” that you faced as Chief Reader?

RP: At the time I agreed to do this, we had just completed the first year and about 7500 students had taken the exam. I really didn’t have any idea what I was getting myself into. In the five years that I served as Chief Reader, the number of exams grew from about 15,000 exams to over 60,000 exams! So there were definitely some growing pains as we tried to figure out how to deal with that kind of growth. Of course, what we thought were a lot of exams at the time pales in comparison to what the Current Chief Reader (that would be you!) is managing—over 150,000 exams this year. I think that the biggest challenge during the time I was chief reader was trying to maintain the feeling of family that we had in those first few years when there were only around 50 people scoring the exams. I think that the AP program has been able to keep much of that, but I still remember being sad the first year I was sitting in the Omaha airport waiting to head home when I realized there were people there at the airport in AP Statistics polo shirts that I didn’t recognize. I think that was the year we had nearly 200 readers. But even now it still feels like family—albeit a very LARGE family. And it has been amazing and wonderful to see the tremendous success of the program.

AR: Let me press you for a detail or two: What are some of the ways that you tried to maintain the feeling of a small, personal community as the size of the AP Reading grew to include more than 200 people?

RP: Much of what I tried to do revolved around the social aspects of the reading. In particular, I worked on ways to make people who were new to the reading each year feel like they were part of the group. Dick had put a structure in place in which every reader and table leader had a partner at the reading, so as we got larger, I took advantage of that partner structure to make sure that every new reader was paired with an experienced reader who could show them around and introduce them to other people at the reading. To facilitate interaction between the high school and college readers, I also tried to pair high school readers with college readers. And for the first few years I also tried to pair people who were close geographically, but that became difficult to maintain as the number of readers got larger. During that time we also started evening programs so that there was always something going on that a new reader could participate in. We started the Best Practices night where teachers could share a favorite activity or example, and we had a very active evening social lounge. And my first year as chief reader, we started the “acorn” performance at the closing night party as a way of getting new readers working together on

something fun (acorns is the affectionate term for new readers—it is based on the College Board logo for AP, which is an acorn).

Activity with K-12 Statistics Education

AR: The acorn camaraderie continues even now that the number of acorns each year far exceeds the total number of readers at the first Reading, in no small part thanks to the “acorn skit.” You mentioned earlier that your involvement with the AP program led you into working with K-12 statistics education. I know that one way you’ve been involved with K-12 issues is the joint committee between ASA and NCTM. How did you come to serve on that committee, and what are some of the projects that you have worked on with that group?

RP: Quite a few years ago, I served as one of the ASA members on the joint committee, and also chaired that committee for two years. The ASA/NCTM Joint Committee is a very active committee and has tackled a number of major curriculum development projects over the years. During the time I was on the committee and in the years since leaving the committee, I was involved with a number of committee sponsored projects. One of the first was the development of the GAISE K-12 document. I was one of the authors who got to work with Chris Franklin, who was the lead author. I don’t think that we realized at the time how influential that document would become. After being endorsed by the ASA Board of Directors, it was used by several states as they revised their K-12 mathematics standards, and later played a big role in shaping the statistics standards in the [Common Core State Standards in Mathematics](#), which have now been adopted by almost all of the states. Later, the joint committee received one of ASA’s strategic initiative grants to produce statistics curriculum materials for a high school capstone experience. I became one of the lead authors on that project, which resulted in the ASA publication [Making Sense of Statistical Studies](#) (MSSS). MSSS is a collection of investigations organized around types of statistical studies (observational studies, surveys, and experiments) that also includes an informal introduction to inference. Like most writing projects, it took about twice as long as we thought it would to complete, but I am very happy with the way it turned out. Occasionally I still get to attend one of the joint committee meetings, and I am always impressed with the work of that committee.

AR: Did your editing of [Statistics: A Guide to the Unknown](#) also come from your work on this committee?

RP: Although the first edition of [SAGTU](#) was edited by Fred Mosteller when he chaired the joint committee, I actually got involved in the most recent edition through my association with Duxbury Press (now Cengage Learning). [SAGTU](#) is a joint publication between Cengage and ASA, and it had been more than a decade since it had been revised. In that time, many of the papers in the [SAGTU](#) collection had become a bit dated, and so there was interest in putting together a new set of papers that would maintain the spirit and vision of the earlier editions. The publisher and ASA brought together an editorial board for the project and I was asked to coordinate the project. It was a lot of fun—I got to work with a great group of co-editors and we ended up with what I think is a collection of papers that really do showcase the use of statistics in a wide variety of settings.

AR: Please tell us more about the [Common Core State Standards](#). Are you working on a project to develop some materials to help teachers to teach according to those standards?

RP: The [Common Core State Standards in Mathematics](#) are a set of national standards that most states have now adopted. States that adopt these standards also agree to use one of two national assessment tests that are currently being developed by assessment consortia. There is not a lot of statistics and data analysis in the standards for K-5, but there are a very ambitious set of standards that cover statistics and probability beginning in grade 6. These standards go well beyond what is currently being taught in K-12, especially at the high school level, where there are standards that address study design, data analysis, and even informal inference. This is something that will be a challenge for teachers. This is similar to the challenge of preparing high school teachers to teach AP statistics, but on a much larger scale. If the Common Core standards are implemented in the way they are written, every middle school and almost every high school mathematics teacher will also become a teacher of statistics. Helping teachers be successful is something that I hope the statistics community will embrace.

I have been working on a couple of projects that I hope will contribute to these efforts. Rob Gould, Stephen Miller and I just finished writing a volume for NCTM's [Essential Understandings](#) series of books. These books focus on the big ideas and related essential understandings that are important for teachers in order for them to be effective. When the series is completed, there will be 16 books in the series. Two of these will address essential understandings in statistics—one for middle school teachers and one for high school teachers. Rob and Stephen and I wrote the book for high school teachers, and Tim Jacobbe and Gary Kadar wrote the book for middle school teachers. These two volumes are in production now and will be introduced at the NCTM meeting in April 2013.

When the Common Core standards first came out, I worried that publishers of K-12 mathematics textbooks would not really understand the standards and would attempt to integrate them into their texts in a piecemeal and superficial way. So I put together a team of experienced teachers that I knew could write well (Michael Allwood, Floyd Bullard, Kathy Fritz, Brian Kotz and Chris Olsen) and we approached publishers offering to help them integrate the statistics content into their texts in a way that would reflect the standards and would be coordinated over the six years from grade 6 to grade 11. Of course, I thought this was an offer that they would find immensely appealing—how could they pass it up? But, I was surprised (maybe I was the only one) that most of the publishers were quick to claim that their materials were “Common Core Compliant” and that their algebra, geometry and middle school math authors would just add the statistics bits that were needed. Very disappointing. But the College Board, publishers of the *Springboard* middle and high school curriculum materials, was interested, and so we just finished writing 7 modules that they will be integrating into their middle school and high school texts. We are hoping that these materials will at least provide a good model for how the Common Core standards could be implemented in a coherent way across the years.

AR: What's the key to coordinating the work of six authors in a project such as this?

RP: This is always easier when you have a great team to start with, and I couldn't have asked for a better group. Also, College Board funded three in-person meetings for the group, so that

allowed us to coordinate our efforts. At these meetings we discussed plans for the modules, potential examples and applications, and how some of the standards could be implemented in curriculum materials. I think that these meetings were really important to the success of the project.

Most of us have not taught at the middle school level, and I have not taught in K-12, so it was very helpful to have people on the team that had this experience to provide advice. We each took primary responsibility for one of the modules, and each of us had a “back-up” partner who reviewed and advised as the module was being written. We worked on the middle school modules in the fall, so three of us were working as writers and the other three were in the back-up role. Once the middle school materials were done, we moved on to the high school materials, where the three who were back-up on the middle school work moved into the lead and the other three moved into the back-up role. It seemed to work well, and I think the process allowed us to provide a coherent set of materials. Of course the real test will be this fall, when they are first used in the classroom.

AR: And speaking of large, multi-author projects, tell us a bit about your work with the [STATway project](#).

RP: [Statway](#) is a very ambitious project that is the brainchild of Uri Treisman at the Dana Center at the University of Texas. In a nutshell, the idea is to teach developmental mathematics topics as needed in the context of the community college introductory statistics course. The traditional developmental mathematics sequence at most two- and four-year colleges has been shown to be a major obstacle for students who place into developmental mathematics—sometimes consisting of as many as three semesters of mathematics review before the students who make it through the sequence are allowed to enroll in a college-level mathematics course. The vast majority of students who start down this path do not complete the sequence and as a consequence are blocked from completing an academic degree.

Based on research at community colleges, Uri became convinced that this one-size fits all approach to mathematics remediation was a major contributor to the problem. Because it was the *only* path for all students, the content was geared to getting students ready for pre-calculus and calculus. However, Uri’s research showed that a very large percentage of the students who place into developmental mathematics are enrolled in programs that do not require calculus and that meet mathematics requirements by requiring an introductory statistics course. Success in introductory statistics requires some basic mathematical skills, but it doesn’t require some of the things that were preventing students from completing the traditional developmental mathematics sequence, such as factoring trinomials.

Uri decided to advocate for a multiple pathways approach to developmental mathematics, and Statway is one of those pathways, designed for students who will fulfill their mathematics requirements by taking introductory statistics. The focus is primarily on the mathematics topics required for success in statistics, and these are integrated into the introductory statistics course, so that students see the need to learn the mathematics and see immediately how the mathematics supports their learning of statistics. The idea of Statway is that it would be taught over the course

of a year, and at the end of that year, the student would have fulfilled their developmental mathematics requirements and also have credit for the college level introductory statistics course.

Sorry for the long intro, but I didn't think I could answer your question without first describing Statway! My involvement with Statway came when I was invited to join the Statway development team. Uri had partnered with the Carnegie Foundation to develop learning outcomes for the Statway course and an initial set of curriculum lessons for a pilot course. I served on the development team and also worked with a large team of statistics authors to produce lessons. Unlike the *Springboard* project we were just talking about, this project was more chaotic and frustrating, primarily due to the magnitude of the project and an overly ambitious timeline. A set of lessons were produced and then a new team of folks came in to revise and rewrite the lessons. Nineteen community colleges piloted the program this last year, and these same colleges will use what they learned and work as a community to improve the lessons.

Uri and the Carnegie Foundation are now each pursuing different ways forward—the Carnegie Foundation is working on its networked improvement community and Uri is beginning work on a separate Pathways project that will revise and promote a Statistics pathway, as well as a Quantitative Literacy pathway, and a STEM pathway for students who are preparing for a STEM academic program. Over the next year, I will be working with Uri and the folks at the Dana Center on the Pathways project, and I am looking forward to that work. I think the original vision behind Statway opens academic doors for a large group of capable students, and I think that the potential for success is huge. And, to be honest, I love working with Uri and would probably try to hitch my wagon to any train he was driving!

Work in Academic Administration

AR: Let's return closer to home for the next few questions. You spoke earlier about your first few years at Cal Poly and how you were inspired to rethink your teaching approach and to embark on textbook writing projects. You eventually moved into administrative roles, first as department chair and then as associate dean. What sparked your interest in academic administration, and did you find those experiences to be rewarding?

RP: Early on, I didn't really see myself in an administrative role. I enjoyed teaching and working on the textbooks. When Jim Daly, who had been the chair of the Statistics Department for some time, decided to step down from the chair position, no one else in the department was interested in taking on that position. That was how I discovered that saying "I will do it if no one else will" is the same thing as saying yes. But in spite of the fact that I really just stumbled into the position, I found that I did really enjoy the job (well, most parts of the job). It helped that we were a small department with a faculty that got along well.

I stayed in that position for six years until the Associate Dean position opened up. As chair I had the opportunity to work with our dean and found that we had very similar values and priorities, so I knew that I would enjoy working with him in the role of Associate Dean. With that position, I think I discovered my administrative niche. My responsibilities at the college level included curriculum, assessment and facilities. As a part of the facilities work, I got to work closely with

architects and campus planners on the design of the Cal Poly's new science building. That was a lot of fun, and I got to learn way more about the workings of chemistry labs than I ever would have imagined! I was Associate Dean for 13 years, until I retired from Cal Poly.

AR: Cal Poly's Statistics Department is no longer as small as when you were department chair. We now number 18 tenured and tenure-track statisticians, despite not having a graduate program in statistics. What do you think has been the key to the growth and success of the department?

RP: Well, part of the growth is attributable to growth at the university level and also the growth of the undergraduate major and minor in statistics. But I think that it is also more than that—I think that we have hired well and are really good at what we do. In terms of hiring, we have been fortunate to bring in people with a passion for teaching and a real interest in undergraduate education. I think that “back in the day” we had a solid program and a good faculty. But the new faculty that have joined the department over the last two decades have really strengthened the academic course offerings and helped to create what I believe is one of the best undergraduate statistics programs around. So I think that the success of the department is really a function of the students and faculty that make up the department.

Pop Quiz

AR: Now we begin what I'll call the “pop quiz” segment of the interview, where I'll ask very specific questions and will ask you to limit your responses to 2-3 sentences per question. First, what hobbies do you have outside of statistics and education?

RP: I love to travel when I can find the time, and I also enjoy reading—my favorites are mysteries set in the southwest. I also collect Navajo rugs, most of which I have purchased at the monthly Crownpoint rug auctions on the Navajo reservation.

AR: What are 1-3 books that you've enjoyed reading in the past year?

RP: My favorite recent reads are the books in the *44 Scotland Street* series by Alexander McCall Smith. They are quirky and entertaining.

AR: That was a quick jump from the southwest U.S. to Edinburgh, Scotland. What are 2-3 of your favorite places that you have traveled? Maybe you could mention one place that you've traveled for professional reasons and one that was purely for pleasure.

RP: My favorite place in the U.S. is the north rim of the Grand Canyon. My grandfather helped to build the lodge there and spent summers in the canyon working the pump station at Roaring Springs. When we were kids we spent a lot of time at the canyon and I worked there for three summers while I was in college. For a professional trip, it is hard to top the trip to South Africa for the International Conference on Teaching Statistics in 2002. The conference was great, and about 20 of us did an amazing safari trip after the conference that has to be one of my top three trips of all time. My most exotic purely pleasure trip was a trip to Antarctica. The scenery just doesn't get any more spectacular than that.

AR: Please tell us a bit about your family.

RP: I never married and don't have any kids (although Beth Chance was mistaken for my daughter once when we were traveling together—that hurt because I didn't think she was THAT much younger than me!). My sister Lygia lives in San Luis Obispo and works at Cal Poly as a systems analyst, so I get to see her often. My brother Kyle lives in Pennsylvania and is on the faculty at Penn State. We all seem to have gravitated to academic careers.

AR: Other than your previously expressed interest in the Journal of Potato Research, name something that JSE readers will probably be surprised to learn about you.

RP: I don't have any tattoos. And I do have the complete collection of Rocky and Bullwinkle shows. They just don't make shows like that any more!

AR: I'm not sure that your lack of tattoos will come as a surprise, but that's for readers to judge. Let's return to a travel-related theme, and I promise that this will be my most fanciful question of the interview: Imagine that you can have dinner for four with anyone you'd like, anywhere in the world. Who would you invite, and where would you go?

RP: This is a tough one. For people I think my three guests would be President Obama (because he is a president who could actually carry on an intelligent conversation and because then we could probably fly to dinner on Air Force 1), comedic folk singer Christine Lavin (because I have always loved and identified with the songs she writes and I am sure that we would become bff's if we could only meet), and Sean Connery (because I have always had a little crush on him). For a place, I think I would choose Prague because it is somewhere I have wanted to go for a long time, but haven't made it there yet.

AR: What was your favorite course to teach?

RP: Of the courses for statistics majors and minors, I always enjoyed teaching the sampling course. It was fun to find group project topics, and I was usually able to tie class projects into community or local business needs. Of the service courses, I enjoyed teaching the general education statistical literacy course.

AR: The theme of the USCOTS conference held last year was "the next big thing." What do you think the next big thing in statistics education is?

RP: I think that the next big thing (or at least one of the next big things) in statistics education will be rethinking how K-12 and undergraduate education will work together to achieve the goal of statistical literacy for all. As the impact of the new K-12 Common Core State Standards for Mathematics becomes clearer, it will be really important for K-12 and higher ed to work together in a coordinated way.

Parting Thoughts

AR: *Thanks very much for taking the time to answer my questions. I'm confident that JSE readers will enjoy reading about your career and viewpoints, and I hope that your proofreading got done along the way. My next-to-last question is: Among your many accomplishments in statistics education, which one (or two, if you insist) are you most proud of?*

RP: Thanks for giving me an easy question here near the end. I would say that I am most proud of the textbooks (which is a good thing, given how much time they have taken!).

AR: *And they've had a huge impact, and will continue to, on hundreds of thousands of students and thousands of instructors. My final question is perhaps an easy one also, but I believe an important one: What advice do you have for JSE readers who are fairly new to statistics education?*

RP: Surround yourself with good people! You will learn from them and they will inspire and motivate you. Don't be afraid to reach out to others who share the same interests, and seek out opportunities to collaborate and exchange ideas. And whenever you can, go to meetings and conferences like USCOTS, ICOTS and JSM—they are great places to meet colleagues and expand your professional circle.

References Cited in the Interview

Common Core State Standards Initiative, www.corestandards.org

Gigerenzer, G. (2002), in *Calculated Risks* (Chapter 4), Simon and Schuster.

Kadar, G. and Jacobbe, T. (2013), *Essential Understandings in Statistics for Grades 6-8*, National Council of Teachers of Mathematics.

Mathway Project, www.utdanacenter.org/mathways

Peck, R. (2014), *Statistics: Learning from Data*, Cengage Learning.

Peck, R., Casella, G., Cobb, G., Hoerl, R., Nolan, D, Starbuck, R. and Stern, H., editors. (2006), *Statistics: A Guide to the Unknown*, Duxbury Press.

Peck, R. and Devore, J. (2012), *Statistics: The Exploration and Analysis of Data*, 7th ed., Cengage Learning.

Peck, R., Gould, R. and Miller, S. (2013). *Essential Understandings in Statistics for Grades 9 – 12*, National Council of Teachers of Mathematics.

Peck, R., Olsen, C., and Devore, J. (2012). *Introduction to Statistics and Data Analysis*, 4th ed., Cengage Learning.

Peck, R. and Starnes, D. (2009). *Making Sense of Statistical Studies*, American Statistical Association.

Rossman, A. and Chance, B. (2012). *Workshop Statistics: Discovery with Data*, 4th ed., John Wiley and Sons.

Scheaffer, R., Watkins, A., Witmer, J., and Gnanadesikan, M. (2004). *Activity-Based Statistics*, 2nd ed., John Wiley and Sons.

Springboard, www.collegeboard.com/Springboard

Spurrier, J., Edwards, D., and Thombs, L. (1995). *Elementary Statistics Laboratory Manual*, Duxbury.

Statway Project, www.carnegiefoundation.org/statway

Strogatz, S., “Chances Are,” *The New York Times*, April 25, 2010.

[Volume 20 \(2012\)](#) | [Archive](#) | [Index](#) | [Data Archive](#) | [Resources](#) | [Editorial Board](#) | [Guidelines for Authors](#) | [Guidelines for Data Contributors](#) | [Guidelines for Readers/Data Users](#) | [Home Page](#) | [Contact JSE](#) | [ASA Publications](#)