

THE STATISTICAL CONSULTANT



Section on Statistical Consulting
Winter 2001; Volume 18, No. 3

American Statistical Association
Christina M. Gullion, Editor

IN THIS ISSUE

- Section on Statistical Consulting Mission and Membership
- Help Wanted: Program Chair for JSM 2004
- Thanks to Donors of JSM 2001 Door Prizes
- Membership of the ASA Section on Statistical Consulting Executive Committee
- Statistical Consulting and Lunch Roundtables at JSM 2001
- Notes from the Editor

Section on Statistical Consulting Mission and Membership

The Statistical Consultant is a member benefit for the ASA Section on Statistical Consulting. The special interests of the Section on Statistical Consulting are statistical consulting and the training of statistical consultants. The section is broadly interested in fostering the increased and improved use of statistics through effective client/consultant interchanges.

In addition to *The Statistical Consultant*, members can compete for one of up to three \$500 travel awards given annually for the best Topic Contributed Session proposed for JSM,

as well as participate in section business and officer elections. Also, there's FREE FOOD and door prizes at the JSM Member Reception.

If you would like to join this Section, use the ASA Fax on Demand service to obtain an enrollment form. In the US, call 1-888-267-8285, from outside the US, call 703-531-0879. Request Form 1104 to join the Section. If you are not an ASA member, you need to join ASA in order to qualify for Section membership. To join ASA, request Form 1100.

Help Wanted: Program Chair for JSM 2004

Matilde Sanchez, Chair-elect-elect, 2003

I am looking for a volunteer (or a draftee) to be the Statistical Consulting Section's Program Chair for the 2004 JSM (to be held in Toronto, Canada). This is your chance to make your mark in the Section and in the ASA.

To find out more about this position, please look at the Task and Timeline for Program Chair online. Go to www.amstat.org/sections/cnsl/ and click on Officers, then on Descriptions of Officer Responsibilities, Tasks, and Timelines. Most of the work will be com-

pleted in 2003, but early appointment gives you a chance to get to know key people and procedures.

Please contact me before January 1, 2002, using the following contact information if you are interested in the job or if you know someone whose name you would like to put forward.

Contact:

Matilde Sanchez
732-594-5953 (phone)
matilde_sanchez@merck.com

Thanks to Donors of JSM 2001 Door Prizes

The Statistical Consulting Section would like to thank the companies named here for their contributions, which served as door prizes during the Section's Business Meeting at the 2001 Joint Statistical Meetings in Atlanta.

Addison-Wesley	Minitab
ASA-SIAM	NCSS
Biostat	Oxford University Press
Blackwell Publishers	Palisade Software
Cambridge University Press	Prentice Hall
Conceptual Software	Quant Systems
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Duxbury	S-Plus
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Key College Publishing	SPSS
Kluwer Academic Publishers	Statistical Solutions
McGraw Hill	StatSoft

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Statistical Consulting and Lunch Roundtables at JSM 2001

Editor's note: Thanks to Janice Derr for assembling these notes.

The 2001 Joint Statistical Meetings marked the first time in several years that the Section on Statistical Consulting sponsored lunch roundtable discussions. Brenda Gaydos, our section program chair for the 2002 JSM, organized this offering.

Here is a brief summary of the lively discussions that occurred over lunch in Atlanta.

“Involving Undergraduates in Statistical Consulting”

Discussion leader: Beth Chance, California Polytechnical State University

Although there were only four participants, the discussion was quite valuable. Two participants were already running consulting courses for undergraduates, and the others were considering beginning such a program.

All agreed that the most important activity of an undergraduate consulting experience is to provide students with experiences applying their statistical knowledge to real projects

from the university, industry, or local community. The goal is to enhance students' ability to determine the appropriate statistical techniques for a given research question and to improve their skill in communicating with non-statistical audiences.

The existing courses described were open to students from a variety of majors. One had a prerequisite of only Elementary Statistics.

Our discussion included

- what resources are necessary,
- how to best fit consulting experiences into the students' program of study,
- what student background is a necessary prerequisite,
- what materials are available as instructional tools, and
- strategies for identifying and selecting plausible consulting projects.

A reference list was shared and extended. The insights from those with successful programs were especially valuable. We hope such sharing of experiences will continue in further informal discussions.

“How Can Statisticians and Their Clients Improve the Way They Work Together?”

Discussion leaders: Janice Derr, US Food and Drug Administration, and Tom Loughin, Kansas State University

Six statisticians from various academic and industry work environments joined Janice and Tom to grapple with this issue.

First, we discussed barriers to effective statistical consultation that exist at our various workplaces. The most important one seemed to be a lack of knowledge on the part of the people we work with about what statisticians do, how they go about doing it, and how their expert knowledge can contribute to accomplishing the goals of a project.

Sometimes the people we work with think we are capable of accomplishing miracles. Paradoxically, sometimes they view us as mere service-providers. In that light, we discussed the use of the convenient term “client” to represent the people we work with and whether “researcher” might be a better term to help promote the feeling of a collaborative relationship.

Once we had identified barriers, we discussed how we might work toward overcoming them. One suggestion was the “site visit”, where the statistician gains first-hand knowledge of the work that the others involved in a project are doing. This might involve such diverse activities as watching the manufacturing process of a product, observing an interview of a patient in a clinical trial, or visiting a cattle feed yard! Our lunch roundtable group felt that taking this initiative to get to know more about the work of our collaborators can help build a good working relationship and reduce the feeling of working on opposite sides of the problem.

Differences in vocabulary were also iden-

tified as an occasional barrier to effective cooperation. A researcher or a statistician who uses unfamiliar technical words distances the partner from the collaboration. Here, too, the statistical consultant can take the initiative to cross this barrier by asking lots of questions about aspects of a problem that are unclear. It is also important for the statistician to provide explanations that are at a technical level that collaborators can understand.

We also focused on how to provide more insight into what statisticians can do as collaborators. Continuing with the theme of the “site visit”, we speculated about what we would show our collaborators if they were to visit us. This is where our lunchtime discussion ended, so it remains an open question.

If you have some creative ideas about what you would do or show a non-statistician “site visitor” that would increase their understanding of what statisticians can do as collaborators, we would like to hear from you. Just contact Janice Derr at Jderr@cvm.fda.gov or Tom Loughin at loughin@stat.ksu.edu.

Many thanks to the participants for contributing to a very interesting and productive discussion.

“Some Observations on the Practice of Statistics in Legal Proceedings”

Discussion leader: Dennis Gilliland, Michigan State University

At the table were two faculty/researchers in biostatistics, two faculty/researchers in statistics, an analyst with a large consulting firm, and a recently retired analyst from government.

Two in the group had testified as experts in legal proceedings and were looking forward to more opportunities of this type as they pursue typical academic paths. Two were looking forward to consulting as their main activity with an expectation that some of the work would be in legal arenas.

Much of the conversation dealt with the ethical issues that naturally arise through work for a client in an adversarial setting. Does one

have an ethical obligation to share information that speaks to the truth regardless of whether it is harmful to the client? How should one handle such information when it is not solicited in the proceedings? Professors and researchers rush forward with unbridled enthusiasm to share ideas and discoveries with their students and colleagues. However, there is not a free rein in the court, since attorneys and judges orchestrate the flow of information.

It was agreed that the expectations of the client and the expert should be openly discussed before accepting a chance to speak out in a legal proceeding.

“Checklists to Consider in a Private Consulting Practice”

Discussion leader: George Milliken, Kansas State University

The participants at this table came from a variety of backgrounds. All want to run a statistical consulting business some day. There were persons who work full time as a statistical consultant in the private sector, college professors looking for something to do after retirement, and people who currently have a statistical consulting business.

A checklist was passed out that contained items concerning the type of business one could establish and liability insurance needs. For those who might have employees, employee benefits were discussed including social security, state and federal taxes, health insurance and retirement plans.

Once the business has been established, it needs to be advertised. Those present dis-

cussed several marketing methods from developing a brochure to using the World Wide Web. They also discussed the need to work within their capabilities and to use their own specialties as the basics of the advertisement.

The problems of forming a customer base were discussed. For those working with regulatory agencies, standard operating procedures are a must, particularly for data handling, data analysis, and the form of the reports provided by the consultant.

Start-up costs were discussed. These include permits and fees (such as becoming incorporated), computing and office equipment, software licenses, business cards, brochures and supplies.

Finally, and of most interest to all, was the discussion of how to price consulting work. There are advantages of long-term contracts that provide stability, but the reality is that most statistical consulting jobs take only a short time. Thus, alternative pricing strategies are needed.

It is desirable to have a contract if possible, for longer-term projects. If a contract is not needed, then the services can be priced on a per hour basis. Some preferred to build overhead into their cost per hour basis and others added overhead from 20 percent to 50 percent of the per hour basis.

The discussion ended with comments about the type of customers one might encounter and possible strategies for handling the difficult ones. The group was very lively and all contributed to the discussion.

Did you know. . .

- Links to more than 20 university-based statistical consulting centers are found on the Consulting Section Website
- There is also a link to a directory of other statistical consulting services at our website
- Previous newsletters are posted at our website, usually in PDF form

Check out our website, www.amstat.org/sections/cnsl

Notes from the Editor

Thanks to Ron Wasserstein (our esteemed chair) and Karla Genter (L^AT_EX 2_ε expert extraordinaire) for following through on the development of a useable image of our Section logo. It looks great, doesn't it?!

The summer issue of *The Statistical Consultant* was very late in reaching you this year. I was moving from Texas to Oregon while it was at ASA, supposedly being printed and mailed. When it didn't arrive in my mail, I initially thought it was because all of my mail was delayed by forwarding. However, it emerged that there were a series of miscommunications between ASA and the printer, which left the newsletter on a loading dock somewhere. While I still haven't received a copy, I have heard from reliable sources that it did eventually arrive in members' mailbox. It is now also posted on our website (www.amstat.org/sections/cnsl) in PDF form.

The roundtable luncheons at JSM this year (see summary above) suggested some paper topics to me. I would particularly welcome papers on any of the following topics:

- Using the WWW to market a consulting business
- Teaching clients about what a statistician does
- Guidance on costing a consulting project
- Tips and pitfalls in developing a marketing brochure for a consulting practice

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- Standard operating procedures for working with a regulatory agency as a consultant
- Costs of starting up a consulting practice
- Sample contract verbiage
- Bibliography of articles/books on how to do statistical consulting

A new book on statistical consulting is scheduled for publication this fall: Javier G. Cabrera, Andrew McDougall, and A. McDougall (2001) *Statistical Consulting*. Springer Verlag; ISBN: 0387988637. If you have seen it, what do you think of it? Is it useful to a practicing consultant? Would it be a good text for a course or intern? You are invited to submit an article describing the book and your evaluation of it.

I invite papers on this and other topics related to statistical consulting practice or training of consultants. I will also consider write-ups of 2001 JSM presentations that you do not intend to publish elsewhere.

If you decide to submit an article, it should be 500 to 1000 words (that's not very long, folks). Copy deadlines are three times a year: October, February, and May. See contact information below. Email is preferred for actual submission of the article, but I am always happy to hear from readers via any medium.

Many thanks to Karla Genter for her continuing excellent work in doing the markup and layout for the newsletter.

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