

# THE STATISTICAL CONSULTANT

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### Call for Invited Sessions for JSM 2001

The Statistical Consulting Section is recruiting organizers for invited sessions at the 2001 Joint Statistical Meetings in Atlanta, Georgia. The Section expects to be awarded up to four invited sessions at those meetings.

Prospective organizers are encouraged to contact Rob Tempelman, Michigan State University, to discuss an idea and to contact potentially interested speakers before February, 2000. Sessions addressing technical issues of broad interest are particularly sought.

Please contact: Rob Tempelman  
Michigan State University  
517-355-8445 (voice)  
517-353-1699 (fax)  
tempelma@pilot.msu.edu

# What my Mother Never Told Me: Learning the Hard Way

Barbara L. Mann, Wright State University,<sup>1</sup> Linda Quinn, QED Industries, Inc.,<sup>2</sup> Thomas Boardman, Colorado State University,<sup>3</sup> Thomas Bishop, Bishop & Associates, Inc.,<sup>4</sup> and Brenda Gaydos, Eli Lilly<sup>5</sup>

A Special Contributed Panel at the 1999 Joint Statistical Meetings addressed the topic: “What My Mother Never Told Me: Learning the Hard Way.” The panelists were the authors (see above). Barbara L. Mann organized the session.

The panelists were invited because of their extensive experience as consultants in a variety of settings. The session began with short presentations by the panelists, who were asked to prepare remarks on one or two aspects of statistical consulting that he or she was never taught in any course, but had to learn by doing while actually consulting. They could address any aspect of statistical consulting: technical, managerial, interpersonal, organizational, or other.

Audience members added many other items to the list of helpful hints and suggestions. These are presented below in five broad categories: framing the problem, professional integrity, interpersonal communication skills, getting credit for one’s work, and payment.

## Framing the Problem

*Enumerative skills do not solve analytic problems, or statistical theory taught in the classroom is not for everyone.* “Finally, after beginning to understand the distinction between the enumerative and analytic problem, recognizing that almost all of the problems I had dealt with were analytic in nature, better approaches to problem solving began to emerge,

and credibility with my clients increased significantly.” (Tom Bishop)

*Understand the what and why.* “Take the time to fully understand the what and why driving a client’s request for services. What is the issue the client hopes to address, and why will addressing this issue support the ultimate goal? Understanding the what and why helps the consultant to work with the client to better define services and expectations. A client may be dissatisfied with deliverables that clearly and competently address their request for services, but yet, do not meet expectations in terms of addressing their research goals.” (Brenda Gaydos)

*Define the operational definitions before you start operating.* “The lack of understanding of basic scientific and mathematical principles, particularly the concept of operational definitions, leads to many errors in problem formulation and solution in the practical world. The lack of basic rational thinking skills has led many organizations to invest significant resources to solve the wrong problem in the wrong way. In addition significant business resources are consumed attempting to clarify and correct errors in thinking and communication.” (Tom Bishop)

*Some problems can’t be solved; some questions can’t be answered.* If you run into a problem that can’t be solved, explain to the client why and offer whatever alternatives you can think of that seem feasible.

<sup>1</sup>Wright State University, Dept of Mathematics and Statistics, Dayton, OH 45435 ([barbara.mann@wright.edu](mailto:barbara.mann@wright.edu))

<sup>2</sup>QED Industries, Inc., 1286 Gary Blvd, Brunswick OH 44212-2912 ([1mq2@po.cwru.edu](mailto:1mq2@po.cwru.edu))

<sup>3</sup>Colorado State University, 217 Statistics, Fort Collins CO 80523-1877 ([boardman@lamar.colostate.edu](mailto:boardman@lamar.colostate.edu))

<sup>4</sup>Bishop & Associates, Inc., 1585 Treadway Pl., Worthington OH 43235-1151

<sup>5</sup>Eli Lilly, Lilly Corporate Ctr, Drop Code 2233, Indianapolis IN 46285 ([blg@lilly.com](mailto:blg@lilly.com))

*Does the client know his/her own business?* Go down to the “shop floor” to find out how the job/research is done. Sometimes what management tells you isn’t what’s really going on.

*Don’t deliver just an answer; rather, help the client improve their project or process.* “A good consultant addresses the client’s questions; an excellent consultant works with the client to form the question. We do not always perform a service by supplying an answer to the question posed if it does not truly address the client’s ultimate goal. Knowledge of the value and limitations that statistical science can bring to the table can alter expectations for a project. The client often can benefit from assistance in forming their request because they may not be aware of the possibilities.” (Brenda Gaydos)

*Be aware of the value of your different perspective.* An audience member reported that he was told that his value to the company was that “You ask different questions than we do.”

## Professional Integrity

*It’s OK to say “I don’t know”,* as long as you are willing to go dig up the answer. It is much better to do this than to flounder or give incorrect advice.

*A client may misuse your work.* “[E]ven when I can keep to my statistical ethics and make the client happy, I could still feel like I had done a disservice to my profession. This occurs when the results of statistical analyses are not fully disclosed by the client or when limitations to the study and its results are ignored. Many times, the results of my analyses are re-summarized by the client for presentation elsewhere, sometimes with my knowledge, other times without; sometimes correctly and sometimes not. This is true for publications when the statistical ‘nuances’ are omitted for space requirements, or when used to support study or product claims.” (Linda Quinn)

## Interpersonal Communication Skills

*Assess the client’s knowledge of statistics.* “It is imperative for good communication to understand the client’s prior level of statistical knowledge and comfort level with statistics and statisticians. I learned the hard way, for example, that frequent use of statistical jargon does not equate to an understanding of statistical terms. In fact, it might even be an indication of an underlying feeling of unease with statisticians.” (Brenda Gaydos)

*Clients do not understand the concept of variation!* “Helping people understand the nature of the two types of variation, common and special causes, is one of the major jobs of the consulting statistician. We must be ever alert to the likely lack of understanding of variation by our clients.” (Tom Boardman)

*Watch your language.* “Parameter” means something different to an engineer than it does to a statistician. You need to understand and speak the language of your client.

*Ask the same questions several times in different ways!* “Early on I learned that I often would hear different answers to what I perceived as the same question. When I asked Dr. Horace Andrews at Rutgers University about this, he reminded me that our job as a consultant was to confirm our understanding of the client’s problem. Often this will require our subtle use of probing this same issue with multiple questions. As the client begins to understand their project, I have found that their responses to questions dealing with the same issue begins to converge.” (Tom Boardman)

*Build relationships.* If you are an individual consultant or have a small consulting business, your long-term relationships with your clients are among your most important assets. Building these relationships is critical to your success. Meet with your clients socially, as well as professionally.

*Be visible.* Take time to be at the customer’s location even if the work can just as easily be done at your own.

## Getting Credit for Your Work

*Statisticians often have to fight for authorship.* “Because I am in a consulting position where clients pay for my services, clients feel that I do not qualify in the same manner as they do for authorship. Authorship on consulting assignments should be discussed at the onset. Consulting statisticians who are entitled to authorship (and some statistical contributions do not [qualify]) should be recognized for their contributions.” (Linda Quinn)

*Sell yourself.* “[S]uccess on one project does not guarantee future business. Statisticians must recognize that they must sell services that are not viewed as significant by many potential clients or customers. Most statisticians cannot sit in their office waiting for [a knock on] the door... We have important services to sell, but we must get out of our offices to sell them.” (Tom Bishop)

*Establish your role as a collaborator.* “It can be difficult to make contributions, let alone be recognized for them, if you are an assigned (not requested) member of a multi-disciplinary research team. In this situation, it is often the case that you first need to determine the value you can bring to the project and then define your role. To be recognized for your contributions, it is important that the team members view you as a collaborator, and not as [a] number crunching support service... Therefore, it is imperative to build credibility as a scientist by selling yourself and your ideas, and also to develop inter-personal relationships.” (Brenda Gaydos)

*Be aware of the value of authorship.* Your name on a paper can generate important contacts, either as future clients or (for university consultants) opportunities to do reviewing and possibly editing for the journal.

*Confidential work.* Confidential or classified work will obviously not generate publications, but may generate internal documents. Just as for any other publications, it is important to establish rules for authorship of and responsibility for such documents at the be-

ginning of a consulting relationship.

## Payment

*How to set fees.* Determining a reasonable fee schedule is a difficult issue, particularly for beginning consultants. Some resources and techniques suggested by the panel and by audience participants include:

1. Look for fee schedules posted by University Statistical Consulting Centers on the Web. If the fees are not posted, they usually can be obtained with a telephone call.
2. Experienced consultants may be willing to share their fee schedules with you.
3. Use a “value to client” approach. Ask the client how much value your work will add to the project/product.
4. If the client knows what is “fair”, then the figure is “right”. Some negotiation may be appropriate.
5. Tom Bishop has three types of fees for service:
  - *hourly* (basically work that is done in town);
  - *daily* (for out of town work); and
  - *course* (a fixed fee for teaching a course).

*How long does it takes to get a job done?* There was general agreement that it is best to overestimate, especially before you have much experience. The “Rule of 3” was suggested: estimate the time, then multiply by three. Also, allow for “change orders,” that is, if the client starts adding new questions and analyses to the job, you need to be able to say that the cost will go up.

*Not everything is billable.* If you have to do some self-education, you have to decide how much of this is billable to the client. What amount of “digging” time do you bill client?

If you choose to let a problem rest for a while to give yourself a fresh perspective or to wait for inspiration, this “cogitation time” should not be billed to the client.

*Document.* Every billable item should be documented and clearly listed on your invoice.

*Pro bono work.* Look at pro bono work in the same way you would a charitable donation. Select the pro bono work you do to fit your own philosophy and support your own causes. However, do put a price on it. Let the recipient know that this is what it would have cost if you had charged.

*Consultant? Employee?* A recent lawsuit against Microsoft has changed the com-

pany/consultant relationship. Contractors now can work no more than 18 months without becoming an employee of a company. Forming a corporation or partnership is one way to avoid the time limit. A “limited liability” partnership is available in some states.

*Payment problems.* Some clients will attempt to do “cash flow management” at your expense, by either not paying on time or not paying at all. This situation is much less likely to arise if you have developed a long-term relationship with a client. One solution suggested by an audience member: produce periodic technical reports, which will be delivered only upon receipt of payment.

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## Client Expectations in a University Statistical Consulting Lab

**Holmes Finch**, University of South Carolina

Statistical consulting centers are a common feature at large research universities. Generally, these centers offer members of the university community free or nominally priced consultation in statistical methodology, research design and data analysis, including help with common statistical software.

An obvious facet of this work for the statistician/consultant is interaction with people from a variety of academic disciplines and a mixture of statistical competencies. These interactions present stresses for clients, many of whom come to the consulting session feeling intimidated by statistics and unhappy at not being able to solve their own analysis problems (Boen and Fryd, 1978). Some researchers believe that statistics will produce nothing short of a miracle, saving bad data, whereas others may view statistics and statisticians as working directly for them to accomplish their pre-

determined research outcomes (Boen, 1972).

There has been a great deal written about statistical consulting from the perspective of the statistician, outlining problems with clients as well as giving suggestions for practice. In contrast, there has not been much written from the perspective of the clients in their interactions with statisticians. Certainly, generalizations have been made about clients and their needs, with emphasis on those who are unreasonable or difficult to interact with. However, there has not been much work done examining clients’ expectations of statistical consulting and how statistics fit into the larger scope of their research.

Obviously, if statisticians understand what their clients want from the consulting interaction, they can work to improve the collaboration by addressing these expectations. Kimball (1957) stated that consultants must be careful

to avoid errors of the third kind, or “. . . giving the right answer to the wrong problem”, which he attributed to poor communication between the statistician and the client. To avoid this problem, some have argued that statisticians need to be taught communication or “people involving skills” (Barabba, 1991).

The objective of the research reported here is to determine what expectations clients of a university statistical consulting center bring with them, regarding both the consultant and the consulting process.

## Method

Qualitative research methods were used to gather and analyze the data for this study. Based upon an initial search of the literature, a set of interview questions was developed. Adjustments to these questions were made after pilot testing.

Fourteen graduate student clients of a statistical consulting lab at a research university were questioned in a semi-structured interview. The researcher asked every graduate student client who came to the lab during the summer of 1998 to participate in the study, and all of those who agreed were interviewed. Each interview was recorded and transcribed verbatim by the researcher.

Patterns in the data were investigated through development of domains and taxonomies. Based on what subjects said, the researcher decided which issues were important in understanding client expectations. He coded the data to reflect these large categories of meaning, called *domains*. Once the domains were established, the information included in them was further subdivided into finer shades of meaning known as *taxonomies*. Finally, a componential analysis was used to place the taxonomies in the context of who said what and under what conditions.

It is important to remember that the purpose of this research is to describe a group of people who may be typical of a certain type of client at a certain type of consulting cen-

ter. The degree to which this sample matches those found in other locales would determine how transferable to another context these results might be. For further information on techniques of qualitative data analysis, I recommend Spradley (1979).

## Results

Table 1 gives the distribution of clients by degree program, college, gender and ethnicity.

**Table 1. Demographic description of sample**

	Category	N
<b>Degree program</b>	PhD	10
	Master's	4
<b>College</b>	Engineer/Science	4
	Social science	5
	Other	5
<b>Gender</b>	Female	8
	Male	6
<b>Ethnicity</b>	White	11
	African American	1
	International	2

Two of the domains will be discussed here: *expectations of consulting* and the *role of the statistician*. Due to limited space, I have not included the complete outline for the domains, however they are available upon request.

## Expectations of Consulting

Four expectations were selected for inclusion here either because their meaning is not initially obvious or because they seem to contradict other terms included in this domain.

The first of the four expectations is *knowledge leading to independence*. Some clients discussed wanting to gain enough information about the statistical analysis so that they could use it on their own in the future, without the aid of a statistician. “I don't want [the statistician] to just tell me this is the statistical analysis you do and that's it . . . I want to

know why, so that in the future I don't have to go back to [the statistician] every time". In addition to independence in future research, some clients saw this type of knowledge as a way to better interpret the results of the current study.

In conjunction with this knowledge leading to independence is *critical knowledge*, which entails understanding why a procedure is used and what problems might be associated with it. "... I like to know when I leave someplace, here are the problems with this. Here are the things that are good about it, here is what's bad about it". Quite often clients voiced their desire for critical knowledge in the context of defending their method to a thesis or dissertation committee.

A third, and very different, expectation held by some clients was *answers to specific questions*. Interviewees talked of coming to the consultant needing the answer to a statistical question, and not necessarily wanting more than that. "I had expected that this problem had been dealt with before and that [the consultant would provide a solution]". These questions typically involved a data analysis approach that they wanted to use, the sample size necessary to use a particular procedure or the appropriate way to use software to do a particular analysis.

A final set of expectations involves *affective and logistical concerns*. For example, several interviewees said that timing was extremely important and that they needed quick feedback from the consultant in order to keep their research momentum or to meet a deadline set by a committee. Another expectation in this regard is for patience on the part of the consultant as well as a desire not to be made to feel stupid. Finally, several clients stated that they expect the consultant to give them ample time to explain their research problem and to properly understand the recommended analysis. "I'm looking for someone that's going to take the time to understand what I'm doing ...".

Based upon componential analysis of these

data, it appears that master's level students were not as interested in gaining knowledge as they were in getting an answer to a specific problem. Nor were affective concerns as important to master's level clients as they were to those pursuing a PhD. With respect to discipline, clients from the Colleges of Engineering and Science/Math were more likely than those from other colleges to want an answer to a specific question.

Of those who were seeking knowledge leading to independence, none also indicated that they came to the consultant looking for an answer to specific questions. Similarly, only one of the five individuals who came seeking critical knowledge also wanted an answer to specific questions. This suggests that there is a clear division between those clients who come to the consultant seeking deeper understanding of the statistical analyses used in their study and those who want an answer to a specific statistics question.

Finally, I explored the relationship between affective expectations and the other three expectations. Three of the five individuals who wanted knowledge leading to independence also mentioned affective expectations as being important, as did two of the five who indicated that they wanted critical knowledge. On the other hand, only one of the six people who wanted an answer to a specific question was interested in affective issues in consulting. To summarize both analyses, it seems clear that those individuals who wanted an answer to a specific question were focused on that issue to the exclusion of affective concerns as well as of a deeper knowledge of statistics.

## Role of Statistician

In addition to examining client expectations of consulting, I also asked clients their views regarding the role of the statistician in the research process. I identified four roles that clients expected the consultant to play.

The first of these is *guide*. The guide provides the client with help in deciding on a sta-

tistical strategy to analyze the data they have collected and answer their research questions. As one subject said, “I mean your guidance for what I needed to do as far as what analyses to run.” According to several subjects, this guidance did not involve the statistician in the actual analysis of data. “[The client asks the statistician if a particular analysis is okay to use], and the statistician says yes, or no or maybe, if this or some kind of general guidance and let [the client] do it themselves.”

A second role that was mentioned by several interviewees is that of *teacher*. Clients who mentioned wanting a teacher expressed an interest in learning more than just the correct test to use in a given situation. Rather, they were interested in understanding why a statistical procedure is appropriate for a given scenario and how the procedure works. One client stated that she expected a dialogue with the statistician regarding the proposed analysis plan, “...maybe even a discussion so that I could reason [the rationale for the analysis] out myself so that if I’m asked anything that doesn’t follow the script I can [respond].” Others indicated that the teacher should prepare them to work on their own. “. . . I’m looking to someone who helps me with statistics as a way for me to get more independent with doing it.”

The third role that I will discuss here is that of *data analyst*. While some clients saw the *analyst* as limited to just “number cruncher”, who can’t or won’t do anything else, others simply saw this role as part of a set of roles, without any negative connotations. In either case, however, the analyst was to manipulate the data using statistical procedures. “Well, I think their role to me, generally speaking, would be one of data manipulation, data massaging . . .”

The fourth role is that of *quality assessor*. Here, the consultant’s function is to check what the client has done for accuracy (and perhaps integrity) and point out any errors or problems. “. . . I would also want somebody to kind of make sure that I have the *i*’s dot-

ted and the *t*’s crossed in so far as . . . what would you call it, a QA check in itself”. This “QA check” is broadly conceived and includes looking at the conduct of analysis, the initial research design, interpretation of results and writing of findings. As with the guide, most of the work fell to the client, with the consultant serving a largely supporting function.

I found that master’s level students, as well as those from engineering and science/math, were more likely than social scientists or those from liberal arts to view the consultant as an analyst rather than a guide or a teacher. These results are summarized in Table 2.

**Table 2. Pattern of Expectation by Type of Client (number of clients per type given in parentheses): (a) Guide, (b) Analyst, (c) Teacher, (d) Quality**

	(a)	(b)	(c)	(d)
<b>PhD</b> (10)	7	4	5	5
<b>Masters</b> (4)	2	3	1	1
<b>Engineer/Science</b> (4)	1	2	2	2
<b>Social Science</b> (5)	5	2	2	1
<b>Other</b> (5)	3	3	2	3

An interesting pattern emerged that contrasted the *teacher* to the other roles. Of the nine individuals who expected the statistician to be a guide, only two also expected a teacher. Only two of the seven individuals who indicated analyst also said they wanted the statistical consultant to play the role of teacher. On the other hand, four of the nine people who wanted a guide also expected an analyst. The only appreciable crossover with *teacher* was *quality assessor*, with three of the six subjects who expected a teacher also wanting some quality checks. These data are summarized in Table 3.

**Table 3. Pattern of Client Expectations**

Guide	Analyst	Teacher	Quality
4	4	0	2
2	0	2	0
3	0	0	1
0	3	2	1
0	0	2	2

In short, it appears that *teacher* is a distinct role from *guide* or *data analyst*. On the other hand, *quality control* appears to be something that is ubiquitous, not limited by other roles envisioned by the client.

### Implications for Consulting Practice

- The client comes to the consultant with a complex and sometimes contradictory set of expectations. Therefore, the statistician should have interpersonal skills sufficient to discern what the client expects, and what the core issues of the research problem are.
- Some clients have very narrow expectations of the statistician’s role. It is important for the consultant not to be limited by these expectations, but rather to assess the situation and play the role needed to move a client’s work forward. This may be particularly applicable to a client who has predetermined the analysis and who only wants to discuss strategy, but who may in fact need to be guided into another statistical path.
- Clients who are relatively inexperienced with research or statistics (master’s students in this context) may have more limited expectations of the consulting process, and therefore may not be aware that the statistician can provide more help than they originally expected.

- For many clients, time is a major issue. Some are concerned about getting timely feedback from the consultant so that they do not lose research momentum, whereas others may have deadlines that are pressuring them. In either case, the statistician must respond to scheduling needs when possible, and help them to understand the true time frame of research when alacrity is impossible.
- The consultant must be aware of the affective needs that some individuals bring to the consulting process. He/she should exhibit patience and try to set the client’s mind at ease with regard to his/her (the client’s) level of knowledge.

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## Membership of the ASA Section on Statistical Consulting Executive Committee (Effective January, 2000)

### Chair

**Brian Yandell**  
University of Wisconsin  
Department of Statistics  
1210 West Dayton Street  
Madison, WI 53706-1685  
yandell@stat.wisc.edu  
Term of Office (as chair): 1/00-12/00

### Past Chair

**Janice Derr**  
FDA Center for Veterinary Medicine  
Metro Park North 2  
HFV-124 Room N-333  
7500 Standish Place  
Rockville, MD 20855  
jderr@cvm.fda.gov  
Term of Office (as chair): 1/99-12/99

### Chair-Elect

**Ronald L Wasserstein**  
Washburn University  
Academic Affairs Office  
1700 College  
Topeka, KS 66621-1110  
ron@washburn.edu  
Term of Office (as chair): 1/01-12/01

### Program Chair-Elect (for 2001 meeting)

**Robert J. Tempelman**  
Department of Animal Science  
1205H Anthony Hall  
Michigan State University  
East Lansing, MI, 48824-1225  
tempelma@pilot.msu.edu  
Term of office: 1/00-12/01

### Executive Committee

**Diane L Fairclough**  
AMC Cancer Res Ctr  
Biostatistics  
1600 Pierce St  
Denver, CO 80214  
fairclough@amc.org  
Term of Office: 1/98-12/00

**Matilde Sanchez**  
Merck & Company  
PO Box 2000 RY33-404  
Rahway, NJ 07065-0900  
matilde\_sanchez@merck.com  
Term of Office: 1/99-12/01

**Nancy M. Fenn Buderer**  
St. Vincent Mercy Medical Ctr  
Research Dept.  
2213 Cherry St  
Toledo OH 43608  
nancy\_buderer@mhsnr.org  
Term of Office: 1/00-12/02

### Newsletter Editor

**Christina M. Gullion**  
Department of Clinical Research  
Medical City Dallas Hospital  
7777 Forest Lane, Suite C-740  
Dallas, TX 75230  
christina.gullion@columbia.net  
Term of Office: 1/99 - 12/01

### Publications Officer

**Nancy G. Berman**  
Harbor-UCLA Medical Center  
1000 W Carson Street  
Torrance, CA 90509  
Phone: 310/222-1874  
Fax: 310/533-0627  
berman@gcsrc.humc.edu  
Term of Office: 1/99-12/00

## Section Council Representatives

**Michael H. Kutner**  
The Cleveland Clinic Foundation  
Biostats & Epidemiology/P88  
9500 Euclid Ave  
Cleveland, OH 44195  
mkutner@bio.ri.ccf.org  
Term of Office: 1/98-12/00

**Samuel X. Lowe**  
AT&T, Rm 3B321  
379 Campus Dr  
Somerset, NJ 08873  
sxlowe@att.com  
Term of Office: 1/00-12/02

## Secretary/Treasurer

**Stuart Gansky**  
University of CA, San Francisco  
3333 California St., Suite 495  
San Francisco CA 94143-1361  
sgansky@itsa.ucsf.edu  
Term of Office: 1/00-12/01

## Staff Liaison

**Mary Fleming**  
American Statistical Assn  
1429 Duke Street  
Alexandria, VA 22314  
mary@amstat.org

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## Door Prizes Awarded at Consulting Section Annual Business Meeting in Baltimore

The Annual Business Meeting of the Consulting Section concluded with a drawing for the many door prizes contributed this year. Book publishers and software vendors were generous with their contributions. Many companies donated multiple books or copies of software, which were greatly appreciated by the winners.

The Executive Committee would like to thank the following donors for their contributions:

**Scott Isenberg**, McGraw-Hill  
**Gwen Stimely**, Minitab  
**Margaret Maio**, Springer, NY  
**Lori Seabright**, S-Plus  
**Fred Filler**, John Wiley & Sons  
**Curt Hinrichs**, Duxbury Press  
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**Laura Gilmore**, Stata  
**Laura Potter**, Addison-Wesley  
**Patrick Farace**, WH Freeman & Co.  
**Marti Dunn**, Sudaan, RTI

Thanks are also due to Elaine Allen, chair of the Membership Committee, for organizing the door prize segment of the Business Meeting.

## Letters to the Editor

### To the Editor:

Thank you for the invitation to respond to Richard Browne's article about our profession in *The Statistical Consultant* (1999, 16:1-2, pp 3-4). I was angered by the article and feel compelled to respond to it. I think Dr. Browne does a good job of pointing out the important non-mathematical work that statisticians do, and he correctly identifies the image problem and stereotyping that we face as statistical consultants. However, a name change offers a very superficial and ineffective solution to a very serious problem.

Statistics has been our profession for over 175 years. Although statisticians in the 19th century did not do much of what we do today, the work of the Pearsons, Gossett, Neyman and Fisher in the early 1900s established much of the job of today's working statistician.

Today we use more sophisticated tools and take advantage of theoretical and applied advances in statistical computing to do our jobs. However, the job remains essentially (1) design and analysis of experiments; (2) data analysis and modeling; and (3) generally quantifying uncertainty in data. I think item (3) is a general statement of what an applied statistician or statistical consultant does.

It seems to me to be foolish to abandon a profession and a name that has identified us for so long. I do have a slight preference for statistical science as a name for our profession because the statistical method is at the heart of most scientific endeavors. But that is as far as I would go.

I have been bothered at times when I tell a new acquaintance that I am a statistician and they ask what baseball team I work for. Some people who follow baseball closely and have no exposure to statistics have heard of

baseball statisticians, like Alan Roth of the Dodgers, who collect, summarize and spit out statistics on the team to aid announcers like Vince Scully. Obviously such an image is misleading and is far removed from the work of the professional statistician.

I am also taken aback when people cringe at the mention of statistics and either say "oh statistics, I hated that class", or admiringly say "statistics, you must be a very good mathematician." The image of statistics as a dry and boring subject is real. But whose fault is it? It is not the fault of the name.

We as statisticians have been poor teachers and poor communicators. The solution is to become better teachers and better communicators. There are terrific books out there to lead the way, such as *Statistics : A Guide to the Unknown* (J. M. Tanur, 3rd ed. Brooks/Cole, 1989), that explain the variety of interesting statistical problems in everyday life.

Quantitative literacy is a serious part of the current work of the American Statistical Association. The greatest impact comes with our involvement in schools starting with kindergarten.

For instance, last year I went to my child's kindergarten class, where I explained that I as a statistician helped to make sure that pacemakers are safe and effective products. A company video showed the children how slow heart rates (bradycardia) can negatively affect the quality of life for children and adults and that the implantation of a pacemaker in their chest can return them to "normal" function. This was exciting and fascinating for them. One of my young sons is already interested in following in my footsteps.

I have continued my involvement in elementary schools using some of the new activity-based methods for teaching basic statistical concepts. The teachers and the students appreciate my involvement and these programs enhance the students' interest in statistics and mathematics.

It will take time for our image to improve,

perhaps a generation. However, this will take place only through good and hard work on our part and not by changing our name. Shakespeare said it so well. "What's in a name? A rose by any other name would smell as sweet." Changing our name will not eliminate the bad smell!

**Dr. Michael R. Chernick**

*Senior Biostatistician, Biosense Webster*

*3333 Diamond Canyon Road*

*Diamond Bar, California 91765*

*mchernic@crdusba.jnj.com*

### **Reply from Dr. Browne:**

I am pleased that I was able to generate some comment. It appears that Dr. Chernick thought I was simply proposing a name change (e.g., changing *janitor* to *custodial engineer*). I would agree that such an action would be pointless. My purpose was to ask our profession to consider what it does that is of greatest value to our clients and then ask if the title we inherited is a good reflection of it.

For example, we have people at the hospital that started out as photographers using 35mm cameras. They are still good photographers, but now they are known as Media Specialists working in the Media Services Department. Was it simply a name change?

No. They are now also versed in the use of video cameras, electronic (non-film) cameras, retouching of scanned images and the creation of composite images, Powerpoint<sup>®</sup>, interfacing computers with media projection equipment, etc., etc. If I always referred to them as "the photographers" I suspect they would view that appellation as quite limiting. I view the title *statistician* in the same way.

I heartily applaud Dr. Chernick's efforts to improve the perception that young people have of our work. However, I believe Dr. Chernick's examples support my premise about how the title of *statistician* and the field of *statistics* is viewed today.

**Richard H. Browne**

*Research Department*

*Texas Scottish Rite Hospital for Children*

*2222 Welborn St.*

*Dallas, TX 75219*

*rhbrowne@airmail.net*

## Comments from the Section Chair

**Janice Derr**, Food and Drug Administration

By the time you get this newsletter, the millennium will be nearly finished, as will be my term as chair of this section. Not that I was chair for the whole millennium, you understand, just for 1999! I want to thank all of the officers and members who pitched in this year and helped to move our section forward. I feel that we worked hard on establishing some infrastructure for the section, so that we now have a sense of continuity and direction for the years to come.

In 1999 we got a start on the section's web page, and will be continuing to develop and improve it. We established some ad hoc committees to address specific areas of section activity: membership, the web page, and program. We also developed some "time and task" descriptions for key officer positions within the section. With these in hand we hope that future officers will have a clear road map for the year ahead.

The Joint Statistical Meetings in Baltimore this past August was the setting for a lot of activity for our section. We sponsored and spoke at sessions, we attended meetings, we ate meals together, and we brainstormed. Because of all of the behind-the-scenes work that many members helped to accomplish, we were able keep the routine discussion of business at the business meeting very brief.

Following the discussion of business, we had an exciting idea-generating session. We divided into four discussion groups: membership, the web page, program, and outreach to our clients. Each discussion group was asked to generate ideas for how we might make the best use of the section's resources in order to

serve our membership. The room was alive with discussion! After about 30 minutes we re-assembled, but we could have talked for much longer. The discussion leaders then summarized the main points from each group, and we discussed them further.

I was the discussion leader for the "outreach to clients" group, since this is a topic that is very important to me. Just to give you a flavor of the discussion, one of the many ideas contributed by this group was: The section can provide "success stories" on its web site — examples from statisticians who have been successful in promoting good statistical practices at work, or in improving the perceived value of statistics at work. I think this is a great idea, what do you think?

You will find the ideas from all four discussion groups summarized in the minutes to this meeting [Editor's note: Go to [www.amstat.org](http://www.amstat.org)]. We have spent the remainder of this year reflecting on these ideas and starting to develop them into an action plan that can help direct the section's activities for years to come. If any of these ideas appeal to you, I hope you will volunteer to help make it happen. And do consider attending the business meeting at the '00 JSM in Indianapolis. I am confident that you will enjoy brainstorming with your statistical consulting colleagues.

Thank you for giving me the opportunity to serve the section as chair in 1999. I know there are some great years ahead. My best wishes go to Brian Yandell, the chair in 2000, and to Ron Wasserstein, the chair in 2001. They will provide a great start to the millennium!

## Notes from the Editor

Christina M. Gullion, Editor

*Contact information:* Clinical Research, Suite C-740  
Medical City Dallas  
7777 Forest Lane  
Dallas, TX 75230  
Fax: 972-566-4715  
Phone: 972-566-4718  
[christina.gullion@columbia.net](mailto:christina.gullion@columbia.net)

The two major articles in this issue (“What my Mother . . .” and “Client Expectations . . .”) originated in sessions at JSM that were sponsored by the Statistical Consulting Section. These and the exchange of views between Rich Browne and Michael Chernick address aspects of statistical consulting that are not technical or mathematical. These professional concerns distinguish the work of section members from that of other types of statisticians. I hope you find these interesting and useful.

Our Chair, Janice Derr, recounts events at the Section business meeting this year. I am still energized by the excitement that filled the room as members of the Section talked and worked together, sharing ideas for the future of the Section. We owe Janet a vote of thanks for a dynamite meeting, as well as for her leadership this year.

Please heed Rob Tempelman’s call (plea?) for ideas for the 2001 meeting. Yes, 2001. Planning goes on that far in advance. Many aspects of the 2000 meeting were decided by the end of the 1999 JSM. Although it is hard to think that far ahead, it is important to do so.

A number of measures have been put in place to moderate the growth of the JSM, which means competition between Sections for

invited or other special sessions is more intense. Our Section’s success in retaining the number of invited sessions depends in part on coming up with good ideas, as well as attracting large attendance at JSM. Sessions that are co-sponsored by two or more Sections are particularly welcome, since these “stretch” the number of sessions that address the concerns of Section members.

As I indicated in the previous issue, I hope that this newsletter can be a lively forum for exchange of ideas and information. I welcome comments on anything published in the newsletter. You may address them to me privately or frame them as a Letter to the Editor for publication.

In addition, if you would like to share your ideas or experience in some aspect of statistical consulting with the other members of the section, please contact me about writing an article. Submission deadlines for future issues are February 1, May 1, and October 1, 2000.

Elaine Allen continues to assist me with editing the newsletter. In addition, I’d like to acknowledge with thanks the assistance of Karla Hommertzheim, who did the  $\LaTeX$  markup and layout for this issue. Karla is a statistics graduate student at Southern Methodist University.

*THE STATISTICAL CONSULTANT*  
Christina M. Gullion, Editor  
c/o American Statistical Association  
1429 Duke St.  
Alexandria, VA 22314-3402