

THE STATISTICAL CONSULTANT



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

American Statistical Association
Spring 2006; Volume 23, No. 1

IN THIS ISSUE

- 2005 Annual Report for the ASA Statistical Consulting Section
 - e-Directory Launch Update
 - Going Rates for Statistical Consulting: Results from the Statistical Consulting Section Rates Survey Results
 - Academic Consulting Profile: Wright State University
 - Consulting After Academics
 - SAS PROS and CONS: PROfits, PROfessionals, PROviders, PROMoters, CONtracts, CONsulting and CONjobs
 - Comments from the Chair
 - Notes from the Editor
-

Executive Committee of the ASA Section on Statistical Consulting

Chair: Philip M. Dixon, (515) 294-2142, pdixon@iastate.edu

Chair-Elect: Stuart Gansky, (415) 502-8094, sgansky@itsa.ucsf.edu

Past Chair: Susan J. Devlin, (732) 424-2498, sdevlin@theartemisgroup.com

Program Chair (for 2006 JSM): Todd G. Nick, (513) 636-0462, todd.nick@cchmc.org

Secretary / Treasurer: Elaine I. Allen, (781) 239-6413, allenie@babson.edu

Publications Officer: Christina M. Gullion, (503) 335-6356, christina.gullion@kpchr.org

Webmaster: Chuck Kincaid, (269) 344-4100, ckincaid@comsys.com

Newsletter Editor: Karen Copeland, (720) 564-0661, karen@boulderstats.com

Assistant Newsletter Editor: Christopher Holloman, (614) 292-0738,
holloman@stat.ohio-state.edu

Executive Committee: Anamaria S. Kazanis, (734) 769-7100 x 6206, akazanis@umich.edu

Timothy A. Max, (503) 808-2060, tmax@fs.fed.us

Council of Sections Representatives: Keith E. Muller, (919) 966-7272, keith_muller@unc.edu

Brenda L. Gaydos, (317) 277-1982, blg@lilly.com

Council of Sections Governing Board Vice Chair: Russell V. Lenth, (319) 335-0814,
russell-lenth@uiowa.edu

2005 Annual Report for the ASA Statistical Consulting Section

Susan Devlin, The Artemis Group, LLC *

Meetings

Four conference calls of elected officers or Executive Committee.

| Date | Number of Participants |
|---------|------------------------|
| 2/25/05 | 7 |
| 4/05 | 10 (?) |
| 5/20/05 | 14 |
| 6/9/05 | 12 |

Face to face Executive Committee meeting (with elected 2006 officers invited):

| Date | Number of Participants |
|--------|------------------------|
| 8/3/05 | 17 |

Membership annual meeting:

| Date | Number of Participants |
|--------|------------------------|
| 8/4/05 | 30+ |

*sdevlin@theartemisgroup.com

Main issues addressed in 2005

- Website - needs process for keeping information up to date
- Newsletter - escalating cost of paper newsletter and inconsistency in delivery and content
- Services to Members - limited services may be contributing to declining membership
- Amstat News Section Corner - this opportunity to reach out to broader ASA membership is underutilized

Highlight of Activities

Enhanced Electronic Newsletter - Karen Copeland agreed to take over as editor in 2006 and to share the responsibility in transition this year. In 2005, Karen led the transition to an electronic newsletter, which will reduce expenses and thus help fund other initiatives. December was the first electronic issue and also had a significant increase in content.

Consulting Rates Survey - Tim Max, with help from Karen Copeland and Susan Devlin, designed this survey. The survey was fielded in December, and the report on the results is included in this newsletter. The information in this report will help members set competitive rates.

E-Directory of Statistical Consultants - A section committee (Susan Devlin - chair, Harold Dyck, Deborah Fripp, Anamaria Kazanis, and Charles Mann) planned the website. Feedback solicited from members was very positive.

Roundtable Conference Calls - Chuck Davis led a group discussion on "Starting (and Succeeding) as an Independent Statistical Consultant" on 3/5/05. Another call was scheduled for this fall but was delayed to next year due to scheduling. Jane Pendergast led this effort.

JSM Sessions - Our sessions at the annual meetings in Minneapolis were excellent, thanks to Susan McGorray, and we are going to have a record breaking number of session in Seattle, including our own pair of Introductory Overview Lectures, thanks to Todd Nick.

Consulting Snapshot Articles - Christina Gullion, our publications officer, is planning a series of articles for Amstat News, which will feature statistical consultants working in a broad range of application areas. Thanks to help from Anamaria Kazanis, these have started.

Travel Awards - Again this year, we gave travel awards to organizers of topic contributed sessions.

Support for Isolated Statistical Consultants - Many section members do not attend annual meetings. We are exploring several ways to support this group better.

- Brenda Gaydos is taking the lead to explore setting up a mentoring program for our section.
- Borrowing from the success of Isostat, the list server for isolated academic statisticians, Bonnie Dumas has agreed to plan the launch and advertising of a similar information source for isolated statistical consultants.
- We initiated discussions with the chair of the Committee on Applied Statisticians to see how we might work together. Together, we are developing a proposal for an ASA strategic initiative

to support a working session with a group of isolated applied statisticians and consultants to discuss their needs and how the ASA could support them.

Brochures - Philip Dixon, 2006 chair, has agreed to lead an effort to update our brochure, perhaps through a set of shorter brochures to better reflect the diverse applications of statistical consulting.

Charter Review - 2007 chair, Stuart Gansky, is chairing a committee (Jane Pendergast, Susan Devlin, and Caroline Aperson Hansen) to review the section's charter.

Website - Much of the website was updated, but more work is necessary.

Concern

The section is spending down its budget surplus at a rate that cannot continue much longer. While it is hoped that the reduction in newsletter costs, small fee for the e-directory, and new membership revenues resulting from the attraction of news services will address this problem eventually, resources could be a barrier to the initiatives underway.

e-Directory Launch Update

Based on a new site development schedule, we expect to open the site for entries this summer. Initial listing will be free for section members for the first few months to build a core list before we start advertising. Keep tuned in for the premier.

Going Rates for Statistical Consulting: Results from the Statistical Consulting Section Rates Survey Results

Karen Copeland, Timothy A. Max, and Susan Devlin

Background

The Statistical Consulting Section conducted a web-based survey of consulting rates in December 2005 to help members develop and/or assess their consulting rates. Participation in the survey was requested via e-mail from all 1532 Statistical Consulting Section members with e-mail addresses on file with the ASA. In total, 512 responses were gathered for a response rate of 33%. Of those members who responded, 67% reported charging clients on a fee-for-service basis, 23% are statistical consultants who do not charge clients on a fee-for-service basis and the remaining 9% do not do statistical consulting. The analysis below focuses only the 345 members who charge for services.

Summary

The survey and analysis focused on hourly rates and how they vary by categories of work, educational level of the consultant, type of employment, and other factors. Below are the main conclusions.

- The median hourly rate charged for external clients is \$130 with an inter quartile range of \$89 - \$189. Rates charged for internal clients are significantly lower.
- Among the six work categories evaluated rates for specialized consulting were the highest (median = \$150) and lowest for Basic Analysis (median = \$100).
- Ph.D.'s charge on average \$44 more per hour than those with a Master's degree across all types of tasks.
- Consulting Groups have the highest rates (median = \$175) likely reflecting higher overhead costs than other consulting arrangements.

Detailed Results

The survey asked respondents to report hourly rates in US dollars for the following six categories of work.

1. Data manipulation; Editing, Basic Analysis
2. General Statistical Consulting; Collaborative Research
3. Specialized Statistical Consulting
4. Statistical Review for a Fee
5. Teaching non-credit statistical courses for a fee
6. Project Management on statistical projects

Rates were also reported separately based on whether clients were internal or external. The focus on hourly rates proved to be appropriate. When asked what type of rate structure they used most often 80% of consultants report billing clients hourly. There was some data cleaning done on the reported rates. If ranges of rates were reported the mid-point was used. If rates were reported in different units (e.g., different currencies or daily rather than hourly) they were converted appropriately.

The results for external clients are shown graphically (side-by-side box plots with mean lines) in Figure 1. Table 1 provides quantiles as well as the number of responses for each task.

Fewer consultants work on a fee-for-service basis with internal clients than with external clients. Figure 2 and Table 2 summarize the rates for internal clients. As compared to external clients rates are lower and there is less variability. For example the median rate charged for all types of services are at or above \$100/hour for external clients and well under \$100/hour for internal clients.

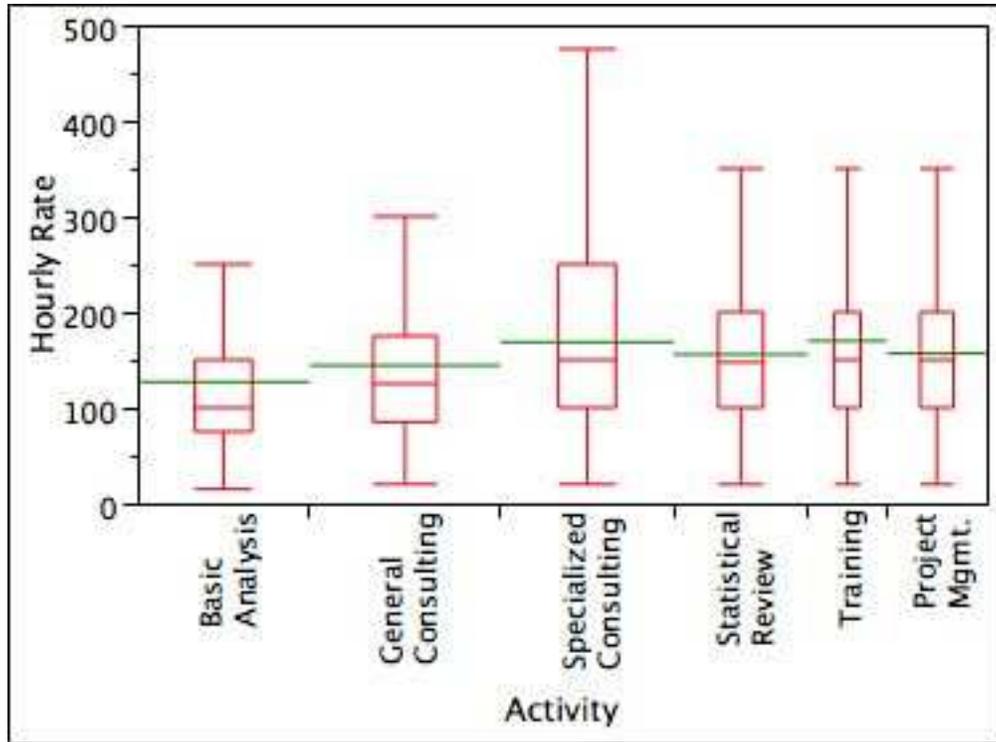


Figure 1: Hourly Rates for External Clients by Category of Work.

Table 1: Hourly Rates for External Clients by Category of Work

| | N | 25th | Median | 75th |
|------------------------|-----|------|--------|------|
| Basic Analysis | 233 | 75 | 100 | 150 |
| General Consulting | 259 | 85 | 125 | 175 |
| Specialized Consulting | 234 | 100 | 150 | 250 |
| Statistical Review | 182 | 100 | 145 | 200 |
| Training | 107 | 100 | 150 | 200 |
| Project Management | 135 | 100 | 150 | 200 |

Table 2: Hourly Rates for Internal Clients by Category of Work.

| | N | 25th | Median | 75th |
|------------------------|----|------|--------|--------|
| Basic Analysis | 71 | 50 | 75 | 100 |
| General Consulting | 74 | 50 | 80 | 102.75 |
| Specialized Consulting | 73 | 61 | 90 | 122.5 |
| Statistical Review | 60 | 57 | 82.5 | 109.5 |
| Training | 37 | 50 | 91 | 120 |
| Project Management | 51 | 60 | 76 | 101 |

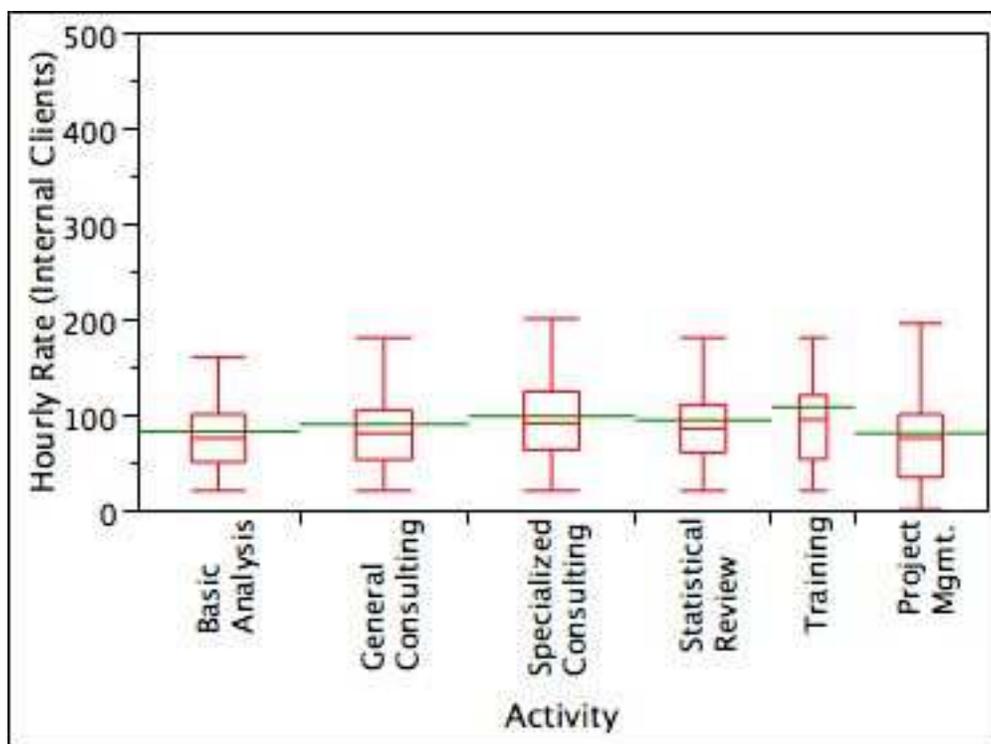


Figure 2: Hourly Rates for Internal Clients by Category of Work.

The survey asked for the consultant's primary employer. Responses were dominated by academics (41%). The next three largest groups were self-employed consultants (29%), those in consulting groups (12%), and employees in business/industry (11%). However, only 31% of consultants do their fee-for-service consulting work under their primary employer (excluding self-employed and consulting group respondents).

The rates vary by primary employer (for the four largest categories) as seen in Figure 4 and Table 3 below. In Figure 4 lines connect the mean levels of each group. Rates charged by Consulting Groups are higher than other consultants for all tasks.

The majority of consultants (74% for external clients and 55% for internal clients) consider their rates to be fully-loaded or partially-loaded. There were no significant differences in rates due to loadings (fully, partially, or no overhead costs); however, this seems inconsistent with significant differences across primary employer suggesting that the loadings question did not capture the "cost of doing business" that we had intended for it to capture. Recall rates are highest for consulting groups (significant for all tasks except teaching). Most of the business/industry and academics consult outside of their primary employer. It seems logical that the "loading" of rates is being reflected by the primary employer question more so than the direct question of loadings.

Rates were also analyzed by educational level of the consultant. Only 3% of responders have less than a Master's degree, 67% have Ph.D.s and 30% have master's degrees. For external clients rates for consultants with a Ph.D. averaged \$44 per hour more than those with a M.S. degree. The difference in rates was significant across all tasks. Figure 5 and Table 4 show the external rates by educational level of the consultant. For internal clients the average difference in rates was \$27 per hour (higher for the consultants with a Ph.D.).

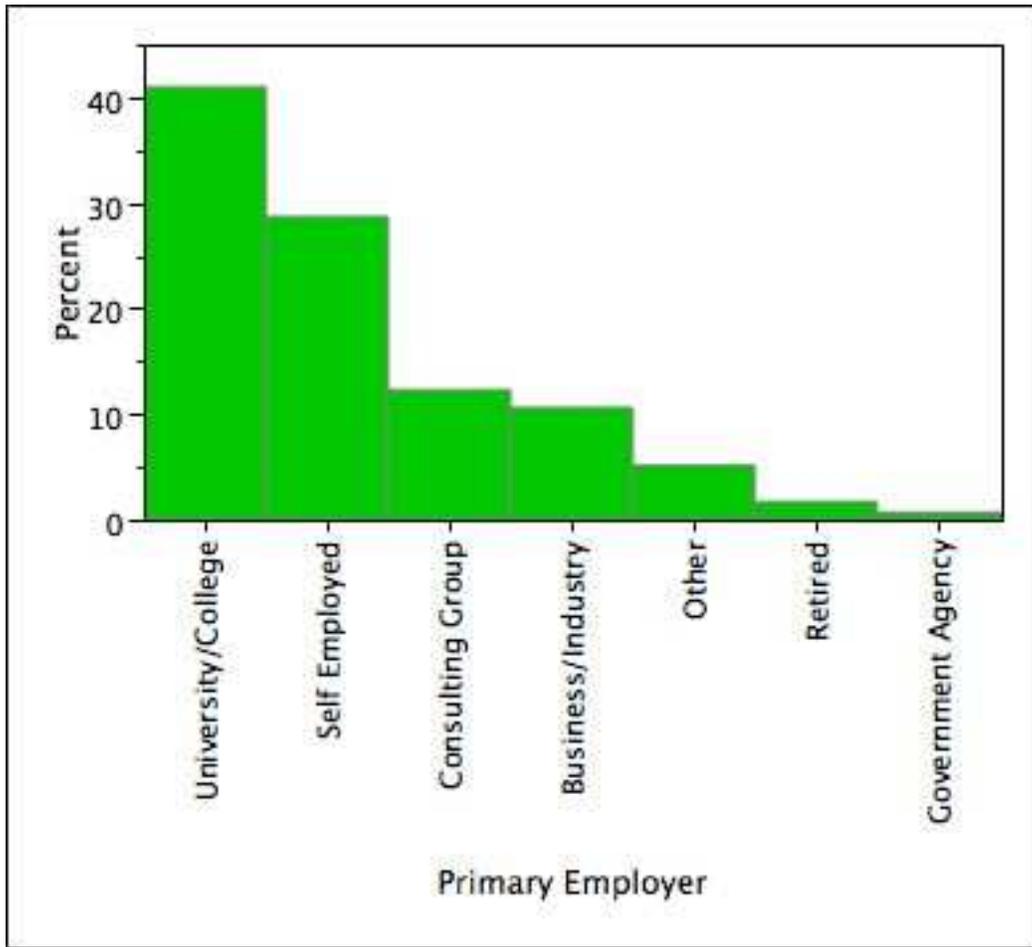


Figure 3: Primary Employer.

Table 3: Rates by Primary Employer for External Clients.

| Primary Employer | Hourly Rates for External Customers | | | | | | | | | | | |
|--------------------|-------------------------------------|--------|--------------------|--------|------------------------|--------|--------------------|--------|-------------------|--------|---------------|--------|
| | Basic Analysis | | General Consulting | | Specialized Consulting | | Statistical Review | | Training Training | | Project Mgmt. | |
| | N | Median | N | Median | N | Median | N | Median | N | Median | N | Median |
| Business/Industry | 24 | 90.5 | 27 | 125 | 22 | 150 | 21 | 125 | 13 | 150 | 11 | 150 |
| Consulting Group | 29 | 150 | 30 | 168.5 | 30 | 222.5 | 25 | 175 | 16 | 162.5 | 26 | 168.5 |
| Self Employed | 69 | 100 | 79 | 125 | 71 | 150 | 53 | 125 | 28 | 145 | 48 | 122.5 |
| University/College | 92 | 102.5 | 102 | 125 | 94 | 150 | 70 | 150 | 42 | 150 | 44 | 150 |

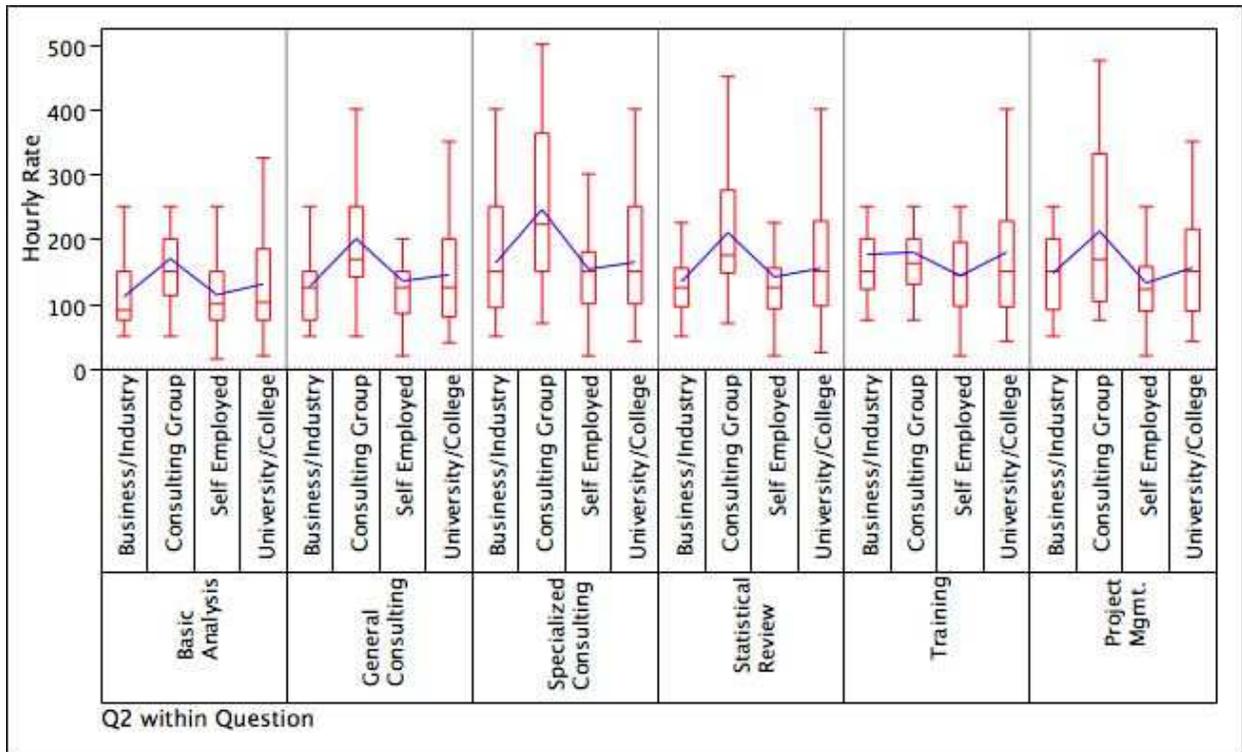


Figure 4: Rates by Primary Employer for External Clients.

Table 4: Rates for External Clients by Educational Level of the Consultant.

| Primary Employer | Hourly Rates for External Customers | | | | | | | | | | | |
|------------------|-------------------------------------|--------|--------------------|--------|------------------------|--------|--------------------|--------|-------------------|--------|---------------|--------|
| | Basic Analysis | | General Consulting | | Specialized Consulting | | Statistical Review | | Training Training | | Project Mgmt. | |
| | N | Median | N | Median | N | Median | N | Median | N | Median | N | Median |
| M.S. | 72 | 82.5 | 81 | 110 | 66 | 120 | 58 | 102.5 | 39 | 140 | 45 | 105 |
| Ph.D. | 153 | 125 | 170 | 150 | 162 | 150 | 119 | 150 | 65 | 150 | 84 | 150 |

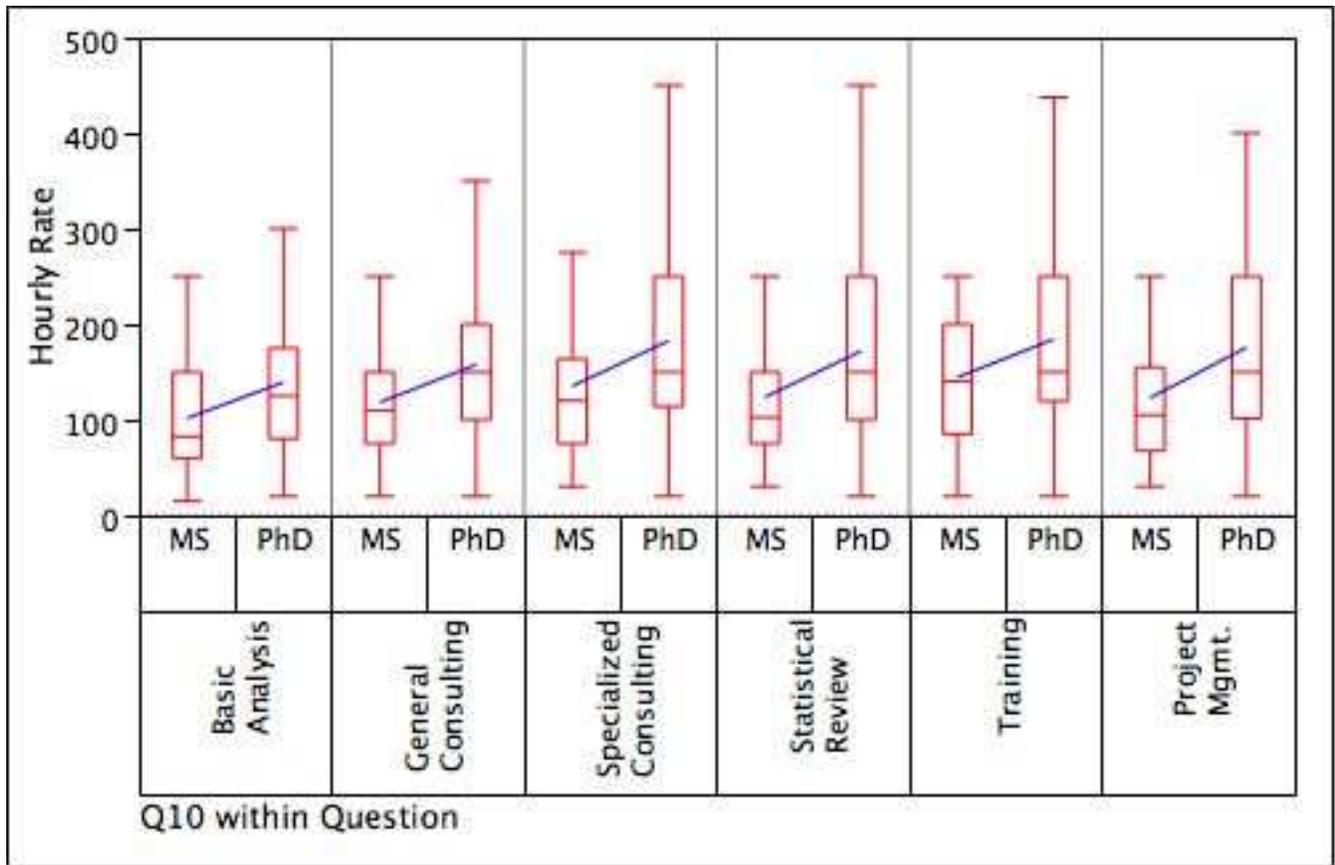


Figure 5: Rates for External Clients by Educational Level of the Consultant.

The location of respondents were supplied using the first 3 digits of zip codes, however, consultants were split 50/50 on whether or not most of their clients were located near their business zip code. Therefore, location was not considered further.

To gauge experience level one survey question asked “How many years have you been working as a statistical consultant?” Those results did not prove meaningful for two reasons. First, it was clear from the responses that there were different interpretations as to how to respond. Some considered their entire career, while others considered only the portion of their career that they worked as an external/independent consultant. Second, response units were not consistent. Responses were given in specific years as well as more than a specified number of years (*e.g.*, 20+).

Thank you to all who participated in this survey. We hope that you find the results useful in your consulting endeavors.

Academic Consulting Profile: Wright State University

Harry J. Khamis, Wright State University *

I like the idea of a series of articles on academic statistical consulting centers, and I’m very happy to have the opportunity to write the second article of such a series. I will follow the same format as that of the first article written by Drs. Rogness and Curtiss (2005). First, a brief overview of Wright State University and the Statistical Consulting Center is presented.

Named after the Wright Brothers, Wright State University (WSU) is a metropolitan university in Dayton, Ohio with over 17,000 students offering approximately 100 undergraduate programs, over 30 graduate programs, and programs of study for the ED.S., M.D., Psy.D., and Ph.D. degrees. The Mathematics & Statistics Department offers the B.S. and M.S. degrees with concentrations in mathematics, applied mathematics, statistics, and mathematics education. The department contains 30 professorial rank faculty members of whom nine are statisticians. There are currently 23 graduate students in the Applied Statistics Program and six undergraduate majors. The B.S. degree in statistics (formerly the B.S. degree in mathematics with a statistics concentration) was just approved by our Faculty Senate. We’re hoping that the number of undergraduate majors will grow with the new degree designation. We graduate an average of five M.S. degree students per year; however, with the recent increase in the number of graduate students this number may go up.

The Statistical Consulting Center (SCC) began operation in 1982 and we’re looking forward to our 25th anniversary next year. The SCC is part of the Applied Statistics Program within the Department of Mathematics & Statistics. The SCC works with over 120 clients each year (not including walk-in clients) from all parts of the University and external to the University (from as far away as Sweden).

In 1989 the State of Ohio designated the Statistics Program at WSU a “Center of Excellence,” and awarded it an Academic Challenge Grant. The success in securing this grant was due in large part to the SCC. The history of the SCC up to 1994 can be found in an article by Khamis and Mann (1994). The SCC webpage can be found at www.math.wright.edu/ms/scc.

The principal goals of the SCC are (1) to provide statistical support to fully-affiliated WSU faculty, staff, and graduate students, (2) train our graduate statistics students in the science and

*harry.khamis@wright.edu

art of statistical consulting, (3) facilitate faculty research by sharing with the statistics faculty consulting problems that may have potential research opportunities, and (4) provide limited statistical support to external (non-WSU affiliated) clients.

Who does the statistical work? What is the work load?

The SCC director is a faculty member with a 50% administrative appointment during the academic year and a 100% administrative appointment during the summer in the SCC. The director is appointed by the department Chair in consultation with the Statistics Program Committee. The SCC employs a full-time Statistical Services Specialist who (1) performs normal secretarial duties, (2) hires, trains, and supervises work-study students to enter data and perform error-checking procedures, (3) designs and scans bubble-sheet forms and creates data sets, (4) labels and formats data sets, and (5) handles the budget. The SCC also employs one full-time statistical consultant and one half-time statistical consultant. Graduate students work in the SCC under the supervision of a professional consultant. The work of the statistical consultants includes: survey/experimental design; sample size analysis; analysis of data; interpretation and communication of results; serving as expert witness in court; giving presentations, seminars, and workshops; and serving as mentor to the graduate statistics students enrolled in STT 791 (Statistical Consulting Course).

Because WSU has a medical school, nursing college, and a large biological sciences department, much of the work done in the SCC deals with the life sciences. In calendar year 2004, 25% of SCC time was devoted to medical school researchers, 24% to College of Science and Mathematics researchers, 21% to nursing researchers, and 9% to external clients. One of our graduate statistics students conducted a retrospective chart review of our weekly project status reports and recorded, for each client, the principal statistical methodology used; the results below are expressed as percentages of all analyses done:

| Statistical Method | Proportion of All Analyses |
|----------------------------|----------------------------|
| (M)AN(C)OVA | 23% |
| Regression/correlation | 19% |
| Descriptive statistics | 15% |
| Repeated measures ANOVA | 10% |
| Categorical data analysis | 7% |
| Power/sample size analysis | 6% |
| Reliability | 5% |
| Nonparametric methods | 3% |
| Sampling design | 2% |
| Factor analysis | 1% |
| Other | 9% |
| Total | 100% |

How are students involved?

The course STT 791 (Statistical Consulting Course) is a required course for the M.S. degree statistics students. It is a three credit hour (quarter system) Pass-Fail course that is a combination of an independent reading course and a practicum. The students are required to read a substantial amount of material including articles, handouts, and portions of the textbook by Chatfield (1995). As for the practicum, students are involved in as many of the consulting experiences as can be managed during the quarter. Specifically, they (1) attend the weekly staff meetings, (2) attend

consulting meetings with clients, (3) write initial reports, (4) conduct analyses, (5) write final reports, and (6) meet with clients to explain results - all under the supervision of one of the professional consultants. Often the students help with outreach activities that the SCC is engaged in, such as participation in the "Take Your Sons and Daughters to Work Day" activities and the "Quest for Community" diversity conference held at WSU annually. A written comprehensive final exam is given at the end of the quarter.

For whom do you consult?

About 43% of our time is spent with faculty researchers and 34% with graduate student researchers (including residents and fellows). As discussed above, our biggest users are the Boonshoft School of Medicine, the College of Science and Mathematics, and the College of Nursing and Health.

Historically, about 10% of our time has been spent with external clients. These external clients consist of individuals from hospitals, other universities, high schools, churches, private companies, corporations, law firms, courts, governmental agencies, city operations (e.g., Dayton Power and Light, Dayton Regional Transit Authority, etc.), pharmaceutical firms, the Army, the Air Force, health departments, etc. We have never formally advertised our services outside the University because our principal charge is to address the statistical needs of WSU personnel.

Does the center charge for statistical consulting? How does the fee structure for external clients differ from internal clients?

For WSU-affiliated researchers the fee for SCC services is currently \$65/hour; the first one-hour consultation is free. For pre-grant support (sample size analysis, specification of the appropriate design/analysis, help with writing the statistical component of the grant proposal, etc.), our services are free provided the SCC is written into the grant proposal budget. In this way we invest our time and energy in the grant proposal just like the PI and, like the PI, we will benefit from that investment if the grant is funded.

Although we have a flat \$65/hour fee for WSU clients, very few of them actually pay us out of their own pocket. The SCC has financial arrangements with its three biggest users, Boonshoft School of Medicine, College of Science and Mathematics, and College of Nursing and Health. These three units make up 70% of SCC work hours. In each case, the Dean essentially pays for all SCC services for their college's personnel.

After accounting for the 70% of work time mentioned above and the 10% spent on external clients, there remains 20% of work time that is split between (1) other on-campus units, such as Liberal Arts, Engineering, School of Professional Psychology, Education and Human Services, etc. and (2) the statistical education component of the SCC, including some specialized classes (e.g., STT 791), workshops, seminars, short courses, and special presentations.

For external clients, our current fee schedule (hourly rate) is given below.

| Service | Profit-making organization | Non-profit organization |
|---------------------------------|----------------------------|-------------------------|
| Statistical Consultant | | |
| Faculty | \$150 | \$135 |
| Non-faculty | \$80 | \$70 |
| Statistical Services Specialist | | |
| Bubble-sheet/opscan | \$60 | \$50 |
| Data management | \$60 | \$50 |
| Data entry | \$45 | \$35 |

The money made from our external clientele is used to (1) purchase books for the SCC library, (2) purchase needed software/hardware and equipment, (3) send SCC staff to professional development opportunities, (4) purchase American Statistical Association memberships for graduate students who successfully complete their comprehensive exams, etc.

Conclusion

We are fortunate at WSU to have a Department Chair and a College Dean that understand and appreciate the value of the SCC's work at the University. We make a significant effort in the SCC to thoroughly and carefully document our activities, including a weekly project status report (the principal document for the weekly staff meetings) and careful recording of number of hours worked, recipient of work performed, billing, etc. This enables me to: (1) justify our existence to Deans or to the Provost or others, (2) respond quickly and accurately to queries directed to me about the SCC, and (3) write the annual report effectively and accurately.

Over the years, I have noted a wide range of perceptions by our clients of what it is that we actually do here in the SCC. And trying to describe to someone with limited statistical background what a statistical consultant does is not easy. However, there seems to be one description of what we do that is understood and appreciated by all of our clients – so much so that I've displayed it in the glass-encased directory outside our suite of offices: WE DO PRECISION GUESSWORK.

References

Chatfield, C. (1995). Problem Solving, a Statistician's Guide, second edition, Chapman and Hall, New York.

Khamis, H. and Mann, B. (1994). Outreach at a university statistical consulting center, *The American Statistician* 48, 204-207.

Rogness, N. and Curtiss, P. (2005). The statistical consulting center at Grand Valley State University, *The Statistical Consultant* (Section on Statistical Consulting, American Statistical Association) 22, 10-11.

Consulting After Academics

John H Schuenemeyer, Southwest Statistical Consulting, LLC *

During my early morning visit to the Cortez Recreation Center, an acquaintance greets me with, "Good morning Professor?" I smile and respond and am pleased because it was indeed an honor and privilege to be a professor of statistics for 25 years at the University of Delaware. It was, however, time to move on to new challenges and a new career, one of a statistical consultant.

Deciding what to do was relatively easy. Most of my career had been in applied statistics with applications in energy, earth, and environmental sciences and there were many challenging unsolved problems to which I believed I could make a contribution and receive reasonable monetary compensation. So I therefore approached this as a serious venture, as opposed to something that got

*jackswsc@charter.net

me out of the house. Although getting the business out of the house is not a bad idea and whenever feasible, I recommend it. You have spent a life time being interrupted by students, colleagues, and book sales people. Find a nice peaceful place. Get an answering machine and turn off the cell phone.

Another major consideration was, "Where should I locate this business?" The first thing, of course, is to talk to spouse, significant other, kids, and grandkids. The answer can be, "almost anywhere." High speed internet access is essential and a nearby airport is a big plus. A college and library is nice but not essential. We, my spouse and I, settled in Cortez, Colorado, a city of 8,000 in the far southwest corner of Colorado, a place with beautiful scenery and many outdoor recreational opportunities, where four cars behind a stop light is a traffic jam. Cell phone access would be nice but this is still spotty in many rural areas of the United States, including Cortez.

A friend in the small business development office of a nearby college (Fort Lewis College in Durango, CO) suggested that I take his course on starting a business. But I already knew how to consult and I had an initial client base, so why should I bother?

Well, I did bother and here are some of the things I learned. A small business, any small business is much more than knowing the technical aspects of providing goods or services. You need a business plan. You also need an accountant, lawyer, graphic designer, software engineer, a marketing agency, and a web master, unless you are prepared to do some of these jobs yourself. In addition, you can anticipate the pleasure of working with various local, state, and Federal agencies. A good instructor in such a course will do her best to try to discourage you from such a venture. I'll begin the process. Here are a few things to think about.

1. How many hours do you want to work each week? If you want to make this a full time job, eight hours per day, five days a week, think 60 hours.
2. How much time would you enjoy devoting to the above mentioned tasks - marketing, accounting, replacing a hard disk, etc? If it's not 40% or so, read no further unless you happen to have a really good friend who is willing to help or you can pay for these services.
3. Are you going to lose sleep if a client does not pay you for a couple of months? How about not at all?
4. Can you afford to say no to those really awful jobs that you had to do while a faculty member because the client was a friend of the provost? If you can answer yes, your life as a consultant will be much more enjoyable.
5. Can you postpone a dinner date, and maybe even a vacation because you found an error in a simulation program that took 20 hours to run and the client wants the results day after tomorrow? The correct answer to this question is yes.
6. Do you consider yourself to be a good writer? I am not talking about the articles you and I have written for theoretical journals, which our two best friends and one really good antagonist may read. You need to be able to explain complex material to a bright, often technically sophisticated, but non-statistical audience.
7. You have just completed a contract that involved supplying the client with an algorithm. As you are getting ready to jump in the shuttle to the airport, the client says, "Oh, by the way, would you mind making one little change, it will take you less than an hour?" The correct answer is, "let's negotiate a contract extension."

8. Do you totally despise air travel? You don't have to like it. Who does? You just have to tolerate it! Perhaps the real measure of a successful consultant is one who gets to travel in business class.
9. Are you willing to say no? The correct answer is yes. Perhaps you are too busy, the project is too far from your area of expertise, or the client wants you to supply him with the "correct answer."
10. And finally, there is the issue of deadlines. Unfunded research, even sometimes funded research, can occur over a career and that's okay. In the world of a consultant, you will soon discover that clients don't want research, they want answers, usually by yesterday.

Lest I paint too negative a picture, I am thoroughly enjoying my career as a consultant. I get to work with some of the best geoscientists, economists, and statisticians in the world. I have discovered that people will actually pay me to do statistics. Yes, there are deadlines and budgetary constraints, and often I know the outcome the client would like to see. Perhaps I have been lucky; I know I have been fortunate. My clients want quality work. I have never been pressured to get the right answer. This is a great job. Now if only I had a few graduate student slaves!

SAS PROS and CONS: PROFits, PROfessionals, PROviders, PROMoters, CONtracts, CONsulting and CONjobs

Gary McQuown, Data and Analytic Solutions, Inc. *

Introduction

The SAS community is an excellent resource of technical information on SAS programming and development, but is typically lacking when it comes to information on the non-technical business side. On the one hand we need to know how to do our job and how to improve our skills; on the other hand we need to know how to maximize our profits while performing in an ethical manner. I consider both to be opposite sides of the same coin, so this paper is an attempt to provide some additional balance. Agree or disagree, there is always something to consider.

One "dirty little secret" is that we do it for the money. Hopefully we enjoy what we do or at least don't hate doing it, but we do it for the money. So if we do it for the money, how can we make larger profits? This is one person's perspective on making a living within the "SAS" industry. Some of the topics covered include how to become or deal with: SAS professionals (programmers and developers), providers (clients that provides jobs or contracts), promoters (recruiters or HR depts.), contracts (legally binding agreements), consulting (working for a third party) and con jobs (problems due to a lack of ability and/or ethics). This article is meant for anyone and everyone who earns a living working with SAS in one form or another.

Note: The views and opinions presented are my own and are based upon my personal observations and experiences. They should not be construed to being those of any other. The author is

*mcquown@dasconsultants.com

neither a lawyer nor a CPA. All information should be considered general in nature and not legal or financial advice. For the purpose of this paper, the term "SAS industry" applies to anyone who makes a living writing SAS code, selling SAS products or acting as a middleman for those that do.

Profit

In Econ 101 I learned that "Income is what you make, and profit is what keep." Actually I had learned this from my father, but who listens to their parents when they can pay for the same lesson? Profits are calculated by the self-employed by subtracting a reasonable salary for oneself and expenses from the total of all money earned (revenue). Employees can do something similar by comparing their total earning (wages and benefits) to what they consider reasonable. In both instances, what is reasonable for your time depends upon the individual and is somewhat subjective. Some insight into the income of your peers and an abundance of relevant information can be found on sites such as http://salaryadvisor.informationweek.com/ibi_html/iwsal00/, www.rates.com, www.sconsig.com, and www.jobstar.org/tools/salary/sal-surv.cfm.

There are three factors used to calculate one's profit, so there are three ways to maximize your return. The first is to increase your skills and abilities to increase your reasonable earnings. The second method is to lower expenses, something along the lines of "a penny saved is a penny earned." The third is to obtain a higher rate at the negotiating table.

Increasing your skills and abilities is a common topic at SUGs and is well covered. Most suggestions include learning additional technical skills and new products. To do so you can attend classes, study independently (proceedings are great text), or make an effort to learn through your routine tasks. Employers will often assist in the effort by paying for all or part of the expense and making certain accommodations. Consultants must pay their own way and possibly make up for lost revenue (non-billable hours), but the reward is normally well worth the time and expense.

A suggestion rarely mentioned in technical forums is the necessity to increase your non-technical skills such as communication (verbal and written), organization, and relationship management. While normally associated with management, these skills are also essential for successful programmers and developers. During the interview process, it is quite common for the most substantial offers to be made for those with the highest interpersonal skills who can get the job done, rather than to those with the highest technical skills only. In most instances this is a correct judgment, as the better communicator requires less effort and oversight.

In order to improve upon your non-SAS skills, you may wish to return to school. Most community colleges offer inexpensive courses in speech, business writing, time management and various aspects of self-improvement. Organizations such as Toast Masters focus on specific skills for improvement.

Keep in mind that you are a commodity to be bought (hired), sold (subcontracted), or discarded (fired) according to how well you meet the requirements of another. Unflattering and perhaps insulting, but true.

Lowering expenses is a challenge and can be very personal. For consultants, staying at less expensive hotels and "bagging food" while on assignment may help in the short term, but will probably cost more in the long run as it takes an emotional toll. There are few items that employees can cut, other than the occasional course or work related materials. Therefore my suggestion is to cut expenses by negotiating them into your benefit package or wage.

To this end, employees and consultants should attempt to identify expenses that can and should be paid by the employer/client. Education is the first place employees should look to save. Most may consider this absurd, as they currently don't spend any money on education - a clear sign that

they are falling behind and don't realize it. Funds for classes and more importantly paid leave and permission to attend those classes are extremely important for upward mobility. Yet they are often neglected or overlooked when applying for a job. Working them into the original negotiations is a good way to insure that you have the option in the future.

Travel, lodging, and some portion of meals eaten should be at the top of the list for anyone working on the road. This can be achieved by expensing the items or by negotiating an "all inclusive rate" that includes a fair estimation of the expenses. If the client/employer is unwilling to pay for reasonable expenses, perhaps it is best to look elsewhere. While I consider it unreasonable to expect a client to pay for most of my educational expenses, I consider it reasonable if the topic is narrowly focused and pertains directly to the task at hand. In this instance I would attempt to have all or part of the lessons included in the contract.

Obtaining a higher rate is the quickest way to increase your profits, but also the most difficult. In order to obtain a higher rate or salary, you must convince your employer/client that your efforts are worth even more than what you are requesting. Only by achieving the "win win" scenario will you really get ahead. This is where your communication and relationship management skills will be tested.

In this instance, it is essential that you know your worth and be able to accurately relay that information to the interviewer. While it is common for some to be "humble" and understate their achievements, this only serves to lower your worth in terms of your employers/clients opinion of your skill and your salary/rate. On the other hand, exaggerating your worth may result in a higher initial rate, but the duration may be (and should be) very short. From ethical and practical perspectives, both are deviations from the truth and should be avoided.

Knowing one's worth is a difficult task. Partially because the information is subjective, and more importantly, it is easy to lie to oneself when bad news is involved. For this reason, it is best to rely upon the actions of others and objective results. While some may verbally rate your skills at one level or another, a more important indicator is what tasks you are assigned and how those tasks are accomplished. Another indicator is what you are able to accomplish compared to your peers. It is this information that you must present to prospective employers/clients in order to achieve the high-test reasonable rate. One suggestion to this end is to keep a diary (resume) of your achievements. It should clearly list what others have had you do, and how the task was done. It should also include all of the extra effort that you have made to improve your skills; listing off the classes attended, papers published, and products/languages you are familiar with.

Professionals

There are many definitions of "professional" and an abundance of opinions on how the term applies to those in the SAS industry. The least strenuous definitions only require that the individual receive payment for services. More stringent definitions require "great skill" and or "conforming to the standards of a profession." Judging from the levels of proficiency and behavior that I have witnessed, SAS programmer and developers perform across the spectrum.

I typically categorize SAS professionals into various levels of SAS programmers and/or SAS developers. Developers typically write dynamic code to be used by others as canned macros, stored procedures or as some portion of another application. Programmers typically write code for immediate results, perhaps to generate reports or for data processing. These categories are by no means mutually exclusive and many will perform in both to some degree.

Levels of proficiency within the two categories are often broken into: beginner, intermediate, advanced, and expert. The highest level requires little or no supervision and writes code that is of

high standard. Their code should be accurate, efficient, well documented, and complete in respect to the task. Lesser levels require greater supervision and although their code should function correctly, may not be able to perform to the same degree as that of the more skilled.

Where one splits the levels is a common topic of conversation and disagreement. Some determine proficiency by tallying the years where SAS was used. Although very simple, this method is often wrong. Some individuals may work on simple tasks for years and not achieve a significant level of proficiency for no other reason than that it is not required. Another individual may work on a variety of challenging tasks for short durations and become very proficient in a very short amount of time. Others rely on some form of testing, typically a verbal test of less than 20 questions. This process is better than most, but only provides limited insight into the actual level of proficiency. Still others (myself included) believe that the best determination is to observe the individual writing code and to request that they do so at various levels of complexity. While more time consuming than the other methods, I believe that this is the most comprehensive and accurate.

Behavior

There have been a number of articles written on the proper behavior in the workplace: "Good Consulting Manners" by Michael Davis, "The Dont's of Consulting" by Charles Patridge, etc. These are excellent guides and should be adhered to by all. Most deal with personal issues such as the use of computers, space, phones, and dress code. There is also some mention of ethical issues such as inappropriate billing (padding and double billing). The first group is fairly straightforward, somewhat open to interpretation and offenses are relatively minor unless taken to an extreme. For instance some may consider the appropriate length of personal calls to be a few minutes, while others may deem longer and others shorter. In most instances, professionals adhere to a standard higher than those you are working with and take constructive criticism when offered.

Padding and double billing are normally associated with legal consultants but are all too frequently associated with computer consultants as well. Simply put, padding is billing for hours that were not worked and double billing is charging two clients for the same time. Other inappropriate and unethical acts include falsifying documents (data, emails, etc.) and viewing or releasing restricted information. These actions normally result in termination when discovered and may be further processed in the courts.

One item I would add to the lists is to "be honest." After all, the client is paying for our services and expertise. They deserve to receive honest and objective information and notice of any conflicts of interest that may exist. This starts with the resume and first interview and should continue unabated throughout the length of employment. In return, we should expect the employer/client to be honest with us.

Providers

Providers, End Customers and End Clients drive the SAS market and comprise the following sectors: financials, pharmaceuticals, social sciences, government, manufacturing, health care, telecommunications, and academia. The terms employer and client were not used because it is common to be employed by A which is under contract with company B to perform work for company C. Company A is your "employer of record" and is required to do little more than collect taxes for the IRS. Company B is a middleman who may or may not provide some managerial efforts, or may merely perform accounting transactions and pool resources from other companies. It is company C which provides the scope and funding for the work while A and B are relatively immaterial to

the process. Therefore it is imperative to consider the needs, resources, and traits of the providers when considering a career.

The differences in compensation are illustrated in the following reformatted extract from the "SAS Salary/Rate Survey" at www.sconsig.com. The full results include numerous breakouts and graphics and cover several years. Other traits to consider include benefits, potential advancement, job security, work conditions, work location, and educational opportunities. For someone starting to work with SAS or considering changing industries, significant effort should be made to determine what industry is the most appropriate. The best place to start is a frank discussion with your peers.

SAS SALARY/RATE SURVEY RESULTS from WWW.SCONSIG.COM

SAS Salary/Rate Survey Results

09:18 Tuesday, January 4, 2005

----- Type=1 Full Time Employee -----

| -----Salary or Rate Statistics----- | | | | | |
|-------------------------------------|-------|----------|----------|----------|-----------|
| Classification | Count | Low | Average | 50th % | High |
| UNKNOWN | 1 | 48000.00 | 48000.00 | 48000.00 | 48000.00 |
| BANKING | 28 | 23616.35 | 63977.31 | 64500.00 | 125000.00 |
| CLINICAL RESEARCH COORDINATO | 1 | 20009.60 | 20009.60 | 20009.60 | 20009.60 |
| CONSULTING | 18 | 37000.00 | 63977.78 | 58625.00 | 97750.00 |
| CONSUMER PACKAGING GOODS | 1 | 82000.00 | 82000.00 | 82000.00 | 82000.00 |
| CUSTOMER SERVICE REPRESENTAT | 1 | 20000.00 | 20000.00 | 20000.00 | 20000.00 |
| DATABASE MANAGEMENT IT FIRM | 1 | 60000.00 | 60000.00 | 60000.00 | 60000.00 |
| DIRECT MAIL MARKETING | 11 | 62500.00 | 77363.64 | 75000.00 | 110000.00 |
| DIRECT MARKETING | 1 | 35000.00 | 35000.00 | 35000.00 | 35000.00 |
| EDUCATIONAL INSTITUTION | 17 | 22908.00 | 50685.29 | 55000.00 | 80000.00 |
| ENTERTAINMENT | 2 | 27600.00 | 33800.00 | 33800.00 | 40000.00 |
| FINANCIAL | 15 | 25000.00 | 60033.33 | 65000.00 | 83500.00 |
| GOVT - GOVT | 13 | 45000.00 | 74410.38 | 72000.00 | 113000.00 |
| GOVT - LOCAL | 1 | 73200.00 | 73200.00 | 73200.00 | 73200.00 |
| GOVT - STATE | 5 | 37704.00 | 53539.20 | 46992.00 | 76000.00 |
| GOVT CONTRACTOR | 1 | 62000.00 | 62000.00 | 62000.00 | 62000.00 |
| HEALTH CARE | 35 | 25000.00 | 54910.11 | 52000.00 | 85500.00 |
| INSURANCE - HEALTH CARE HMO | 5 | 40500.00 | 58500.00 | 67000.00 | 71000.00 |
| INSURANCE - LIFE | 1 | 30250.00 | 30250.00 | 30250.00 | 30250.00 |
| INSURANCE - PROPERTY CASUALT | 8 | 39500.00 | 74269.25 | 83833.00 | 100000.00 |
| INTERNET | 1 | 85500.00 | 85500.00 | 85500.00 | 85500.00 |
| INTERNET COMPANY | 1 | 10400.00 | 10400.00 | 10400.00 | 10400.00 |
| LEGAL FIELD | 1 | 66000.00 | 66000.00 | 66000.00 | 66000.00 |
| LOGISTIC | 1 | 61000.00 | 61000.00 | 61000.00 | 61000.00 |
| MANUFACTURING | 9 | 32000.00 | 68055.56 | 62000.00 | 109000.00 |
| MARKET RESEARCH | 1 | 50000.00 | 50000.00 | 50000.00 | 50000.00 |
| MARKETING | 1 | 64000.00 | 64000.00 | 64000.00 | 64000.00 |
| MULTIPLE | 1 | 57500.00 | 57500.00 | 57500.00 | 57500.00 |
| NON PROFIT- POLICY RESEARCH | 1 | 64500.00 | 64500.00 | 64500.00 | 64500.00 |
| NONPROFIT | 2 | 5984.00 | 34992.00 | 34992.00 | 64000.00 |

| | | | | | |
|-----------------------------|----|-----------|-----------|-----------|-----------|
| OUTSOURCING COMPANY, CLIENT | 1 | 40400.00 | 40400.00 | 40400.00 | 40400.00 |
| PHARMACEUTICAL | 54 | 2609.00 | 63565.42 | 64000.00 | 120000.00 |
| PHOTOPROCESSING | 1 | 62000.00 | 62000.00 | 62000.00 | 62000.00 |
| PSYCHOLOGICAL ASSESSMENT | 1 | 45692.16 | 45692.16 | 45692.16 | 45692.16 |
| PUBLICATION | 1 | 65929.29 | 65929.29 | 65929.29 | 65929.29 |
| RADIO TV | 1 | 109000.00 | 109000.00 | 109000.00 | 109000.00 |
| RETAIL | 7 | 44000.00 | 70000.00 | 59000.00 | 105000.00 |
| SALES | 1 | 62500.00 | 62500.00 | 62500.00 | 62500.00 |
| SAS | 1 | 56000.00 | 56000.00 | 56000.00 | 56000.00 |
| SHORT TERM DISABILITY | 1 | 45000.00 | 45000.00 | 45000.00 | 45000.00 |
| SOFTWARE | 1 | 108000.00 | 108000.00 | 108000.00 | 108000.00 |
| SUPERVISOR | 1 | 40000.00 | 40000.00 | 40000.00 | 40000.00 |
| TELECOMMUNICATIONS | 12 | 20982.00 | 53750.66 | 50000.00 | 110000.00 |
| TRANSPORTATION | 5 | 43000.00 | 50814.00 | 45760.00 | 65310.00 |
| UTILITY | 1 | 80000.00 | 80000.00 | 80000.00 | 80000.00 |
| WORKER'S COMPENSATION | 1 | 64000.00 | 64000.00 | 64000.00 | 64000.00 |

Promoters

Promoters match people to positions for a fee and are akin to real estate agents and used car salesmen. They are often disliked and avoided with most considering them a necessary evil. Resources such as the "Contract Employee's Handbook" at <http://www.cehandbook.com/> suggest that they should be avoided whenever possible and offer a list of alternatives. However I have found that promoters provide a service and working with them can be mutually beneficial. While it is possible to find full-time employment or consulting jobs without them, they typically can find jobs more quickly and have access to positions that would not otherwise be available. With the advent of the preferred vendors list, this may be truer now than ever before.

Promoters may contract with programmer and developer as W2 employees, 1099 independents, or through a "Corp to Corp" relationship. Each relationship has costs and benefits. As a W2 employee the wage rate is normally less, as benefits may be included. 1099s and Corp to Corps are responsible for their own benefits, so they normally receive higher rates and greater flexibility. The type of relationship you have with your "employer" / promoter will also affect your taxes and any write-offs you may have.

There are good and bad promoters. Common problems arise when promoters promise jobs but can't deliver, insist upon overly restrictive contracts, are slow to pay, or create conflicts of interest. In most instances common sense can be your guide. In respect to legal matters, it is best to get a professional opinion and assistance.

Contracts

Contracts are legally binding promises and require compensation in return for services rendered. Both parties are required to perform according to what has been stated in the contract. If either party does not perform as required, the other may ask the courts to enforce the contract. Typically employers may be forced to provide unpaid salary, wages, or benefits. Employees and consultants may be forced to refrain from certain activities or pay damages to the employer. What can and cannot be enforced is determined by the legal body with jurisdiction (often a contended issue) and the provisions of the contract.

When dealing with contracts, it is very important to remember that the "standard contract" is a myth - anything not included is irrelevant and you are what you sign. While it may be difficult to agree on what needs to be said, a contract may be modified with the agreement of all parties. While it may be possible to have a court deem some provisions of a contract unenforceable, it is best to consider all provisions as binding. Once signed, you are committed. On the other hand, if the other side does not perform as required, you must also consider the cost of having the contract enforced. Legal fees, time, and effort are all considerations that must be balanced against what you **may** receive.

The **Independent Computer Consultants Association (ICCA)** (www.icca.org) provides sample contracts for their members along with some very relevant information. Sample contracts may also be found through other websites, bookstores or by contacting your lawyer. All will identify the parties and what each promises to do for the other. Additional provisions may include work place protocols (time and place, dress code, behavior, etc.), intellectual property rights (security, non disclosure, ownership of code), non-competes, and provisions for termination and requirements for arbitration. As a general rule, I have found that the longer the contract, the less desirable the relationship.

When faced with contractual issues with which you are uncomfortable, you can try to have them changed to something agreeable to both parties. If that fails, you are faced with a serious dilemma with far reaching consequences. In those instances, I have found it best to walk away. Either the other party decides to compromise, or I find other work. Some of the most grievous contractual issues I have seen are:

Non-Competes: A typical non-compete will restrict you from working for anyone you have been introduced to for a reasonable amount of time (6 months to a year). Overly restrictive non-competes restrict you from working for anyone within the entire company or for an extended period (1 - 5 years). Another attempted to restrict employment by any firm that they have marketed to.

Payment: Most contracts call for payment within 30 or 45 days after invoicing. However those supplied by the other party almost never contain any penalties for late payment. Some also allow the employer to withhold or even take back funds already paid if they are not paid.

Conflicts of Interest: Who do you work for? Who is the client? What can you say when the client asks for your "professional opinion" on some aspect of your employer's performance (another employee's work, products, etc.). If the contract states that you must always act on the behalf of or in the best interest of your employer, you may be in a very uncomfortable and legally sensitive situation. While my approach of being as honest and accurate as possible has endeared me with some employers, it has yet to be tested in a court and has been greatly appreciated by the end customers.

Consulting

The most common reasons for transitioning from Employee to Consultant can be organized into three categories: Money, Power, and Warm Fuzzies. Anyone contemplating independent consultant status should consider and weigh every item in each category to determine what is best for them. They should then reconsider and reweigh every item in a best and worst case scenario for various time periods into the future.

Money represents anything associated with net income. The most obvious benefit is that consultants charge more per hour/job, so there is the potential that they can achieve a higher net income.

Less obvious benefits are that contracts may be negotiated more frequently than companies provide promotions, so the potential for advancement (per hour increases) is greater. Compensating for some of the additional expenses incurred, Independent Contractors may also write off work-related expenses while employees may be limited to write off of only 2%[†]. The most common negative factors to affect one's income are business expenses and a lack of billable hours.

Business expenses include fees for accountants and lawyers, licenses, software, hardware, insurance, etc. Billable hours may be reduced for several reasons. In some instances you may be unable to find work for which you can bill, and at other times you may actually perform work for which you cannot bill. Non-billable hours may be the result of difficulties with a project, but more likely they will be spent performing business-related activities such as accounting, marketing, training, etc.

Power describes the ability to make and act upon your own decisions as well as being responsible for your own success or failure. As his or her own boss, a consultant can more easily act in his or her own best interest. However, if they ignore the interests of their clients, they are very likely to do more harm than good. A perfect example is in the selection of jobs. The consultant has significantly more control over which jobs they will accept and often can pick between multiple assignments. However, if the consultant chooses unwisely or alienates a client, they may limit the availability of future jobs.

Warm Fuzzies encompass everything that is left over. This includes more time with the family, more leisure time, the ability to work from home, reduced stress, and more personal recognition. Although Money is a primary motivator, a Warm Fuzzy is often the catalyst for the transformation from Employee to Consultant. The unfortunate few are able to realize the benefits they originally sought and many actually sacrifice what little they already had. Employees often turn consultant so that they can spend more time at home with their families. But in order to start, maintain and grow their business, they may spend significantly more of their precious personal time on business related tasks.

The most significant downside of consulting is the uncertainty. Another is that instead of receiving Warm Fuzzies, consultants may be given the Cold Shoulder. Employees may look down upon them or consider them to be outsiders.

Please keep in mind that the factors listed in the box on the following page are general and dependent upon additional factors often out of the control of the individual.

Another Warm Fuzzy is social acceptance. "Half of your co-workers will hate you before you start. If the other half don't hate you before you leave, consider the job a success." While this is somewhat exaggerated, you should expect some of your co-workers to dislike working with a consultant. From my perspective, most of the dislike is due to either jealousy or fear. W2 employees may resent working next to a "better paid" consultant, especially if the work is similar. When budgets are tight, consultants are often blamed for inflating expenses. Consequently, consultants are often the first budget line to be cut when short-term savings are mandated.

Others may fear that one of the consultant's tasks is to judge their own work and to document their shortcomings to management. This fear may be well founded because consultants often act out of the normal hierarchy and social norms of an office, are trying to be as productive as possible in order to justify their compensation, and bring a wider variety of experience to the endeavor. Upper management is likely to request an "outsider's" option, especially if the consultant has worked for other firms within the same industry or worked on similar tasks in other industries. My preferred method of dealing with this issue is to always provide my best service and advice to the client. If

[†]See disclaimer.

**COMPARISON OF PRO'S AND CON'S FOR
EMPLOYEE (W2) AND CONSULTANT (1099)**

| | Pro | Con |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| W2 | Job Security Steady Income Less Responsibility Structured Environment Employer Benefits Corporate Support Limited Failure | Lower Income Limited Write Offs Less Flexibility Routine Tasks Lower Income Corporate Hierarchy Limited Advancement |
| 1099 | Higher Wage Higher Wage Can Write Off Expenses Greater Flexibility Challenging Activities No Corporate Hierarchy Unlimited Advancement | Less Job Security Business Expenses Uncertain Income Higher Responsibility Greater Uncertainty No Corporate Support Unlimited Failure |

this causes issues with my co-workers, I reassure myself that I will only be there until the job is completed, and my true co-workers are my fellow consultants.

Con Jobs

I consider something a "Con Job" when someone knowingly makes a false claim in an effort to get more than they should. Some may resort to cons only when they are in a bind, others run cons as part of their business model. Regardless of which con is pulled, some form of deception or deceit is involved.

The most common con I have noticed is **forging or faking documentation**. From exaggerating the extent of SAS used to the positions held and degrees earned; lying on resumes is rampant. When looking through a large stack of resumes it is not uncommon to find two or more that are virtually identical with the exception of the contact information. In one instance I discovered someone had cut and pasted parts of my resume into their own. In most instances, a technical interview can expose this type of fraud. Emails are another document that can be easily forged. Creative editing and exchange can substantiate false claims, cover incompetence, or support additional fraud. Email fraud may be difficult to detect unless the supposed author sees a copy of the forged document. However most servers have backups that can be used to substantiate a claim once fraud is detected.

Other cons that I am noticing more frequently deal with **conflicts of interest**. In some form or another, trusts or obligations are breached in return for personal gain. It could be that the con artist offers to "scratch your back if you scratch theirs." In return for their financial assistance, you are expected to support them in some endeavor that breaches the trust or obligations you have with another. Examples include divulging proprietary information, overlooking poor performance and offering inaccurate or biased advice. If the con is played well, the con artist may not need to follow through with their commitments. Given the circumstances, few would complain about someone's unethical behavior at the risk of exposing their own.

Then there is a form of **bait and switch** pulled by unscrupulous promoters. Shortly before the official start date, the prospective employee / consultant is told that the job has fallen through but another position, paying less than the first is available. Rather than face the uncertainty of locating a new position on such short notice, they accept the new position. They may never realize that the original job was always secure and that they were conned into working for a lower rate.

Padding and double billing are cons related to how much is billed. Padding occurs when additional hours are added to the invoice. Double billing occurs when two or more are invoiced for the same time. In both instances the con artist is receiving more than they have rightfully earned. An employee, consultant, or promoter may pull these cons. Given the many layers that may exist, adding an hour or two here and there may not be noticed. On the other hand it is difficult to perform two jobs simultaneously and keep both employers happy.

Conclusion

The SAS industry is a small world with few degrees of separation between even the most far-flung. Working within the industry allows us to produce products that can be very beneficial to others. It is also a business that pays our bills and affords us a nice living. To improve what we already have, we should improve upon both our technical and non technical skills while providing our services in an ethical manner. Regardless of the outcome, working in the SAS industry is always interesting.

Comments from the Chair

Philip Dixon, Iowa State University*

Thank you! Thank you all for being members of the Statistical Consulting Section of the ASA. Your interest and energy make the section active. Your dues support section activities. Without either, we would cease to exist. Thank you also for electing me chair for 2006; it is an honor.

I am one of thirteen members of the section executive committee that runs the section. Between us, we demonstrate the diversity of statistical consulting. Some run their own consulting businesses, some are academics, some work in industry, and others work in government. Many focus on biomedical statistics, but others work in industrial statistics, marketing, or other applications. My day job is as a professor of statistics at Iowa State University. I do a lot of consulting with researchers in Biology and Agriculture, but that includes everything from biochemistry and genetics to wildlife biology and ecosystem ecology. My own statistical research concentrates on statistical methods to answer ecological and toxicological questions. I also consult privately for a variety of industrial and governmental clients.

If you have kept in touch with section activities, you are seeing the results from the projects initiated by Jane Pendergast and Susan Devlin, the section chairs for 2004 and 2005. The section has held roundtable conference calls on topics ranging from mixed models to starting a consulting business. These will continue, but we are always looking for volunteers to help. We surveyed section members about consulting rates and the results are published in this newsletter. A committee is developing a web database for consultant referrals. A prototype has been developed, but it may be mid-summer or later before it can be integrated into the ASA system.

We are also planning new activities. The section is working with the ASA Committee on Applied Statisticians to develop activities for isolated statistical consultants. A pilot project has been funded as an ASA Strategic Initiatives Proposal. You'll hear more about this as the project develops. We will be revising or rewriting a brochure about statistical consulting, and we need to update our section charter.

Most importantly, the section is you. What are your interests? What might the section do to benefit you? Your comments and suggestions are always welcome. The easiest way to reach me is to e-mail me at pdixon@iastate.edu. Again, thanks!

Notes from the Editor

I hope that you have found this issue of our newsletter informative and helpful to your consulting endeavors. Please direct comments, topic suggestions, and submissions to me at karen@boulderstats.com.

Karen Copeland, Editor

*pdixon@iastate.edu

Contact information: Boulder Statistics
2456 Vine Place
Boulder, CO 80304
Phone: 720-564-0661
karen@boulderstats.com

Christopher Holloman, Assistant Editor

Contact information: The Ohio State University
Cockins Hall
1958 Neil Ave.
Columbus, OH 43210
Phone: 614-292-0738
holloman@stat.ohio-state.edu

**Remember the
Section on Statistical Consulting
website address:**

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.