Interview with Jackie Dietz

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Beginnings

AR: Hi, Jackie. It's a real privilege to begin this new feature by interviewing the founding editor of JSE. *Let me start by asking about your choice to devote so much of your professional life to statistics education. Please comment on both of these words: statistics and education. What led you to pursue a career in statistics, and then how did you come to focus your attention on teaching and education?*

JD: My path to statistics was a bit circuitous. I always liked math and knew from an early age that I would major in math in college. I did complete a math major at Oberlin College, but during my last couple of years there, I became a bit disillusioned with the more theoretical math courses I was taking and decided I should pursue something more "relevant." That would have

been an obvious time to pursue statistics, but I didn't know anything about statistics then. The only stat course I took at Oberlin was a mathematical statistics course out of Hogg and Craig. I knew nothing about statistical methods, and, sadly, the math stat course was pretty much lost on me. My last two years of college I added a second major called psychobiology (since renamed neuroscience). I enjoyed my courses in biology and psychology and decided to pursue that direction after graduation. I entered a graduate program called Biobehavioral Science at the University of Connecticut. During my first year of graduate school, I took my first couple of applied statistics courses. It was quite a revelation to discover that the math I still enjoyed could be used to analyze interesting scientific problems! I realized finally that statistics was the perfect way to combine my interest in math with my desire for "relevance," and I transferred to the Ph.D. program in statistics.

When I finished my Ph.D., I applied for only academic jobs. I don't really remember making a conscious decision to pursue an academic career; I think I just always enjoyed being on a college campus! I accepted a faculty position at North Carolina State University and stayed there for 26 years. I have always enjoyed teaching and certainly always tried to do a good job of it, but early on I'm sure I didn't think of statistics education as my focus. Looking now at my list of publications, there is an obvious shift over the years from articles on multivariate nonparametric tests, the area of my Ph.D. dissertation, to work related to teaching statistics. In 1989, I published a paper in *The American Statistician* called "Teaching regression in a nonparametric statistics course," probably my first foray into statistics education as an area of scholarly activity. The real turning point for me, however, occurred in the early 1990's. As part of a strategic planning effort by the Department of Statistics at NC State, we discussed the possibility of starting a new journal in statistics education. After much discussion and information-gathering, we decided in 1992 to take the plunge, and I found myself the editor of the new *Journal of Statistics Education*. During my years as *JSE* editor (1992–2000), most of my time and energy were devoted to the journal. Since then, nearly all of my professional activities have revolved around statistics education.

Founding of *JSE*

AR: Can you say more about what led to the interest in starting a statistics education journal at NC State? How did that discussion begin? Were lots of folks at NC State interested in education and in scholarship related to education?

JD: Dan Solomon, the Head of the Department of Statistics at the time, was certainly interested in statistics education, and there were many other faculty members in the department who were interested in improving the teaching of statistics. In 1989, we had hired Tim Arnold as supervisor for our new Statistics Instructional Computing Laboratory, and he and others were exploring ways to increase the use of technology in our teaching. As we considered possible new initiatives for the department, we realized that there were few prestigious places to publish work on the teaching of statistics, particularly at the college or university level. We felt that the lack of publication outlets discouraged statisticians from investing time and energy in the scholarship of teaching. From our earliest conversations about starting a journal, Tim encouraged us to think about making the journal electronic. This was a novel idea at the time, but we were intrigued by the possibilities for innovative content that the electronic medium

would give us. In May of 1992, we held a workshop at NC State to discuss the feasibility of starting a new journal in statistics education. The 22 participants included statisticians from large and small institutions, representatives of professional organizations in statistics and mathematics, the director of the NC State libraries, an expert on electronic communication, and the editor of *Postmodern Culture*, a successful electronic journal that had also begun at NC State. I met Joan Garfield for the first time at that workshop! At the workshop, it was decided that NC State would take the lead in establishing a rigorously refereed electronic journal on teaching statistics.

AR: That 1992 workshop must have been great fun. Can you tell me more about the discussions at that workshop? Did everyone think that starting JSE *was a good idea? Were there lots of different ideas about how to proceed? Oh, and feel free to drop more names in addition to Joan's!*

JD: The two-day workshop was preceded by a lot of e-mail discussion among workshop participants and others who were invited but did not attend. Fortunately I'm somewhat of a packrat, and I have a folder with printed copies of all of those e-mails. It makes for interesting reading after 19 years! There was a lot of discussion early on about whether a new journal would duplicate or compete with the existing publication outlets, which were primarily the Teacher's Corner of *The American Statistician* and the British journal *Teaching Statistics*. Some felt that we should try harder to take advantage of those and other existing outlets before considering a new journal. David Moore did not attend the workshop, but he wrote in an e-mail, "I do want to go on record as being very dubious about the wisdom of starting such a journal." David's concerns were shared by others; he thought that the area of statistics education at the college level was too narrow "to ensure a flow of quality papers" and that "people like us" (statistics teachers) would tend to write anecdotal reports rather than high quality educational research papers. He also expressed concern that there were already too many journals, making it unlikely that a new journal would succeed. Ann Watkins (who also did not attend the workshop) was an early skeptic regarding the electronic format, saying "I'm a firm believer…that most anything can be done over e-mail, except journals." It's important to mention that once the decision to start the journal had been made, both David and Ann served on the first Editorial Board. In addition, David helped us immensely by interviewing Frederick Mosteller for the inaugural issue (http://www.amstat.org/publications/jse/v1n1/moore.html).

The discussion at the workshop covered a lot of ground – the demand for a journal, the target audience, proposed content, refereeing guidelines, the electronic format, the composition of the editorial board, ownership of the journal, funding, and copyright issues. I don't remember whether we settled on the name of the journal at the workshop or soon after, but Dan Solomon sent an e-mail to workshop participants in July 1992 containing a "Proposal to Found an Electronic Journal: Journal of Statistics Education." I know we debated whether to include the word "electronic" in the journal title. By the way, according to the Director of Libraries at NC State, there were only about a dozen refereed electronic journals in existence at that time. But fortunately we had the foresight to realize that *Electronic Journal of Statistics Education* would one day sound as silly as *Paper Journal of Statistics Education*! As far as dropping names, the list of workshop participants is pretty impressive! There is substantial overlap between the list of

participants and the list of members of the 1993 Editorial Board at http://www.amstat.org/publications/jse/v1n1/edboard93.html.

AR: What were some of the challenges that you faced in getting the journal off the ground?

JD: As predicted by David Moore, one of the early challenges was to generate a flow of high quality submissions. The proposal distributed by Dan Solomon claimed that issues of *JSE* would appear quarterly. It quickly became clear that that was overoptimistic! The first issue, which appeared in July 1993, consisted entirely of invited papers. I think we assumed that once potential authors became aware of the journal, submissions would follow. A full year elapsed before the second issue appeared in July 1994. So the 1993 volume contains just one issue and the 1994 volume contains two. Since 1995 there have been three issues a year in March, July, and November. Another huge challenge from the start was figuring out how to handle the technical aspects of an electronic journal. It's hard to imagine now, but we started *JSE* before the days of widespread access to the World Wide Web! The first few issues were prepared as plain text files and were sent to readers by e-mail. At the end of 1994, we announced that *JSE* was available on the World Wide Web and recommended the web browser Mosaic as the best method for accessing the materials. We continued to produce both a plain text version and the html version for several years in an attempt to keep the journal as widely accessible as possible.

AR: Did reactions pour in as the first few issues were published? Were you hearing from folks that you had never met who became interested in JSE*? Did you have many negative reactions, or do you recall any particularly striking reactions from that first year or two?*

JD: I really don't remember negative reactions to the early issues. As I mentioned before, there had been some early skepticism about the need for the journal and about the electronic format, but once we got started, people wanted to get involved. We tried to advertise widely in various newsletters and other publications, and we actively solicited referees. Lots and lots of people offered to help with refereeing, and a few people I had never met expressed interest in serving on the Editorial Board. I definitely met a lot of new people during those early years. There were a few Editorial Board members and many, many referees with whom I exchanged dozens of e-mails without (or before) ever meeting in person.

AR: Can you tell us about how JSE *became an official publication of ASA? Did you approach ASA about that, or were you approached by ASA? Would you cite that development as a turning point, when you became confident that* JSE *had gotten over the hump and would be around for the long haul? Or did that point come later? (I'm assuming that you think this point has been reached by now, as* JSE *approaches its 20th anniversary!)*

JD: Funding for *JSE* was an issue and a dilemma from the time we began. A three-year grant from the Fund for the Improvement of Postsecondary Education (FIPSE) from 1993 to 1996 provided some release time for Tim Arnold (the Managing Editor) and me, salary for our Editorial Assistant, and miscellaneous software, hardware, and supplies. I remember that I first met you, Allan, at a FIPSE Project Directors meeting, where I heard you talk about Workshop Statistics. I think you and I were the only statisticians with FIPSE grants at that time.

By 1995, as the end of the FIPSE grant approached, we initiated conversations with both the American Statistical Association (ASA) and the International Statistical Institute concerning possible sponsorship of the journal. Those discussions went on for years, during which our FIPSE grant and a year-long no-cost extension ended. We were fortunate to receive a grant from the Exxon Education Foundation that supported our Editorial Assistant for the 1997-98 academic year. Finally, after several years of discussion and negotiation with the ASA, the ASA Board of Directors voted in August 1998 to make *JSE* an official ASA publication, effective January 1999.

It was certainly a relief to reach an agreement with the ASA. For me, one of the best things about the transition was that ASA sponsorship brought with it an established process for editorial succession! I continued to serve as editor for two more years (1999 and 2000) under ASA sponsorship, but the search for a new editor was initiated by the ASA in early 2000. I think that for me that turning point (when I realized *JSE* would actually make it) was when I learned that Tom Short had agreed to serve as the next editor. It was such a relief to find out that someone I really liked and trusted was willing to take on the project to which I had devoted eight years of my life. I knew that *JSE* would survive and flourish under Tom's editorship.

AR: Do you have a favorite article or two from JSE*, perhaps from the early years, that you would like to draw readers' attention to? Or is that a completely unfair question, like asking a parent to pick their favorite child?!*

JD: It would be very hard to choose just one or two! The interview between David Moore and Frederick Mosteller in v1n1 certainly stands out as special. I especially liked some of the early articles that took advantage of the electronic medium and included material that could not be published in a print journal. The Datasets and Stories article "Teaching Statistics with Data of Historic Significance: Galileo's Gravity and Motion Experiments" by David Dickey and Tim Arnold in v3n1 contains a little movie of a ball rolling down a ramp. That seems fairly mundane now, but we thought it was quite innovative at the time. Carl Schwarz's article "StatVillage: An On-Line, WWW-Accessible, Hypothetical City Based on Real Data for Use in an Introductory Class in Survey Sampling" in v5n2 allows a student to sample dwellings by clicking on a map of a hypothetical city. A perl script extracts records for the chosen dwellings from a file of actual census data and returns the records to the student for analysis. I believe that "Interactive Demonstrations for Statistics Education on the World Wide Web" by Webster West and Todd Ogden in v6n3 was our first article that included applets. On a different note, there are several Datasets and Stories articles that contain datasets that are perpetual favorites of my students for class projects. Those include "Using Cigarette Data for an Introduction to Multiple Regression" by Lauren McIntyre in v2n1, "The Statistics of Poverty and Inequality" by Mary Rouncefield in v3n2, and "Pricing the C's of Diamond Stones" by Singfat Chu in v9n2.

Teaching at NC State and Meredith College

AR: I reread that Moore-Mosteller interview in preparing for talking with you, and I agree that it's very informative and entertaining. I believe that ours is the first interview to appear in JSE *since then. I'd like to keep asking about the early days of* JSE*, but I also want to ask about your own teaching experiences, and your mention of students working on class projects provides a*

good segue. Can you give us a sense for the kinds of courses you taught and students you worked with at N.C. State?

JD: I taught at NC State for 26 years, and I taught a lot of different courses. But there are four that stand out for me, I guess. I developed two new courses early in my years at NC State that are still being taught. ST 101, Statistics by Example, is the required first stat course for undergraduate statistics majors. I used David Moore's *Statistics: Concepts and Controversies* as the text and tried to incorporate a lot of examples from the newspaper and popular press. I remember doing things like simulating the Monty Hall problem and capture-recapture estimation of population size in that course; it was always fun to teach. The other course that I developed was ST 505, Applied Nonparametric Statistics. My original area of research interest was nonparametric statistics, and this was probably my favorite course to teach at NC State. The students taking the course were roughly one third each undergraduate statistics majors, Masters of Statistics students, and graduate students from other departments. That mix of backgrounds was sometimes challenging, but I enjoyed the fact that the different groups brought different strengths to the class. The statistics students obviously had more statistics background than the students from other fields, but the students from other departments had more experience with data and could more easily think of applications for the methods they were learning. Two other courses that were staples for me at NC State were ST 507 and 508, Statistics for the Behavioral Sciences I and II. That two-semester sequence was taken by graduate students from education, public administration, parks and recreation, and other behavioral science programs. Many of the students were very anxious about taking the course, and I worked to build their confidence in their ability to master the material. I think I had a pretty good rapport with those students, and I always enjoyed teaching those courses.

AR: Did your teaching style, or your overall approach to teaching, change much over those years? Even if not, can you tell us something about your "teaching philosophy," to use a term that has become quite common?

JD: I always find it intimidating to be asked about my teaching philosophy because I don't feel like much of a philosopher! I've been teaching statistics for 33 years, and my teaching methods have certainly changed over that time in fairly predictable ways. The most dramatic changes have resulted from changes in technology. I once expected students to carry out hand computations that I would never ask them to do now; I certainly emphasize concepts more and calculations less than I once did. I have always tried to use real data in my teaching, but it is easier now to find interesting datasets, and it's feasible to analyze datasets of realistic size.

Throughout my career as a statistics teacher, I have encountered students who expected a statistics course to be boring, difficult, and irrelevant to their lives. So I guess my teaching philosophy (if I have one) is to try to convey to students who are expecting the worst from their statistics course that the field is exciting and important and that it will be useful to them in their everyday lives. I want students to have confidence in their ability to solve problems that are not exactly like other problems they have solved previously, and I want them to be able to assess whether their answers to problems make sense. I want them to remember their statistics course as one that was useful and interesting and maybe even fun.

AR: Those are very commendable goals. If you don't mind my pressing a bit further, I'll stay away from philosophy, but how do you go about instilling that sense of confidence in your students, and that realization that statistics can be useful and even exciting and fun? Perhaps you can give us an example or two of how you try to achieve those goals?

JD: I have found that often students are apprehensive about taking statistics because of bad experiences they have had in previous math courses. Particularly at Meredith College, where I now teach, students tend to think of statistics as a math course because it is taught by the math department and has a math course number. While I don't want to say anything negative to students about taking math, I do try to convince certain students that a statistics course is quite different from an algebra or calculus course, and that they may find it better suited to their interests and strengths. I emphasize that reading and writing and drawing sensible conclusions will play a more important role in the class than will manipulating formulas or doing calculations. I have also found that different kinds of assignments appeal to students with different academic strengths. At NC State, in the ST 101 course, I gave an "Article Collection" assignment in which students collected articles from the newspaper or popular press that illustrated certain ideas we had talked about in class. For each article, they answered a particular question or explained how a statistical concept was used. I found that some of the best Article Collections were assembled by students who had not performed particularly well on exams. That assignment seemed to resonate with students who actually read the newspaper on a regular basis and enjoyed writing about how ideas from class were used in fields of interest to them. So obviously having a variety of different kinds of assignments can increase the chance of reaching students with different aptitudes and interests. Of course, I also try to use a wide array of examples to show students that the concepts and methods they are learning can be applied to almost any area of interest.

AR: Speaking of Meredith College, you made a very big move a few years ago, big in every sense except geographically. While you're still in Raleigh, you went from the Statistics Department in a very large, public research institution, one of the biggest programs in the country for Ph.D.'s and Masters' degrees in Statistics, to the Mathematics Department of a small, private, liberal arts college for women. I remember discussing this possibility with you at the time, because I had made the opposite move: from a Mathematics Department in a liberal arts college to a Statistics Department at a mid-size public university. Can you say a bit about the motivation behind your interest in making such a mid-career change?

JD: I had not really been thinking of making a move, and I was certainly not job hunting. But I heard through the grapevine that Meredith College was conducting a search for a statistician. I have always had an affinity for small colleges; I attended Oberlin, and both of my sons have now graduated from small schools. I realized that this position at Meredith might be my only real chance to ever experience teaching at a small school. The fact that Meredith was a women's college was appealing to me, and its location (one mile from NC State) meant that I could change positions without disrupting other aspects of my life. The more I learned about Meredith, the more appealing the position seemed.

As we've discussed already, over the years, my interests had shifted away from research in nonparametric statistics toward statistics education. I had also become quite active in the ASA,

both in the Section on Statistical Education and in the Council of Sections, and I held editorial positions with both *JSE* and *STATS*. While NC State naturally placed considerable emphasis on research, publication, and grants, I was spending most of my time on activities related to teaching and service. So, increasingly, I had felt that my interests and talents were at odds with the priorities of a large research university. Meredith, on the other hand, emphasizes teaching over all other activities. Meredith's "Faculty Role Model" specifies that faculty members are expected to make contributions in the areas of effective teaching, advising and mentoring, service, and professional involvement. Professional involvement is broadly defined and includes the kinds of editorial and service activities that I had come to enjoy.

I also found that Meredith offered very attractive facilities for teaching. The Department of Mathematics and Computer Science is housed in a new Science and Mathematics Building that had been completed just a few years earlier. All classrooms are equipped with computer projectors and document cameras, and all Meredith students receive laptops with a common load of software that includes Fathom and SPSS. I realized that it would be easier to incorporate technology into my teaching at Meredith than it had been at NC State. So, while it was scary to think of moving from NC State after 26 years, I applied for the job at Meredith.

AR: So, how has it turned out? Has teaching at a small college been as rewarding as you had hoped? What kinds of new challenges have you encountered? What do you miss about NC State? (Sorry, I know that's several questions in one, but I think your perspective on these issues can be very helpful to junior faculty, and perhaps senior faculty as well, who are making decisions about what kind of faculty position might be best for them.)

JD: Meredith has certainly turned out to be a good fit for me. I very much enjoy teaching small classes; our classrooms hold a maximum of 32 students, and many of our upper level courses are much smaller than that. I get to know all of my students to some extent and many of them quite well. Our laptop program and technology classrooms have enabled me to use technology nearly every day in every class, just as I had hoped.

I am fortunate that Meredith has quite a few different statistics courses so that I have a good bit of variety in what I teach. Since my arrival here, we have introduced a new required stat course for math majors. The college has also adopted a new General Education program that requires every Meredith student to take either Statistics I or Calculus I, so we are teaching 7 to 9 sections a semester of our Stat I course. Each year we have a small group of students who complete a statistics minor. So I think I have played a role in increasing the number of Meredith students who are exposed to a stat course during their college years.

The biggest challenge I have faced at Meredith is serving as head of the Department of Mathematics and Computer Science. I came to Meredith knowing it was likely I would eventually serve in this role, but I think I underestimated how stressful and time consuming it would be. I have now completed seven years at Meredith – four as head. I have agreed to continue as head for one more year and look forward to becoming a regular faculty member again after that.

The teaching load here has been a bit of a shock. At NC State, my usual load was two courses a semester, and I always had a graduate student grader who graded homework for me. The load at Meredith is 21 credit hours a year – typically three courses one semester and four the other – and there are no graduate student graders. As department head, my load is reduced by one course per semester. Some semesters I spend more time grading here than I did at NC State, despite the smaller class sizes.

Other Professional Activities

AR: Let's shift gears again and talk about some of your other professional activities. You and I have worked together with ASA's Council of Sections and with the AP Statistics program. Let's start with the Council of Sections. How did you get involved with that, and how would you describe that experience?

JD: My very first encounter with the Council of Sections (COS) was not very successful. In 1997, I agreed to be a candidate for the office of 1999 Chair-Elect. I was chagrined when I saw the ballot to discover that I was running against my colleague and former department head Dan Solomon! I was not at all surprised when Dan won that election. But I had another opportunity for involvement when I was asked in 1999 to run for a three-year term as Vice-Chair for 2001–2003. I did win that election, and after that three-year term as Vice-Chair, I served for three more years as Chair-Elect (2004), Chair (2005), and Past Chair (2006). You served as COS Vice-Chair from 2005–2007, so we overlapped by a couple of years.

I really enjoyed my six years on the Council of Sections. My previous involvement in the ASA had almost entirely revolved around the Section on Statistical Education. So for me, a Section very much provided my "home" within the ASA. Because of that, I have always felt that most of the action in the ASA takes place in the Sections, so becoming involved with the Council that oversees the Sections made perfect sense for me. I am always surprised when I hear that a substantial proportion of ASA members do not belong to a single Section, because I have found the Stat Ed Section to be such an important group for social and professional networking.

The most interesting project that I remember working on during my term as COS Chair was the allocation of invited sessions to Sections for the Joint Statistical Meetings (JSM). The total number of invited sessions allocated to the Sections had increased, and the COS Governing Board was asked to develop a method for fairly allocating those sessions to the Sections. We spent a lot of time investigating variables like Section membership, Section attendance at the JSM, and various measures of Section activity at the JSM on which our recommendations could be based. I still have a large number of e-mail messages from the summer of 2005 with the subject line "Summer data analysis project" in which we discussed various rank-based methods for doing the allocations. I remember that it was quite fun to actually use statistical methods to make a recommendation on an issue of importance to the Sections!

AR: Another professional activity that you have devoted a good bit of time to is the grading of Advanced Placement exams in Statistics. Do you consider that to be service to the profession, or is that a valuable experience for your professional development, or both, or neither? What is your motivation for participating in the AP program?

JD: This will be my tenth year of grading AP Statistics exams. I guess that when I began, I might have thought of this as service to the profession. My son Adam had a positive experience with AP Statistics as a high school senior in 2000–2001. I applied to become a reader soon after that, maybe partially thinking that it would be a way to "give back." But I'll confess that I had been hearing from friends for several years that the readings were great fun, so I probably had other motivations as well! At this point, I'd say my motivations are more selfish than altruistic. I have learned a lot from the AP readings about grading in general and about using rubrics in particular, so it has definitely been a professional development opportunity for me. I continue to be impressed by how well the rubrics really work to ensure consistency in grading, and I particularly enjoy having the opportunity to teach others to use the rubrics. I also really enjoy the reading as an opportunity to get away from my regular routine and to spend time with both old and new friends; I describe the reading to friends as "summer camp for statistics teachers"!

AR: Thanks for making the AP Reading sound so appealing. That's terrific that you find lots of benefits for yourself, but I also think you and others who participate are performing a valuable service not only to those students but also to our profession. I'll take this opportunity to encourage those reading this interview to consider applying to be an AP Reader at the collegeboard.org website.

"Pop Quiz"

AR: Now let's begin what I'll call the "pop quiz" portion of this interview. I'll ask a series of short questions and request that you give a quick and brief response of no more than two sentences. First, what hobbies do you have outside of statistics and education?

JD: I like to read mysteries (mostly by female authors about clever and intrepid female characters), knit and crochet, swim, and do sudokus. I also love to walk on the beach and collect shells and sea glass.

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

JD: An author I've discovered fairly recently is Lisa Unger. I especially liked her first two books, *Beautiful Lies* and *Sliver of Truth*, which are about her character Ridley Jones, a New York writer.

AR: What are 2-3 of your favorite places that you have traveled? Maybe you could mention one place that you've travelled for professional reasons and one that was purely for pleasure.

JD: My all-time favorite trip was to Marrakech, Morocco, for the 1994 International Conference on Teaching Statistics. My husband and I took a wonderful vacation in Maine during the summer of 2008 during which we stayed at several different Bed & Breakfasts and ate a lot of lobster. We also visited a friend of mine from 7th grade who lives on a little island called Vinalhaven, 12 miles off the Maine coast.

AR: Speaking of your husband, please tell us a bit about him and your sons. (I'll extend the restriction to 3 sentences.)

JD: My husband Richard and I just celebrated our 32nd anniversary; he has a Ph.D. in biomathematics from NC State and works as a statistician at SRA International, Inc. My older son Adam just finished his Master of Statistics at NC State, having previously obtained a BA in biology from Earlham College and an MS in biology from UNC-Greensboro; he is currently in the Netherlands taking a belated honeymoon with his wife of nearly two years, Katelijne van Drongelen. My younger son Evan graduated two years ago from Elon University with a BS in computer science; he works as an Application Programmer for the Nutrition in Medicine program at UNC-Chapel Hill, developing and maintaining a website that provides nutrition information for practicing physicians.

AR: Congratulations on your anniversary and on your sons' accomplishments. Now let's pretend that I'm arranging for a lavish dinner and opportunity for hours of lively discussion for you and three other statistics educators. While we're dreaming, I'll even arrange for the dinner to be held in Marrakech in honor of your favorite conference destination. Who would you like me to invite to join in this dinner and discussion?

JD: This is a tough one – there are so many people I'd like to invite! I'll start with someone I strongly associate with Marrakech – Joan Garfield. Joan served as "travel agent" for some of us who went to ICOTS in Morocco; she found the wonderful hotel where we stayed and arranged our post-conference tour, and I'd love to have dinner with her there again. For my other two guests, I'll choose friends I have known for over thirty years. Bob Stephenson and I went to graduate school together at UConn and have had similar careers since. We both did research in nonparametric statistics and then drifted toward statistics education, and we've both served as *JSE* editor. I'll also invite Jessica Utts, who I first met in the spring of 1978 at an ENAR meeting; we were both finishing our Ph.D.'s that semester. I always enjoy talking to Jessica when I see her at the AP Reading or at a conference.

AR: You already mentioned a favorite course earlier, but my next "pop quiz" question is: What is your favorite course to teach? I'll make this question more concrete with some more imagining: If you were given a chance to teach only one more course for the rest of your career, what would it be?

JD: This might surprise people, but I think I would pick our Stat I course – the one required for Gen Ed. This is the only stat course that a lot of students will take, so it's our opportunity to convince them that statistics is useful and interesting.

AR: Name something that JSE *readers will probably be surprised to learn about you.*

JD: When I was a kid, my family had horses, and I used to ride on trail rides with my father and in 4-H horse shows.

AR: Very interesting! And yes, I for one am surprised. Not surprisingly, you recently attended the US Conference on Teaching Statistics (USCOTS), held right there in Raleigh. The

conference theme was "the next big thing." What do you think the next big thing in statistics education is? (You can have as many sentences as you like for this one.)

JD: Like many others at the conference, I would have to choose teaching inference through randomization-based methods. I really am convinced that the logic of hypothesis testing is most easily understood in the context of randomization tests. In fact, one of the fun things about teaching my nonparametric statistics course at NC State was that students often told me that they first really understood hypothesis testing in that course. I'm sure the reason was that we calculated *p*-values for nonparametric test statistics by considering the distribution of the statistic over all arrangements of ranks that were equally likely under the null hypothesis. That logic made more sense to students than the standard *z* or *t* tests they had learned in previous statistics courses.

As you know, I have taught a new required stat course for our Meredith math majors twice now using your book with Beth Chance, *Investigating Statistical Concepts, Applications, and Methods*, which introduces hypothesis testing through randomization-based methods. It has been fun, but challenging, to teach such a different course – maybe after a couple more times, I'll be comfortable enough to elevate this one to my favorite course! It was really helpful to hear so many people at USCOTS talking about teaching randomization and bootstrap inference; I feel fortified for the next time I try this.

Evolution of *JSE*

AR: Speaking of changes and the future, I want to go back and ask another JSE *question that I probably should have asked earlier. Can you comment on the direction that* JSE *has taken since you handed over the editorial reins? How do you think the Journal has changed since then, if at all? Has anything about its evolution surprised you? And what do you see for* JSE*'s future, both in terms of potential and challenges?*

JD: It has been amazing to see the growth of *JSE*. In the early days, we worried about having enough good submissions to put together three issues a year, and now each issue contains far more articles and other features than we ever hoped for. It seems clear that JSE is fulfilling the role we had in mind from the beginning as a needed and valued publication outlet for work on teaching statistics. "Data Sets and Stories" and "Teaching Bits" appeared in the very first issue of *JSE* and are still regular features today; it is gratifying to see that some aspects of our original design have been successful enough to persist for 19 years. Yet the journal has also been responsive to changing interests; the section "From Research to Practice" was introduced in 2007 to help statistics teachers use statistics education research to inform their teaching.

What has probably surprised me the most is the way electronic publishing has evolved. Through 2006, *JSE* articles were published in html format. During my editorship, preparing mathematical material was always painful. We used bits of LaTeX markup in articles for things like subscripts and superscripts, and I created image files of more extensive mathematical material using LaTeX. We spent hours fussing with those image files, trying to get them sized and aligned properly. But I always assumed that better options for including mathematics in web pages would soon be available. But it never seemed to happen. The task of marking up the articles in

html became so time-consuming, and the results for mathematical material were so unsatisfactory, that over the years there were many discussions about switching to pdf format. I resisted that idea for a long time because I wanted *JSE* to remain interactive and dynamic; I didn't want it to look like a print journal that had been posted online. But over the years, pdf evolved, and now pdf files can contain hyperlinks much like html. During Bill Notz's editorship (2007–2009), he published both html and pdf versions of articles. When John Gabrosek began his editorship in 2010, he discontinued the html version in favor of pdf. I have come around on this – as the size of the issues increased, the html version became unsustainable, and the pdf articles really do look better.

I am very optimistic about the future of *JSE* because of the many very capable people who are dedicated to its success. I mentioned before how overjoyed I was when Tom Short agreed to become the second editor of *JSE*. At that time, I really wasn't sure whether anyone else would care enough about the journal to devote as much time to it as I had. But every time there's been a search for a new editor, there have been many dedicated and well-qualified candidates. The four editors since me – Tom Short, Bob Stephenson, Bill Notz, and John Gabrosek – have all done a terrific job and have nurtured and improved *JSE*. I'm sure there will be challenges in the future as technology evolves and as new ideas about statistics education emerge, but I feel confident that *JSE* will continue to adapt and flourish.

AR: I agree that the growth and impact of JSE *have been remarkable, and you certainly deserve much of the credit for making sure that the* Journal *got off to such a good start and for remaining as editor throughout those formative years. Do you have any thoughts about how the content of the articles has changed, if at all? For example, you mention the new section on connecting research to practice; do you think there are more research articles in* JSE *than there used to be? Or can you think of any ways in which the focus and content of the articles have evolved? Of course, I'm not asking for a rigorous analysis of* JSE *content, although I think that would be an interesting project for someone to undertake. I'm just asking for your impressions.*

JD: I thought maybe I'd get away with avoiding comments about content in response to your last question! I skirted the issue because I don't think I really know the answer. It would be interesting to find out what more recent editors think. *JSE* articles have always been so diverse – there are articles about statistics programs and courses, distance learning, ideas for teaching particular concepts, research on teaching and learning, resources for teaching, data sets, assessment, and so much more. There have always been some research articles in *JSE*; there may be more now – I'm not really sure. In any case, I do hope that *JSE* continues to publish a variety of different kinds of articles, including the more anecdotal papers on resources and teaching ideas that have been so valuable to readers over the years.

Parting Thoughts

AR: Thanks very much for discussing JSE*'s history with me and for your reflections on your career and all of the teaching issues that we've touched on. I've really enjoyed this, and I think JSE readers will also enjoy learning more about you and hearing your perspective on these topics. I have just two more questions to ask. First, among your many accomplishments in statistics education, which one are you most proud of?*

JD: That's easy – I am most proud of the role that I (and many others) played in helping to get *JSE* started. Looking back, there were many innovative features of *JSE* – aside from the obvious use of the electronic medium – that those of us who started the journal should all be proud of. *JSE* has used double-blind refereeing from the very start, a practice later adopted by other ASA publications. Also, from the start, we have had a practice of sharing referees' reports (anonymously) among all reviewers of an article. Referees find it interesting to see other reviewers' comments, and we hope that this practice improves the quality of referees' reports. From the beginning, we have also placed a high priority on making *JSE* an international journal. In fact, in 1998, the Editorial Board debated whether to change the name of the journal to the *International Journal of Statistics Education*. I think it's just as well that that name went the way of *Electronic Journal of Statistics Education*, but it does reflect our seriousness about making *JSE* widely accessible.

AR: I had a feeling that would be an easy one. My final question is: What advice do you have for JSE *readers who are fairly new to statistics education?*

JD: There are lots of ways for readers interested in statistics education to find excellent resources for teaching statistics and also to find others who share their interests. I would certainly recommend joining the ASA and its Section on Statistical Education. Attending the Stat Ed Section meeting at the Joint Statistical Meetings is a great way to meet a lot of people who are active in the statistics education community. For those who consider themselves to be isolated statisticians (or even those who don't!), the Isolated Statisticians group is an informal group made up primarily of statistics teachers in math departments at small colleges. That group has a website (http://www.lawrence.edu/fast/jordanj/isostat.html) and an e-mail list, and it holds an open meeting at the JSM each year. I'd also recommend that readers interested in statistics education explore the CAUSE website at http://www.causeweb.org/, which contains a wealth of information and resources for teaching statistics. The biennial USCOTS meeting is a wonderful opportunity to meet people and to participate in discussions about teaching statistics. And, of course, everyone interested in statistics education should read *JSE*!

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