THE STATISTICAL CONSULTANT

Section on Statistical Consulting
Kim Love-Myers, Editor; Christopher Swearingen, Assistant Editor

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IN THIS ISSUE...

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Chair's Column — 2014 JSM Awards and Looking to 2015

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It seems as if this year has flown by! So, what has happened over the course of the year that is relevant to the Section? The major activity was a terrific JSM. There were many interesting roundtable discussions, posters, and presentations on a very full program. Deciding which topic contributed session, contributed paper, and poster would receive the section's awards was quite difficult as there were many excellent submissions.

Best Topic Contributed Session

The best Topic Contributed Session was entitled "Collaborative Statisticians Advancing Their Careers in an Academic Setting." This session was organized by Julia L. Sharp of Clemson University and Alexandra L. Hanlon of the University of Pennsylvania. Julia and Alexandra have split a $750 prize and received plaques acknowledging their award.

Best Contributed Paper

The best Contributed Paper was won by Emanuel Msemo of Virginia Tech for his paper entitled "Impacting Agricultural Productivity in Tanzania Through the Wheels of Statistics." Emanuel won $500 and a plaque.

Section Chair Walter Ambrosius and Best Contributed Paper Winner Emanuel Msemo at JSM 2014

— Photo Courtesy of Eric Vance

Best Poster

Finally, the best Poster was won by Meng-Ru Cheng, Amylou Dueck, Evan P. Kransdorf, Octavio E. Pajaro, and Yu-Hui Chang of the Mayo Clinic for their poster "Rate Data Modeling: Using the Organ Procurement and Transplantation Network United Network for Organ Sharing Database." They will split a $250 prize and a plaque.

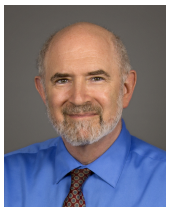
Congratulations to the winners! And thank you to everybody who participated in our Section's program either as a presenter or as a member of the audience.

You may be wondering why the largest prize goes for the Topic Contributed Session and why there are no prizes for Invited Sessions. We want to create an incentive for people whose session isn't picked as one of our Section's invited sessions to move forward with their session as including them invariably results in a richer program. And, for most of us, the intangible rewards (academic credit or publicity) for organizing an invited session or giving an invited talk are worth more than the modest amounts our Section's treasury can afford.

I would hope that many of you will attend the 2015 JSM in Seattle and will present some of your work. If you have an interest in organizing a session, please contact Kim Love-Myers (krlove@uga.edu) our 2015 Program Chair. If you would like to organize a roundtable discussion, please contact Isabella Ghement (isabella@ghement.ca) who is the 2016 Program Chair and in charge of the 2015 roundtables.

See you in Seattle!

Technical Knowledge? Check! Experience? Check! What Else Might Help You? – Thoughts from the ASA President-Elect



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Westat Statistics Unit *ASA President-Elect*

ASA members were educated at some of the finest statistics departments in the world and were taught by outstanding academics well versed in theory, many with extensive practical statistical consulting experience. Many graduate statistics programs offer hands-on consulting experience in stat labs addressing real-world problems. Our members keep up with recent developments in theory, do research, and write and present papers at technical conferences.

What else can we do to improve our consulting skills?

Soft Skills

Studies of the characteristics of a good consultant suggest these topics as valuable: professionalism, time management, judgment, acting as a team player, good communication skills, good listening skills, assuming roles and responsibilities, involving other consultants, and reputation. (N. Ramakrishnan). A survey of London Business School alumni identified the following skills as most prized for consultants: skill in structuring tasks,

technical knowledge/skills, industry experience, commitment to clients, and getting along with clients (Martin Ashford, 1998).

In 2011, Bob Rodriguez, then President-Elect of ASA, identified an important opportunity for ASA to provide even more service to our members by offering career success training, including many of the above skills. The topics in this training include improved communications, both speaking and writing, teamwork, and leadership. You may have seen course offerings at the JSM or the CSP in these areas, described as 'soft skills.' Bob Starbuck , who taught ASA's Career Success Factors course on "Effective Presentations for Statisticians", retired after 30 years in the pharmaceutical industry, led a workgroup to develop this training.

Of all these soft skills, let me start with the topic of communications, one I consider of great importance to all statistical consultants! If you are inclined to strengthen your soft skills, I encourage you to start with it as well! After that, I'll review recent offerings at JSM and the Conference on Statistical Practice (CSP) and future opportunities I invite you to consider.

Communications

If you haven't yet read Steven Covey's 2004 book *Seven Habits of Highly Effective People*, do consider it. Covey offers valuable advice, including the suggestion: "Seek first to understand, then to be understood. Communication is the most important skill in life." It's a skill that is vital to our success as statistical consultants. It involves listening carefully and fully to your client, asking careful and thoughtful questions to help your client clarify the problem, and being interested in their concerns.

Whether you are consulting within your organization or for an outside client, communication occurs at many levels, starting with you and your client. (I'll use the term client to mean either within or outside your organization.) From there we can note communication linkages: between various members of your or your client's organization; between staff and management; between departments; between newer staff and experienced hands; between research units and operations; and between members of a team or committee. Whether it's a conversation, an email, or a report, you can enhance your effectiveness as a consultant if you improve your speaking and writing skills, and you can learn new communication tools.

After you think you understand the client's problem and have identified possible approaches, you need to communicate two important issues: what assumptions you are making, and what you will and won't be doing. Virtually all of our statistical approaches rest on assumptions. When we design an experiment, we need to include our best judgment about variation, which, if we are fortunate, might be based on previously collected or prior data. When we design a survey, we have to make assumption about response rates, eligibility rates, and many other input parameters that impact the result. Connecting your assumptions to the consequences of your approach serves you as well as your client. Likewise, it's important to be clear about your product or service, telling the client what they can expect (and perhaps identify any limits to your efforts). In many situations (e.g. government contracting), these agreements take the form of written contracts. Verbal agreements increase the risk of miscommunication.

Many 'softer' tools are available to help the statistical consultant improve communications. Agendas, flowcharts, checklists, and minutes from meetings are just a few. Agendas and meeting minutes, when done well and in a timely fashion, can be a real help in communicating between people trying to solve problems. Summarizing the meeting with Action Items assigned to specific people with target due dates can help ensure that decisions made during the meeting turn into concrete activities. They can help avoid that sense of "I thought we solved

that problem six months ago!" You may well have solved that problem, but with no follow through or minutes summarizing the agreements, that useful effort may get lost. Flowcharts and checklists also help in communicating change, whether through developing software or modifying processes.

Reward Systems

For those involved in quality improvement consulting, in your own or another organization, understanding who gets rewarded and for what may hold the key to progress. All the sound statistical analyses in the world may come to naught if there is no motivation to implement the improvements you have carefully designed. In the past, carrots and sticks were an apt description of one approach to managing. Managers would set the bar where they wanted and then reward those who made it over. All too often, this approach to rewards led to very undesirable outcomes often at odds with quality improvement.

W. Edwards Deming, a highly respected statistical consultant, recognized the 'soft skill' of understanding the reward system when he urged that we 'drive out fear' and 'break down barriers between departments.' This is all about good communications. Fear in an organization can prevent the real data from getting to the consultant and organization decision-makers. Barriers between departments, often the result of carrot-and-stick management, impede change for the better. More modern methods of management encourage "autonomy, mastery and purpose" [1] leading to better communications. If you consult in quality improvement, you may find it valuable to learn more about the psychology of motivation as well as methods for improving communication.

ASA-Sponsored Trainings

ASA designed a number of courses in career success factors, such as communication and leadership, with other courses to be introduced in the future. At this past summer's JSM, ASA offered courses in Personal Skills Development:

- Communication – Speaking, presentation, consulting, listening, and writing
- Collaboration – Team building, teamwork, and understanding personality types
- Career Planning – Finding a challenging and rewarding position, goal setting, career advancement, negotiation, and strategic planning
- Leadership – Influence, conflict resolution, and creative problem solving The course was titled "Preparing Statisticians for Leadership: How to See the Big Picture and Have More Influence" This course will be taught again at next summer's JSM in Seattle and at CSP 2016.

Any of these would add to a statistical consultant's tool kit! The Statistical Leadership Workgroup, led by Janet Buckingham, organized these courses and will be continuing as an ad hoc committee, making plans for next summer's Seattle JSM. If you have ideas for other leadership courses to be developed, contact Dr. Jim Hess, Chair of the Ad Hoc Committee, at jhess04@reagan.com.

In February, the 2015 CSP will focus on several themes, the first of which is Communication, Impact, and Career Development. You'll have the opportunity to attend these Short Courses: Speak & Connect: Harnessing PowerPoint, and From Statistical Consultant to Effective Leader. I invite you to supplement your statistical expertise by attending the CSP and taking these courses to improve your facility as a consultant!

[1] Pink DH (2009). *Drive: The Surprising Truth about what Motivates Us.* Riverhead Books: New York.

In summary, we can enhance our powerful statistical tools with soft skills to become more effective consultants. Improving our ability to communicate, in both directions, to document and to organize, is a worthwhile investment. ASA continues to add to its stable of course offerings and trainings to support your professional development. You've got the technical knowledge and experience. Now you know what else might help you!

An Interview with W.J. Dixon Award Winner Dallas Johnson

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The following is an interview of Dallas Johnson, the 2010 winner of the W. J. Dixon Award for Excellence in Statistical Consulting, conducted by Eric Vance, Director of the Laboratory for Interdisciplinary Statistical Analysis (LISA) at Virginia Tech. The interview occurred in September 2014 via Google Hangout, with clarifications added later via email.

> *After teaching high school mathematics in small schools in Nebraska for five years, and after completing an MS degree in mathematics at Western Michigan University, Dallas Johnson earned his Ph.D. in Statistics from Colorado State University in 1971. From 1975-1995 he had a 50% appointment as an assistant, associate, and full professor in the Kansas State University (K-State) College of Arts & Sciences Department of Statistics and 50% in the Kansas Agricultural Experiment Station. Dr. Johnson estimates that in a typical year, after clients found his help useful, he would have approximately 500 consulting sessions, lasting from 10 to 60 minutes, with 90 different clients from 20-25 different departments. From 1995-2001 he served as Department Head for the K-State Department of Statistics. Dallas was named a Fellow of the American Statistical Association (ASA) in 1983 and received the ASA Founders' Award in 2004.*

Eric Vance [EV]: Why do you think you won the WJ Dixon Award?

Dallas Johnson [DJ]: That's a hard question. I'm not quite sure why I won or who nominated me. I don't recall the nomination process or even being asked if I was willing to be nominated. I was surprised to learn recently that I was the second person to win the award.

EV: Quoting from an article written about you in 2010 (Boyer 2010):

> "[Dallas Johnson] was always very busy and was constantly sought after because of his vast knowledge of a wide variety of statistical areas and his ability to bring his consultees up to speed so that they had their own understanding of their results," said John Boyer, professor and former head of the K-State Department of Statistics. "He was truly outstanding in these one-on-one settings, whether he was working with another statistician, a faculty colleague in another area, or students just beginning to grasp the statistical methodologies appropriate to the work they were doing."

What do you think makes you so outstanding in these one-on-one settings?

DJ:

- I had total respect for each of the people I was consulting with (at least 95% of the time).
- I never overestimated my value in the collaboration – it was a 50-50 deal. They were more intelligent than I was in their field, and I was more intelligent in the area of statistical design and analyses.
- I also had a tremendous respect and a tremendous liking for the people I consulted with. Very few clients were ones I didn't want to come back again.
- They got along well with me because I was willing to be flexible and I understood the kind of restrictions they had to deal with, for instance, how much time and effort it took for them to collect their data.

EV: How did you teach students to gain proficiency in these skills and qualities to become good statistical consultants?

DJ: Probably 75% of the graduate students at K-State go into consulting. Our process seemed to be a bit different than Doug Zahn's use of video (Vance 2014). For most of the time I was there we didn't have any formal courses on statistical consulting. We would put the students in the right environment, make them consult with clients, and then ask them later how it went. We didn't video. My process was to lead by example and it has seemed to work.

Our students are pretty successful. One comment we hear over and over from employers is that they like to hire K-State students because they're ready to go and be productive right off the bat. That is, they can hit the ground running. I think that one of the reasons for the success of our graduate students in statistical consulting is that about half of the K-State faculty had appointments similar to mine – half-time in Arts & Sciences and half-time in the Agricultural Experiment station. Many of these folks would talk about their consulting activities when teaching courses in statistics and, in particular, in our "Analysis of Messy Data" course where many of the problems discussed were problems encountered in consulting with agricultural researchers and other researchers on campus. I tried to teach my students to know when they have to seek help on what's the appropriate thing to do.

EV: What is your philosophy on consulting?

DJ: I always regarded consulting as another way of teaching. The more I could consult and teach the researcher to do their own statistical analyses, the better off they were. There were very few situations in which I would actually do the analyses. They would generally run their own programs. I would try to decide how much can they do on their own, how much can't they do, and when they might get in trouble with the software, I would go ahead and run the programs for them. I would also spend time with researchers on how to interpret their results and how to present them to others in their fields of interest.

EV: Did you have any consulting experiences that did not turn out to be successful?

DJ: In my first few years, a student in Agronomy ran an experiment to determine how time of year when planting corn affected the yield. There was an early planting date and a late planting date so we developed a nice randomized complete block design. The experimental plots were 150 miles away and the client had to drive there twice to plant early and late in the season. He came back in October after the experiment was over asking for help to analyze the data.

I asked how the experiment went and he said, “Everything went fine; however, we had one little problem. We weren’t able to exactly follow the design you set up. Some plots in the early season were too wet to plant. So we used other plots that were dry enough to plot. That won’t be a problem will it?” I replied, “Not as long as moisture doesn’t affect yield!”

The lesson I learned here was to be more explicit with clients about why randomization was needed in the design. In my experience, convenience is the biggest enemy of experimental design. If one performs an experiment in such as way so that is easy to perform, then it may not provide information that would be as useful as that could be obtained from a well-designed experiment without increasing the cost of running the experiment.

EV: You are known for practical techniques for dealing with “messy data.” What is messy data and how did you get involved in it?

DJ: Anything is messy if you’re not sure what to do with it when you first see it. I was honored to write an entry with George Milliken in the *Encyclopedia of Statistical Sciences* in which we define data to be messy if a proper analysis requires more than the standard statistical methods available in most subject matter methods textbooks (Johnson and Milliken 1985).

George Milliken was teaching a special topics course in “Analysis of Messy Data” when I came to K-State in 1975. He and I co-taught the course during each summer session for several years. When we decided to make it a regular course we called it “Nonorthogonal Data Analysis” because the department (me, in particular) was worried about how having a course with the name “messy” in it might look to others looking at the course listings. After a couple of years we did go back to “Analysis of Messy Data,” which it has been ever since.

At that time, most of the textbooks all had textbook type problems: no missing data, no split plots, no repeated measures, and very limited descriptions of the way the data were actually collected. It was as though students were being taught to analyze data by the way that it looked in a table. The idea of the course was to teach more advanced techniques needed to analyze the data actually being collected after knowing exactly how the data were collected.

About this same time, there were papers by Ron Hocking and Michael Speed about different types of hypotheses that could be analyzed in a two-way experiment in unbalanced data (Hocking 1973; Speed and Hocking 1974; Hocking and Speed 1975). Existing software at the time created ANOVA tables with what they called a Type II analysis. On the basis of those papers it became clear that the Type II analysis wasn’t testing what folks really wanted to test. I would tell our students that the software produced statistical analyses, but we need to know the questions that are being answered by the analysis. The issue was that the software was not testing the same hypotheses when there was no missing data that were tested when data were missing. These papers and presentations that Hocking and Speed made at statistical meetings had a big influence on how we thought about these simple experiments.

The first 17 chapters of our first volume on the *Analysis of Messy Data* were about fixed effects models with missing data (Milliken and Johnson 2009). Chapter 18 started talking about random effects models, followed by chapters on split-plot designs, strip-plot designs, and repeated measures designs. We had taught this course for several years when George and I decided to create a messy data course for the Institute for Professional Education. We taught the course in public workshops 3-4 times per year for 20 years. About the time we started the public seminars, I talked with a publisher about writing a book on regression. The publisher replied back

that a book on regression would be good, but what he would really like is a book titled “Analysis of Messy Data.” The publisher, Alex Kugushev, told us that he would make money on such a book. He said if you write a good book, I’ll make a lot of money, but I will make money on the title with even a bad book. When we finished the book, the publisher thought it was too long, so we reduced the size and wrote two more volumes (Milliken and Johnson 1989, 2002) based on the content that we took out of Volume 1.

We didn’t coin the term messy. However, the term made us known, and we were pretty lucky in that regard. We were smart enough to realize there were problems with many designs and analyses and smart enough to fix some of those problems.

EV: What advice do you have for statisticians?

DJ: My biggest advice is don’t forget about the tried and true methods of experimental design, ANOVA, regression, normal distribution techniques, and multivariate methods. Many new statisticians are not being trained in the traditional techniques and I’m concerned that they are losing favor within the field of statistics.

For students, be sure you go somewhere you can still learn the traditional methods because they’re not losing their importance. Employers still need statisticians who can apply these methods.

EV: What advice do you have specifically for new statistical consultants?

DJ: Specifically for consultants:

- Learn to communicate,
- Respect your clients, and
- Have a good knowledge of the tools you’re going to apply.

I used to talk to grad students about the difference between a MS and a Ph.D. in statistics. For the MS, you learn a number of tools you can use, but you don’t learn how to develop new tools. Ph.D. students concentrate on developing new tools that will work. It’s like the difference between a shoe salesman and a cobbler. A shoe salesman will put your feet in whatever shoes he has on the shelf, but a cobbler will develop the perfect shoe for your foot. If a data problem requires something new, it needs to be developed, and one should not force every analysis to use only the tools that a consultant currently knows about.

The important thing for people who want to do statistical consulting is they need enough knowledge to know what they’re doing is right and that if they don’t know what they’re doing, to go get help.

EV: Have you ever done any statistical consulting or collaboration overseas?

DJ: For a little over a year I have been consulting with researchers at a small agricultural university in the Pacific Ocean. It’s a small endeavor so far. Primarily the Ag researchers have collected data but don’t have the ability to do the data analyses. Unfortunately, I haven’t had input on the experimental designs, so yes, I have seen a couple of “messy” experimental designs.

In the mid-90s I was invited by a former student to consult in Sri Lanka for a summer. Part of my position was to visit all the agricultural experiment stations in the country for 2-3 days. That was pretty eye-opening for me because there were some research stations in which they were still calculating ANOVA tables by hand. A few had access to SAS but their copy was outdated. Another thing that surprised me was how valuable paper was. The researchers would edit the statistical output so there weren't any blank spaces so that when they printed their output, they used as little paper as possible. Every researcher had their paper under lock and key.

Another issue is that every agricultural researcher that I talked to had taken statistics at the same university from same instructor using the same book for the past 10-20 years. They were not using any of the more modern methods of statistical analysis. There were lots of what I would call old-wives-tales going around about what statistical methods to use. Their knowledge of statistics was centered around that one course they had all taken. It was very good for an outsider to come in because they needed exposure to new ideas.

EV: At Virginia Tech we have started a program called LISA 2020 to create a network of 20 statistical collaboration laboratories in developing countries by 2020 (Awe and Vance 2014). We hope to accelerate agricultural research by training statisticians to collaborate with researchers. Do you think Sri Lanka could benefit from being included in such a program?

DJ: Oh definitely! Sri Lanka could definitely benefit from a stat lab. The best place to create one would be at the University of Peradeniya in Kandy. It's a wonderful place to visit. I appreciate what you're doing with LISA 2020 because I've seen how much it's needed.

EV: Where do you see the field of statistical consulting going?

DJ: I don't know. I'm still wondering if we're headed in the right direction, especially with Big Data. The theory of statistics was based on taking random samples from infinitely sized data sets. Big Data forgets about statistical theory and tries to make sense out of the data while ignoring the idea of sampling. If you have such big data, I personally don't understand why you need the computing power to analyze the huge datasets when you could sample and apply the power of statistical theory.

Back 20 years ago, we talked about data as being experimental data that you gathered by reasonable statistical methods using good designs, and random sampling. Now the data aren't coming from designed experiments. Analysts are looking at this "happenstance data" to see if there's information in it. Sampling is so powerful that I don't understand why it's not playing a role in Big Data. I don't know whether it's a fad or not. I wonder if Big Data is a fad and will disappear as other fads have.

At one time statistics wasn't as relevant as it should have been because it was too mathematical. Statistics got more into experimental design and statistical analysis and became more methods oriented. We're getting back to the stage of years ago when the need for statistics was growing so fast but so much of statistics is abandoning the folks who are running experiments and still need statistical support. The people who need statisticians the most can't find them anymore, so they learn how to do things on their own. Can we even train those people to do those kinds of things that still need to be done?

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Survey Results — Statistical Consulting JSM Program and Newsletter

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In mid-August of this year, the Executive Committee of the Section on Statistical Consulting invited members of the section (through the section's listserv) to take two surveys. The first survey sought member feedback about the section's JSM program; the second survey sought member feedback about the section's newsletter, *The Statistical Consultant*. This article provides summaries of the responses to both of these surveys, and reflection on these responses.

JSM Program Survey

Respondent Demographics

A total of 109 individuals responded to the survey. Of these:

- 105 (96.33%) are current members of the Section on Statistical Consulting;
- 59 (54.13%) attended JSM in either 2013 or 2014, and only 20 (18.53%) have never attended JSM;
- 68 (64.15% of those responding to this question) plan to attend JSM in 2015 (three individuals did not indicate their plans with respect to next year's JSM).

Table 1 provides the distribution of the respondents' current states of consulting practice as they were best able to describe them, given the available answers. The majority of the respondents (80.73%) consider themselves to be practicing consultants at the current time.

Table 1. Distribution of Current Consulting Practice

Are you currently a practicing statistical consultant?	Frequency	Percent
Yes, in private or government practice	41	37.61%
Yes, in an academic environment	33	30.28%
Yes, both in private/government practice and in an academic environment	14	12.84%
No, but I would like to be	17	15.60%
No, and I do not plan to be	4	3.67%

Results with respect to the Section-Sponsored Invited and Topic-Contributed JSM Program

Table 2 provides the distribution of answers to the question "Which of the following topics would you like to see in invited and topic-contributed paper sessions and panels sponsored by the Statistical Consulting Section?" Respondents were able to select as many topics as they wished, and so **Table 2** provides the number and percentage of the 109 respondents who chose each topic. The topics are presented from top to bottom, in order of popularity.

Table 2. Potential JSM Topics for Consulting Section-Sponsored Invited and Topic-Contributed Sessions

Potential JSM Topics	Frequency	Percent
Technical aspects of statistical consulting (e.g. methods, application of statistical techniques, programming)	68	62.39%
"Soft" aspects of statistical consulting (e.g. project management, client interaction)	64	58.72%
Ethical issues in statistical consulting	57	52.29%
Business aspects of statistical consulting (e.g. starting/running a company)	55	50.46%
Issues specific to academic statistical consulting (e.g. education in consulting, consulting and research)	45	41.28%
Applications of statistical consulting to specific areas (e.g. biology, genetics, agriculture, health sciences)	44	40.37%
International and non-profit consulting projects	30	27.52%
Other	6	5.50%

Respondents were also asked to choose the topics that were "the most important" and "the second most important" to them to see in invited and topic-contributed paper sessions sponsored by the Section on Statistical Consulting. **Table 3** provides the combined distribution of the most and second most important topics chosen by the 98 respondents. Note that because each respondent could choose 2 topics, the percentages here do not add up to 100%; instead, each percentage indicates the percentage of the 98 respondents who listed the topic among their top two most important topics.

Table 3. Most Important Topics to Feature as Consulting Section-Sponsored JSM Sessions

First and Second Most Important Topics	Frequency	Percent
Technical aspects of statistical consulting	41	41.84%
Business aspects of statistical consulting	37	37.76%
Issues specific to academic statistical consulting	30	30.61%
"Soft" aspects of statistical consulting	28	28.57%
Ethical issues in statistical consulting	22	22.45%
Applications of statistical consulting to specific areas	23	23.47%
International and non-profit consulting projects	9	9.18%
Other	4	4.08%

Results with respect to the roundtable program

Table 4 provides the distribution of answers to the question "Which of the following topics would you like to see in roundtables sponsored by the Statistical Consulting Section?" Respondents were able to select as many topics as they wished, and so **Table 4** provides the number and percentage of 106 respondents who chose each topic. The topics are presented from top to bottom, in order of popularity.

Table 4. Potential JSM Topics for Consulting Section-Sponsored Roundtables

Roundtable Topics	Frequency	Percent
"Soft" aspects of statistical consulting	60	56.60%
Ethical issues in statistical consulting	53	50.00%
Business aspects of statistical consulting	52	49.06%
Issues specific to academic statistical consulting	45	42.45%
Technical aspects of statistical consulting	38	35.85%
International and non-profit consulting projects	33	31.13%
Applications of statistical consulting to specific areas	32	30.19%
Other	5	4.72%

Table 5 provides the combined distribution of the most and second most important topics chosen by the 93 respondents. Note that because each respondent could choose 2 topics, the percentages here do not add up to 100%; instead, each percentage indicates the percentage of the 93 respondents who listed the topic among their top two most important topics.

Table 5. Most Important Topics to Feature as Consulting Section-Sponsored JSM Roundtables

First and Second Most Important Topics	Frequency	Percent
Business aspects of statistical consulting	33	35.48%
"Soft" aspects of statistical consulting	33	35.48%
Ethical issues in statistical consulting	29	31.18%
Issues specific to academic statistical consulting	24	25.81%
Technical aspects of statistical consulting	23	24.73%
International and non-profit consulting projects	16	17.20%
Applications of statistical consulting to specific areas	15	16.13%
Other	4	4.30%

Newsletter Survey

Respondent Demographics

A total of 101 individuals responded to the survey. Of these:

- 97 (96.04%) are current members of the section on statistical consulting;
- 43 (42.57%) are aware of the newsletter and have read the recent issues, while 25 (24.75%) were not aware of the newsletter;
- Only 10 (10.10% of those responding to this question) ever share the newsletter with other statisticians (two individuals did not indicate whether they ever share the newsletter).

Table 6 provides the distribution of the respondents' current consulting practices as they were best able to describe them, given the available answers. The majority of the respondents (80.20%) consider themselves to be practicing consultants at the current time. Note that 9 of the respondents who chose to take this survey did not take the survey about the JSM program.

Table 6. Distribution of Current Consulting Practice

Are you currently a practicing statistical consultant?	Frequency	Percent
Yes, in private or government practice	42	41.58%
Yes, in an academic environment	29	28.71%
Yes, both in private/government practice and in an academic environment	10	9.90%
No, but I would like to be	16	15.84%
No, and I do not plan to be	4	3.96%

Results with respect to Newsletter Topics

Table 7 provides the distribution of answers to the question "Which of the following content types would you like to be featured in *The Statistical Consultant*?" Respondents were able to select as many topics as they wished, and so **Table 7** provides the number and percentage of 101 respondents who chose each topic. The topics are presented from top to bottom, in order of popularity.

Table 7. Most Important Topics to Feature in Newsletter

First and Second Most Important Topics	Frequency	Percent
Articles focusing on statistical methods that may be useful in statistical consulting	77	76.24%
Articles focusing on "soft" aspects of statistical consulting	64	63.37%
Articles focusing on technical aspects of statistical consulting	64	63.37%
Interviews with or opinion pieces by prominent consultants in private practice	63	62.38%
Articles related to the business aspects of running a consulting company	58	57.43%
JSM/conference wrap up and review	46	45.54%
Articles focusing on statistical consulting issues specific to academia	45	44.55%
JSM/conference schedule information	38	37.62%
Opinion pieces by consulting section officers	38	37.62%
Interviews with or opinion pieces by prominent academic consultants	37	36.63%
Other	2	1.98%

Respondents were also asked to choose the topics that were “the most important” and “the second most important” to them to see in future issues of the newsletter. **Table 8** provides the combined distribution of the most and second most important topics chosen by the 89 respondents. Note that because each respondent could choose 2 topics, the percentages here do not add up to 100%; instead, each percentage indicates the percentage of the 89 respondents who listed the topic among their top two most important topics.

Table 8. Most Important Topics to Feature in the Section’s Newsletter

First and Second Most Important Topics	Frequency	Percent
Articles focusing on statistical methods that may be useful in statistical consulting	33	37.08%
Articles focusing on technical aspects of statistical consulting	31	34.83%
Articles focusing on "soft" aspects of statistical consulting	26	29.21%
Articles related to the business aspects of running a consulting company	22	24.72%
Interviews with or opinion pieces by prominent consultants in private practice	17	19.10%
Articles focusing on statistical consulting issues specific to academia	17	19.10%
Interviews with or opinion pieces by prominent academic consultants	13	14.61%
JSM/conference schedule information	7	7.87%
Opinion pieces by consulting section officers	6	6.74%
JSM/conference wrap up and review	4	4.49%
Other	1	1.12%

Discussion

Not surprisingly, the answers to the two surveys reflect a diverse audience with a range of topical interests. The membership of the Section on Statistical Consulting is made up of academic, private, industrial, and government consultants, as well individuals who are aspiring to become statistical consultants and collaborators in their careers; the results of these surveys certainly reflected this composition. The majority of those who responded to the survey have actively attended JSM in recent years and also plan to attend JSM in 2015.

With regard to invited and topic-contributed sessions in the JSM program, it is clear that there is broad interest in technical, “soft”, and business aspects of statistical consulting. This popularity of this combination of three areas indicates a keen interest in professional development: keeping up with statistical techniques and methods that may be of use, successfully interacting with clients and managing projects, and starting and running an effective consulting business (whether directly or in a larger context). There was also a strong constituency in favor of sessions with a focus on issues specific to academic consulting. From comments that accompanied some of the surveys, it seems as though there is a special interest in the intersection of education and academic collaboration as a means of training up-and-coming statisticians to be responsible practitioners. Discussion of ethical issues, while not a frequent choice for the “most important” possible topic, still received strong support as an overall potential topic for JSM sessions.

The results with respect to JSM roundtables were similar to the results for sessions, though not identical. Roundtables, which offer an environment for discussion and personal connections, tended to be viewed as a good venue for discussion of the “soft” aspects of statistical consulting, as well as business aspects. Ethical issues took more of a front seat here than they did for general sessions, which makes sense; a smaller, more intimate environment may be more suited for discussion of what can be a very divisive and sensitive topic. Issues specific to academic statistical consulting were also a popular choice for the roundtable environment.

As for the newsletter (this publication, in fact), 25% of those who took the survey were previously unaware of the existence of the newsletter. Less than 50% of respondents indicated they had read recent issues. While in some ways this is unfortunate, it does provide us with an exciting opportunity to raise awareness of the newsletter and to revisit the needs of the members of the community.

The most popular topics for articles, according to the results of the survey, were statistical methods that may be useful in statistical consulting, "soft" aspects of statistical consulting, and technical aspects of statistical consulting. This closely reflects the career-driven emphasis of the preferences expressed regarding the section's invited and topic-contributed program at JSM. Interviews with prominent consultants in private practice were also valued, though not necessarily considered to be the most important contributions of the newsletter.

Thank you to all who took the time to provide their feedback through taking one or both of these surveys. The Executive Committee values your opinions, and we look forward to continuing to serve the section. As members of our section, you can contribute by organizing sessions and roundtables for JSM (topic-contribute abstract submission for JSM 2015 opened on December 2), and by contributing ideas for articles or your specific expertise in areas that would interest our members.

Headlines and Announcements

JSM 2015 Seattle Abstract Submission Deadline February 3, 2014

The JSM 2015 Abstract Submission Deadline is **FAST** approaching. Authors are encouraged to submit papers on the theme, "Statistics: Making Better Decisions."

For more information on abstract submission guidelines, contact:

- 2015 Section Program Chair Kim Love-Myers — krlove@uga.edu
- 2015 Section Roundtable Chair Isabella Ghement — isabella@ghement.ca
- ASA Website — http://www.amstat.org/meetings/jsm/2015/abstracts.cfm

Nominations Now Accepted – W. J. Dixon Award for Excellence in Statistical Consulting

The W. J. Dixon Award for Excellence in Statistical Consulting is given to a distinguished individual who has demonstrated excellence in statistical consulting or developed and contributed new methods, software, or ways of thinking that improve statistical practice in general. The award recipient receives an engraved award and a $500 cash prize at the Joint Statistical Meetings awards ceremony. Nominations for the 2015 W. J. Dixon Award will be accepted until February 1, 2015.

For more information on the W.J. Dixon Award, please see http://www.amstat.org/awards/wjdixonaward.cfm.

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Section on Statistical Consulting Microsite

http://community.amstat.org/CNSL/Home

You'll find all information relating to the Section on Statistical Consulting, including our charter, officer list, section activities, past issues of *The Statistical Consultant*, minutes of past meetings, and more.