THE STATISTICAL CONSULTANT

Section on Statistical Consulting
Karen Copeland, Editor; Christopher Holloman, Assistant Editor

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IN THIS ISSUE

Travel Award Program

Each year the statistical consulting section provides up to three travel awards for organizers of topic contributed sessions at the Joint Statistical Meetings (to be held in Salt Lake City, UT, in 2007). Your session can either be a panel discussion or a collection of 5 papers and should be a topic of interest to statistical consultants. The award consists of your conference registration fee and a $500 reimbursement for travel expenses.

To apply, please submit a short proposal of your session to Phil Chapman at `phil@stat.colostate.edu` no later than 5pm MST January 10, 2007. The proposal should provide an overview of your session and indicate representative titles and speakers. Speakers do not need to be confirmed for this proposal. Speakers will need to be confirmed by the JSM registration deadline, February 1, 2006. The section executive committee will decide upon the awards within the week following January 10. Questions, contact Phil Chapman at `phil@stat.colostate.edu`.

JSM 2006, Session #131: Having an Impact in a Multidisciplinary Setting

Janice Derr, Food and Drug Administration *
Lillian Lin, Centers for Disease Control and Prevention †
Kevin Cain, University of Washington ‡
W. Scott Clark, Eli Lilly and Company §
Christina Gullion, Kaiser Permanente Center for Health Research ¶
Janet Powell, University of Washington ‖

How can statisticians improve their effectiveness in a multidisciplinary setting? The panelists

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in session #131 of the 2006 JSM considered this question from their experiences in government, academia and industry. Panel members, four statisticians and one non-statistician investigator, drew from their own experiences and also from a set of "consulting tales." These tales, available in a handout, were developed from contributions of members of the Statistical Consulting Section and were circulated in the *Statistical Consultant* newsletter prior to the session. Chris Gullion, as session chair, did an excellent job of moderating the panel, involving the audience in the discussion, and also contributing her insights.

Several common themes emerged from the session. Janice Derr discussed the need for a statistician to be fully involved in the broader purpose of the team. For illustration, she contrasted two of the consulting tales, one where a statistician used his commitment to the overall goal of the project to persuade an investigator to provide a more balanced report of the results of a study, and one where a statistician was not able to obtain even the basic information that she needed to answer the client's question. She proposed that a full involvement takes not only expertise in statistics, but also non-statistical skills, such as skill in communication and team participation, and a vision of the broad role that statisticians can play in a multidisciplinary setting.

Scott Clark highlighted two key roles within industry and how impact could be successful in each of these. The first role was that of a statistician as a trainer/consultant. In this setting, the statistician would not have the time or opportunity to become integrally involved in his clients' projects. The second role was that of a statistician that serves as a full collaborator dedicated to a multidisciplinary team. In both cases, consistent themes emerged that defined effectiveness and success. While technical expertise is critical for success, leadership, influence, clear communication, innovation, humility, and caring were also discussed as characteristics of the industry statistician having impact.

Kevin Cain proposed that a statistician can best serve the client by being a 'devil's advocate' or 'professional skeptic' who constantly asks "What flaws would a skeptical critic find in this study design or analysis or interpretation of results?" which leads to "How can the study be designed or analyzed to overcome these criticisms?" In his environment (the research office in a School of Nursing), advice on statistical analysis methods is only a small part of the job. Helping clients think through their scientific goals, working out details of study design and implementation, and figuring out how to display and interpret results are the major tasks. In fact, refining a good idea for a research study into concrete, specific aims and study design is one of the most challenging parts of doing research, and something with which an experienced statistician can be a great help. Kevin warned about the challenge of finding the right level at which to talk with each client, neither talking down to nor over the head of the client, and of the danger of sometimes being too dogmatic in insisting on statistical purity (for example, obsessing about a potential bias which in practice may be insignificant). He also emphasized the importance of keeping statistical analyses simple and understandable to the intended audience. The simplest analysis that is not statistically wrong is usually the best way to go.

Lillian Lin emphasized the importance of the context of the consulting interaction. A statistician who is on an equal footing with others in an interdisciplinary setting will likely be more fully engaged but will also have less recourse when things go off track. Context also encompasses work culture. A statistician needs to try to understand the context of the individual consultation, for example, by finding out what issues the researcher is grappling with both scientifically and in his or her research setting. Statisticians need to learn about the research and about their research collaborators so that it is easier to establish a dialogue or common language. Statisticians need also to introduce researchers to their own work culture, that is, to explain what statisticians need, not only in order to do their best work, but also for job satisfaction and career advancement.

Statisticians don't always have the opportunity to hear directly from the people they work with. Luckily, Janet Powell accepted the invitation to present her perspective as a medical investigator working in the field of rehabilitation research. She had the audience's full attention as she presented her insights and suggestions. Janet also provided a summary of her talk. Although it is a bit longer than the summary from each statistician on the panel, it embodies many of the common themes of the panel, and may be helpful to the readers of this Newsletter who were not able to attend the session at JSM. Her summary follows:

> From my perspective as a rehabilitation medicine researcher, one of the things that is helpful for statisticians to realize is that clinical researchers are highly varied in the expertise and expectations they bring to interdisciplinary collaborations. Clinical researchers certainly have a wide range of statistical knowledge. They also have a wide range of awareness of the adequacy of their statistical knowledge and of the implications of having incomplete or inaccurate knowledge. As a result, one important function of the statistician is to serve as an educator, teaching not just about statistical methods but also about the role of a statistician in an interdisciplinary team. Recognizing that adult learners are interested primarily in knowing what they need to know and in having information presented in a focused, efficient manner can be helpful in developing effective educational strategies. These include identifying and speaking to the level of knowledge and specific needs of each collaborator and each audience.
>
> It is also important to realize that clinical researchers are similar in that almost all bring an inherent bias to the consulting relationship. That bias stems from a belief in what does, or should, work based on their clinical experience and expertise. It also comes with the hope, and, sometimes, the expectation that a particular approach or treatment will also work statistically in a research study. While such biases could easily be viewed as a drawback in a statistician/clinical researcher collaboration, they can also be seen as an advantage. They can result in researchers bringing a passion to the collaboration that can serve as a motivating force and help sustain the effort needed to initiate and persist in conducting clinical research despite the associated obstacles. Such biases can also bring an important real-world relevance to the research. However, the potential for bias on the part of the clinical researcher makes it even more important for the statistician to remain unbiased while providing statistical expertise.
>
> In my opinion, statisticians can help facilitate effective collaborative relationships with clinical researchers by being proactive in being included in research teams from the inception of projects. In all situations, asking the questions needed to gain a clear understanding of the research and related clinical issues should be considered a pre-requisite to providing assistance. As a study progresses, it can also be beneficial for statisticians to assist researchers in checking for meaning in the numbers from a clinical perspective, while simultaneously checking for meaning in the numbers from a statistical perspective. At the same time, keeping data analyses focused on the research question can avoid problems associated with giving too much information, which can overwhelm the researcher and may confuse rather than clarify the issues.
>
> In my opinion, collaborative relationships could be further enhanced by training statisticians in consultative approaches and methods along with real-world practice providing consultation in a variety of settings. Specific training in interpersonal communication skills, including checking for understanding, giving "bad" news, and negotiation, would

be helpful. Focused training in teamwork and group dynamics could help the statistician be more effective in interdisciplinary interactions. Lastly, training in teaching in informal and formal settings has the potential to improve the ability of statisticians to increase understanding by other disciplines of their profession and the skills they have to offer.

Statisticians in Court

Mary Gray, American University *

[*Based on a presentation at the JSM 2007 in Seattle in August 2007. A more extensive version will be available on the CD version of the conference presentations.*]

Many express surprise that I am both a statistician and a lawyer, believing that somehow the ways of thinking are incompatible. My late husband always said that mathematics and the law both rely on an axiom system; the only difference is that the law's is inconsistent.

Cautions

Be that as it may, there are definitely some features of the two disciplines that make for potential gaps in understanding when statisticians work with lawyers.

The role of the statistician in an effective partnership in a legal setting is

- To present the evidence clearly and ethically.
- To prepare the litigator to deal with statistical evidence.

In doing this, there are several cautions that the statistician must observe:

- Legal proceedings are *adversarial* - there are likely to be two quite different interpretations of the evidence, both presented by statisticians.
- Expert testimony cannot reach legal conclusions - the statistician can say, for example, that there is a statistically significant difference between the salaries of men and women unexplained by legitimate factors in the model but cannot say that there is discrimination.
- Early involvement is essential - if the statistician has no input into data gathering, (s)he is likely to be faced with a "garbage in, garbage out" situation.
- Statisticians bear responsibility for the methods they use and the conclusions they reach.

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- Statisticians can and should be held accountable for their work.
- Because of the nature of their role in adversarial legal settings, it is essential that statisticians carefully guard their reputations.
- Statisticians are experts, not advocates.
- It is important that statisticians not allow unrealistic expectations of what they can accomplish.[†]

Above all there needs to be a clear understanding of what the statistician can and is expected to do. What questions need to be answered? What data are needed? The importance of data needs to be conveyed very early to the lawyers on the case. Getting the data can be a major problem, often requiring extensive back and forth between lawyers on both sides, often culminating in court intervention. Then, as in any problem solving, the data will undoubtedly need a lot of cleaning and grappling with the extent and form of what is available. In addressing the issue of relevant data and appropriate methodology, it is important to keep in mind the possible strategy of the opposition and be prepared to look at alternate methods and interpretations.

Statisticians working as experts in a legal setting have a broader responsibility than merely to the client. They must attempt to promote and preserve the confidence of the public by not exaggerating the accuracy or explanatory power of the data and methodology. Adequate information to permit their methods, procedures, techniques, and findings to be assessed must be provided. Obviously statisticians should not in this context - or any other - promise more than they can deliver nor allow themselves to be pushed to reach conclusions that they cannot support. Uncertainty should be addressed rather than minimized.

Misuse of statistics

The classic case of the misuse of statistics dates back to *People v. Collins* [68 Cal. 2d 319 (1968)], where not only were probabilities of non-independent events blithely multiplied together, but the prosecutor claimed that a probability of 1/12,000,000 of a pair of suspects having the designated characteristics meant that only one such pair could exist in a population of 12,000,000. Even worse, some thirty years later a similar computation in *Wilson v. Maryland* [370 Md. 191 (Ct. of Appeals of Md 2002)], a SIDS case, resulted in a claim that the probability of the defendant's innocence was 1 in 10 million. In both cases convictions rested heavily on the faulty statistics and were overturned, but only after the defendants had spent considerable time in prison. Misuses of SIDS ("cot death" in the UK) statistics by a physician in the UK courts led to several, in British parlance, "unsafe" convictions that were overturned and over 250 cases that were being reviewed. The physician who had testified was "struck off," a nice British procedure that applies to physicians but alas, not to statisticians.

Another stumbling block in statistical evidence is the failure, not only of the courts but also of so-called "experts" to understand p-values. Two cases currently before the U.S. Supreme Court are on appeal from decisions in which the courts below refused to be misled by the misuse of statistics, but the distortion may well be brought up once again in oral argument. *Gonzales v. Carhart* and *Gonzales v. Planned Parenthood* involved state regulation of "partial birth abortions" with the

[†]For a more thorough discussion of some of these issues, see Kadane, J.G. (2005), "Ethical issues in being an expert witness," Law, Probability & Risk, vol. 4, pp. 21-23.

states relying in part on a misinterpretation of the *Chasen* study.[‡] In the study the null hypothesis was that two different procedures led to the same rate of subsequent premature births, with the evidence resulting in a probability of p = 0.30. However, the government's expert testified that 30% is just "stretching it a little bit" from 5% and "There is a 30 percent chance this occurred by chance and a 70 percent chance that it in fact is a true, meaningful, increased risk." An amicus brief by a group of statisticians attempts to convince the Supreme Court of the error of this interpretation.[§]

Evidentiary standards

Often a statistician is called in to advise as to whether there is statistical evidence to support the theory of the case held by one side or the other: Was there discrimination against women or is a difference in salaries, promotion or hiring due to chance? Is a proposed merger likely to lead to antitrust violations? Is racial profiling evident in traffic stops? The expert's report may lead the lawyers involved to decide that the statistical evidence is not going to be helpful to them (or they may look for a more compliant statistician!) or it may be so compelling that it leads to a settlement without trial. However, it may also be the case that the statistician will be asked to provide expert testimony at trial (usually preceded by a deposition that may test the strength of the evidence). Experts have a certain amount of latitude in testifying; for example, unlike fact witnesses they may testify as to hypothetical situations. However, there are strict standards for admissibility of expert testimony in general.

U.S. Federal Evidence Rule 702 states:

> If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education, may testify thereto in the form of an opinion or otherwise, if
>
> 1. the testimony is based upon sufficient facts or data,
> 2. the testimony is the product of reliable principles and methods, and
> 3. the witness has applied the principles and methods reliably to the facts of the case.

In the early 1900's the "Commercial Marketplace Test," that is, that the testimony would be accepted in the marketplace, determined whether testimony was sufficiently reliable to be admitted. The *Frye v. United States* [293 F. 1013 (1923)] decision required that expert testimony be "generally accepted," which usually was interpreted to mean peer-reviewed.

In *Daubert v. Merrell Dow Pharmaceuticals* [509 U.S. 579 (1993)] the Supreme Court declared that judges must evaluate the methodology of expert testimony according to the following:

- Testing and validation
- Peer review
- Existence and maintenance of standards

[‡]Chasen, S.T. (2004). "Dilation and evacuation at $\geq$ 20 weeks: Comparison of operative techniques," American Journal of Obstetrics and Gynecology, vol. 190, p.1180.

[§]*Gonzales v. Carhart*, *Gonzales v. Planned Parenthood*, Nos. 05-380 & 05-1382 (2006). Brief of *Amici Curiae* Statisticians.

- Controlling the use of the technique
- Rate of error
- "General acceptance"

Subsequently *Joiner v. General Electric* [522 U.S. 13 (1997)] and *Kuhmo v. Carmichael* [526 U.S. 137 (1999)] further clarified the role of the judge by extending it to evaluating the way methodology is applied and expanded the definition of who is an expert.

Scope of the use of statistics in legal settings

Some of the cases in which statistics have been used include:

Discrimination (race, sex, age, etc.)	Anti-trust
Pipeline regulation	Epidemiology
Police profiling	Driving offenses
Assaults on prisoners	Legislative redistricting
SIDS	DNA
Human rights violations	Death penalty
Service interruption	Sales figures
Lotteries	Intellectual property
Drug trials	Sentencing
Evidence-based medicine	Recidivism
Environment	Bullet composition
Clinical trials	Product liability
Glass fragments	Earprints

In any of these situations, there are certain keys to effective statistical evidence:

- Use of comparative data - it doesn't help to know that only 10% of those promoted were women if we don't know what percent of the eligible pool were women and what in both cases the absolute numbers were. A case involving the National Security Agency was once settled out of court because the agency refused to provide any actual numbers of employees, only percentages.
- Adequate sample size - courts generally want to hear about statistical significance so power is always a concern.
- Clarity of presentation - think of it as teaching an elementary statistics class.
- Supplemental anecdotal evidence - for some decision-makers real people are more convincing than numbers.
- Control by the expert - the statistician has to formulate the presentation of evidence.
- In order to follow up and to question opposing experts the litigator has to understand the statistical evidence and the statistician needs to make sure that (s)he does. To put in a plug for lawyers' getting at least some exposure to statistics - I have developed for the ASA a short course for lawyers and others involved in litigation.[¶]

[¶]Contact the ASA if you are interested: `rick@amstat.org`. I would also like to push more statisticians to provide

Discrimination

One of the fields of litigation where statistics play a big role is discrimination in employment, education, housing, voting, jury selection, arrests, and sentencing, among other areas. Under most federal and state laws, two forms of discrimination are illegal:

> Disparate treatment - similarly situated individuals are treated differently on the basis of race, sex, etc.
>
> Disparate impact - a facially neutral criterion or process has a disparate impact on members of one sex, race, etc.

How do we use statistics to determine how "disparate" an impact must be? If one group is totally excluded - the inexorable zero - courts have generally concluded that something other than chance is in play. Another approach is to look at differences in percentages; for example, if the success percentage for one group is, say 10%, how large must it be for the other group in order to indicate disparate impact? Without any consideration of the size of the groups, this analysis is clearly not very informative. The 45's rule has been popular with U.S. government regulators, applied either to the selection ratios or the odds ratios of the less-favored over the favored group with the conclusion that the impact is disparate if the ratio falls below 45. Again, the rule has been utilized without regard to the sample sizes.

Eventually the concept of statistical significance achieved Supreme Court recognition. Unfortunately, the standard enunciated was that a difference of "two or three standard deviations" indicated a result unlikely to be due to chance, with no apparent clarification of the substantial difference between the two benchmarks. This ambiguity has persisted with lower courts adopting one or the other or something in between or asserting that the context must be considered, with no "bright line" determination of what constitutes "disparate" impact.

How the application of statistical analysis might have changed early jury-discrimination decisions where the court relied on differences in percentages is illuminating. In *Swain v. Alabama* [408 U.S. 936 (1965)] the percentage of minorities in the pool was 26% whereas the percentage of minorities on the jury panels was 16%. The court said that a 10% difference was not enough to consider that the Constitutional provision providing for juries of one's peers had been violated. However, the probability of such a disparity, given the numbers involved, is one in 10^8. On the other hand in *Avery v. Georgia* [345 U.S. 559 (1953)] a disparity of 5% v. 0%, with a p-value of 0.046 was found to indicate discrimination. Here the inexorable zero was in play plus consideration of the way the jury panels were selected. Names were drawn from a fishbowl where names of white eligible candidates were written on white slips of paper and names of black eligible candidates were written on yellow slips of paper.

A setting where the standard of differences in percentages has been routinely applied is sex discrimination in education, as outlawed by Title IX of the Education Act of 1972. College athletics is an area where a certain amount of segregation by sex is allowed. However, Title IX requires that

- Opportunities be provided to men and women in numbers substantially proportionate to their respective enrollments

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expert help where the litigants may not be able to afford to pay for it. In civil cases the resources available may be very lopsided; in some states adequate money is not available for expert testimony for defendants in criminal cases. Lawyers have a *pro bono* obligation. Shouldn't statisticians? [See Fritz Scheuren's 2005 ASA presidential address: The *Pro Bono* Statistician, to appear in JASA.]

or

- History and continuing policies of program expansion be demonstrated

or

- Interests and abilities of the underrepresented sex be effectively accommodated

Because colleges and universities can rarely satisfy the second or third provision,[‖] attention has focused on the first, hinging on the meaning of "substantially proportionate." Various cases determined that a range of differences in proportions did or did not satisfy the requirement. In *Cohen v. Brown University* [101 F. 3d 155 (1st Cir. 1996)] the percentage of women among students was 51% whereas their percentage among athletes was 39%. The court concluded that the 12% difference was too large for "substantial proportionality" but failed to cite the statistical analysis provided in the evidence that showed a probability of less than 0.001 that the result would have occurred by chance.[**] A ratio of the proportions of .39.51 or of the selection rates .12.20 would fall below the U.S. Department of Education 45 cutoff.

Methodology

Although I have discussed a limited range of methodologies here, many different techniques have found their way into court, such as

Descriptive statistics	Mantel-Haenszel
t-tests	Change point analysis
Non-parametric tests	Urn models
Matched pairs	Lorenz curve
Gini index of inequality	Meta-analysis
Capture-recapture methods	Regression
Multiple systems estimation	Power considerations
Bayesian methods	Sensitivity analysis
Sampling considerations	

Not all techniques have been well-received by the courts. Trial testimony is not generally a good place to introduce a new technique that has never appeared in a peer-reviewed publication. The use of Bayesian techniques was first proposed over thirty years ago but is still not generally accepted, although statisticians keep trying. Although statistics have played a role in the release of defendants on death row, statistical evidence about racial disparities in the imposition of the death penalty has not been accepted as evidence of Constitutional violations.[††]

[‖] A recent ruling by the U.S. Department of Education would allow institutions much more latitude in showing compliance with the third provision by, for example, conducting an online poll of student interests. This has yet to be tested in the courts.

[**] In *Roberts v. Colorado State Board of Agriculture* [998 F. 2d 824 (10th Cir. 1993)] the court relied on the fact that a 10.5% discrepancy produced a p-value of less than 0.001 in finding that the university failed to achieve substantial proportionality.

[††] *McCleskey v. Kemp*, 481 U.S. 279 (1989).

Where next?

Statistical evidence has recently been used extensively and innovatively in intellectual property, finance, environmental, and human rights cases.[‡‡] It has been used to challenge the long-standing acceptance of fingerprint evidence and to suggest that lie detector evidence is sufficiently reliable to be admitted. With the close cooperation and assumption of responsibility and accountability on the part of the litigators and statisticians that is required in order to assure accuracy, fairness, and effectiveness we will no doubt continue to see innovative ways to use statistics in legal settings.

Pro Bono Statistics in Communities and its Benefits

Amy Watkins, Purdue University *

The term pro bono is generally defined as volunteer service done for the public good. Pro bono statistics is volunteer service that utilizes statistical expertise. However, the public is not the only group that benefits in this type of work. Statisticians, students, institutions and the statistics profession stand to benefit from pro bono statistical consulting. Many people have already started participating in this type of work at many different levels. Recently, the ASA formed a Special Interest Group (SIG) on Statistical Volunteerism to increase engagement in pro bono statistical work. Some of their efforts include the formation of a Rapid Response Team to assist in international emergencies, a Fair Elections Team to investigate the role of statistics in ensuring fair and accurate elections, and teams dedicated to statistical education around the world. Even with these strong efforts, more volunteers are needed at the state and local levels. There are many things statisticians can do in their own communities.

Statistics in the Community (STATCOM) is a group started at Purdue University that has been dedicated to providing pro bono statistical consulting for community non-profit and governmental organizations since 2001. One unique aspect of STATCOM is that the organization is run entirely by graduate students, with minimal direction from an advisor. Teams of graduate students work with organizations on a variety of projects that require statistical expertise. Projects typically involve the design and analysis of surveys or other data sets to address specific needs of the community clients. Student consultants perform all analyses, provide a detailed written report, and present results to clients. These reports and presentations are catered to a non-statistical audience. Possible clients include learning centers, libraries, schools, and city governments.

In March 2006, STATCOM was named an ASA Strategic Initiative (SI). This SI is sponsored by the Section on Statistical Consulting, the Section on Statistical Education, and the Central Indiana Chapter. The objectives are to develop and share materials with those interested in starting a pro bono consulting program, to serve as a resource to those starting a program, and to visit universities and ASA organizations to present our work and discuss how others could initiate such work. STATCOM at Purdue has developed a CD of materials that can help with the development of a pro bono statistical consulting service, including a guide for conducting surveys, sample reports, publicity materials to attract potential clients, and frequently asked questions. STATCOM

[‡‡]See, for example, Ball, P., and Asher, J. (2002), "Statistics and Slobodan: Using data analysis and statistics in the War Crimes Trial of former president Milosevic," Chance, vol. 15, pp. 17-24.

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at Purdue has received a significant response from these efforts, and two other STATCOMs have already started at other universities: STATCOM at Cornell University and STATCOM at University of Washington. Meanwhile, STATCOM at Purdue is still actively visiting other universities and institutions to discuss pro bono statistical consulting.

There are many benefits to pro bono statistical consulting. The most obvious benefits are to the organizations receiving the services. They receive free services, but, as importantly, they learn appropriate statistical methods and the advantages of using data for informed decision making. Many organizations benefit from having an unbiased third party providing objective information. In addition, the organization has an enhanced partnership with the institution or individuals providing the analyses. For example, when a student group like STATCOM provides pro bono consulting to an organization in the area, the organization develops a stronger relationship with the university by benefiting from the services that its students are offering.

The students or professionals providing the consulting also receive many benefits. Statisticians can broaden their statistical experience by working on projects they might not have otherwise. This type of work also enables statisticians to form partnerships within the community. When students provide this type of service, they acquire skills useful in their future careers. Students learn how to work with teams, apply statistical methods learned in the classroom, and improve written and oral communication skills. Lastly, students see statistics being used in real-life decision making.

Institutions such as universities or the ASA stand to benefit as well. By encouraging and performing pro bono statistical consulting, the community becomes more aware of the institution and the services it can provide. The service activity also enhances the social network within the institution and encourages greater member involvement.

Finally, the statistics profession benefits greatly from pro bono statistical consulting. It gives the field of statistics more exposure and can increase understanding of key statistical concepts within the general public. It also highlights the service-oriented aspect of the profession and illustrates the good statistics can do for society.

There are many ways in which statisticians can get involved in pro bono statistical consulting. Individuals could practice pro bono consulting on their own, or promote this type of activity within a larger group, such as a university or a Chapter or Section in the ASA. Section or Chapter members could encourage the formation of student groups at local universities or refer clients to already established groups. ASA members could also serve as a mentors or advisors to student groups in the area. Members could even give seminars to local students to educate them on various aspects of statistical consulting. STATCOM at Purdue is also interested in how student groups like ourselves could get involved and make contributions to the ASA and its Sections such as the Section on Statistical Consulting.

Many people are already involved in pro bono statistics, from students to professionals. However, there is still more that can be done, especially at the local community level. Some organizations are unaware of how statistics can be used to improve their services and decision making. By offering time and statistical expertise, you can make a difference in society.

If you have any comments or questions, please contact: `statcom-outreach@stat.purdue.edu`.

Roundtables for Joint Statistical Meetings, Salt Lake City 2007

James Grady, University of Texas Medical Branch *

Have an Idea for a Roundtable?

The Section on Statistical Consulting is soliciting organizers for roundtable events. In addition to the traditional luncheon, there are now coffee roundtables.

Place: Salt Lake City Joint Statistical Meetings
Date: July 29 - August 2, 2007

Past topics have included involving undergraduates in consulting, improving the client - statistician relationship, the practice of statistics in legal proceedings, building checklists for the private practice, and consulting in bioinformatics.

Coffee roundtable tickets will cost $12 and luncheon roundtables will be $40 for attendees. The section pays for the presenters' roundtable cost ($12 or $40).

I will be organizing these round tables so please contact me directly.

Proposed topics and speakers are due January 17th, so send your ideas to

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Comments from the Chair

Philip Dixon, Iowa State University*

The year has sped by. It seems like only yesterday that I was starting my term as chair and now it is almost over. Stuart Gansky will take over the reins Jan 1. While I've accomplished a few things, there is much I wish I could have done. I hope to work on some of those next year when I'm past-chair.

The section works because of the efforts of many volunteers. My thanks to everyone for all their contributions. My special thanks and recognition to those who are finishing their terms on the executive committee:

- Susan Devlin, Artemis Group, chair-elect/chair/past-chair
- Harold Dyck, Cal State San Bernadino, at-large member of the executive committee
- Brenda Gaydos, Eli Lilly, representative to the ASA Council of Sections
- Christina Gullion, Kaiser Permanente, publications officer

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- Todd Nick, Cincinnati Children's Hospital Medical Center, program chair

Brenda will be continuing on the executive committee as chair-elect for 2007.

Some things to look out for over the next few months:

1. Susan Devlin and a committee of volunteers have been developing a web-based consultant data base. This has been developed and tested over the last year and is about to be released for public use. The goal is to provide a resource for clients to locate statistical consultants. Access to the data base will be free but there will be a nominal charge (lower for section members) to list yourself in the data base.

2. A committee will be revising a brochure describing statistical consulting.

3. The section executive committee is revising and updating the section charter, the formal document describing how the section operates. You, the section members, will vote whether to accept the revisions. This will be one of the items included in the ASA ballot, mailed in the spring.

Finally, the executive committee has started to discuss professional liability insurance. This is insurance that protects individual professionals from lawsuits filed by clients. If you do independent consulting, you probably have (or should have) this insurance. Some professional societies provide access to a group policy. The intent is that the group policy will be cheaper than what individuals could get by themselves. Is there any interest in this sort of policy? If the ASA organized a group professional liability insurance policy, would you consider using it? If so, please let me know. My e-mail is `pdixon@iastate.edu`. Or, if you think its a bad idea, please let me know.

Notes from the Editor

Karen Copeland, Boulder Statistics[†]

Many thanks to all of the contributors to our newsletter in 2006. As we move to 2007 I just ask you to keep submitting your articles and thoughts on what types of articles you would like to read in the newsletter. Happy holidays to all!

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www.amstat.org/sections/cnsl/

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.