

### What Women Clients Want

Gary W. Oehlert, rev. by S. Weisberg

School of Statistics  
University of Minnesota

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In the film *What Women Want*, Mel Gibson's character becomes able to hear the thoughts of women.

He uses this to advance his advertising career.

We cannot read clients' minds, but we must know their needs and preferences.

This makes us better consultants.

This lecture mostly follows Chapter 2 of Derr (2000).

## The Plan

- Qualities of a statistical consultant.
- Consulting experience of client and consultant.
- What makes a satisfied client?
- Aligning consultant and client goals.

## Desiderata

1980 ASA committee: qualities of an ideal industrial statistician:

- Well trained in theory and practice of statistics
- Effective problem solver
- Good oral and written communication skills
- Can work within the constraints of the real world
- Knows how to use computers to solve problems
- Is familiar with the statistical literature
- Understands the realities of statistical practice

- Has a pleasing personality and is able to work with others
- Gets highly involved in the solution of company problems
- Is able to extend and develop statistical methodology
- Can adapt quickly to new problems and challenges
- Produces high-quality work in a timely fashion
- And, of course, is ethical

Another interesting feature is teamwork. More and more, in government, industry, and elsewhere, work is done on teams, not individually.

Phil Ross (1995):

*The most important thing I would like to see is people emerging from graduate school understanding that they are going to play on a team, and knowing how to communicate in that team setting. That is very difficult for people, especially those majoring in mathematics and statistics.*

Hahn and Hoerl say statistician must have

- Insight into root issues, technical and non-technical.
- General problem solving and scientific thinking skills.
- Broad base of statistical and subject matter knowledge.
- Ability to learn quickly.
- Ability to adapt knowledge to problem at hand.
- Confidence to work effectively on teams.
- Ability to balance thoroughness and timeliness.
- Outstanding communication skills.
- Stomach to work in high-pressure environment.
- Enthusiasm and immodesty to sell themselves and statistics.

We each have

- different personalities,
- different ways of learning,
- different knowledge bases.

True for both consultant and client.

For relationship to work, must meet in middle and build bridges<sup>1</sup>.

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<sup>1</sup>Sounds like a marriage counselor!

## Derr's Happy Clients

- “I was very impressed with the effort the consultant and assistants made to understand the problem.”
  - ▶ Effort to understand problem.
- “[Consultant] was very accommodating, professional and very accessible. The documentation was very readable, and the technical material was presented in a way that was very easy to understand as well as implement. Overall, my interactions with [Consultant] were very satisfying.”
  - ▶ Accommodating.
  - ▶ Professional.
  - ▶ Accessible.
  - ▶ Easy to understand.
  - ▶ Writes clearly.

## Derr's Happy Clients, continued

- “I enjoyed working with [Consultant]. She clearly enjoys her work, and is one of those rare people who is also capable of putting it into words that non-statisticians can understand.”
  - ▶ Enthusiastic.
  - ▶ Communicates well.
- “The document [Consultant] prepared was extremely helpful — clear, easy for me to understand, and it addressed everything I was concerned about.”
  - ▶ Addresses client's problem.
  - ▶ Good written communication.

## Derr's Happy Clients, continued

- “[Consultant] truly seemed concerned, that he truly desired to aid in my problem. I believe that his good attitude personifies what is required in consulting practices.”
  - ▶ Concerned.
  - ▶ Good attitude.

Stop me when we get to the part where the client praises the consultant's use of measure theory and second-order asymptotics.

## More happy clients

“I am a doctoral candidate. I want to recognize and sincerely thank [the consultant] for the patience, kindness, understanding, and assistance. . . As you know, the dissertation process is an especially stressful time, and the 'stats' aspect can be especially daunting and intimidating, especially for us more comfortable in the 'qualitative' domain. [The consultant demonstrated] a natural ease and special gift for explaining 'stats' to non-stats people, and with the utmost professionalism . . . summed up and grasped the general nature of my proposal, and . . . clearly articulated in general, understandable terms the general direction I need to go. . . I am so, so grateful . . . for taking the time to lead me through the process; it may seem like small matters, but this was very important to me.”

## Making Happy Clients

- Learn about the problem, and its context.
- Learn what the client understands about the problem.
- Fit the solution to the client AND to the problem, not just the problem.
- Empower the client to solve his/her own problems.

## Derr's Unhappy Clients

- “I was able to follow up on most of the recommendations — with a lot of reading. However, I still feel confused ... I have no where to turn for answers. I really need to have someone to ask questions of in addition to the two scheduled meetings.”
  - ▶ Incomplete explanation.
  - ▶ Unfinished business.
- “The time frame in waiting for [Consultant]’s recommendations was longer than I expected.”
  - ▶ Delay.

## Derr's Unhappy Clients, Continued

- “[Consultant] was consistently late to meetings — some time not showing up at all. Also after last contact with him he did not return and e-mail and dropped out of sight?!”
  - ▶ Late.
  - ▶ Irresponsible.
  - ▶ Non-responsive.
- “[Consultant] did understand my questions, but had a very difficult time justifying the method ...”
  - ▶ Poor communication.

## Derr's Unhappy Clients, Continued

- “... I received poor advice. I did not know it at the time, but when I went to [get help from someone else, I] ended up changing the model significantly to make it right. I waited 3 weeks for the feedback from [Consultant] and since it turned out to be wrong, I wasted the whole month of March trying to use the [Consulting Services].”
  - ▶ Incorrect.
  - ▶ Slow.

This person may be more concerned about the lost time than the poor advice.

## More Unhappiness

- Client attitude
- Client expectations
- Unrealistic goals

“I’m having a problem with SPSS—I was able to get my data into SPSS, but when I tried to run a repeated measures ANOVA, things went wrong. I called the [Stat Packages] Helpline, [who made suggestions but didn’t help, so I took my data to the Stat Clinic]... It turns out that the stats help clinic has let their SPSS license expire (!) and can’t give any SPSS help.

This was an **extremely** frustrating experience, which I hope is atypical of the help clinic, but I wanted to let you know, and also to express my wish that you quickly renew your SPSS license.

## Quality for Customer Satisfaction

- Availability: can the client contact the consultant.
- Responsiveness: does the consultant react promptly to client.
- Timeliness: is the job accomplished within the customer’s stated time frame (or negotiated time frame).
- Completeness: is the job done.
- Pleasantness: did the consultant have professional behavior and manners.

Where is technical accuracy?

## Aligning Expectations

Consulting relationships work better when everything is spelled out.

So what do we need to set up?

## Issue 1: What is your role?

- What are your responsibilities?
- What is your level of authority?
- How do you participate in decisions?

Trouble if lots of responsibility but not authority or decision making.

## Issue 2: What are the roles of others?

- Who has responsibility and authority?
- Who makes the decisions?
- Or how are these divided among the team?

## Issue 3: How will communication be maintained?

Who talks to whom?

Regular reports both directions.

## Issue 4: What are the deliverables?

A deliverable is a “product” to deliver to the client, a data analysis, design, report, etc.

Deliverables should be relevant to client needs.

Deliverables must be feasible.

## Issue 5: What are the deadlines?

What needs to be delivered when?

Are deadlines feasible?

Timeliness is a key to client satisfaction.

## Issue 6: How are you compensated?

This needs to be decided right at the start!

Hourly rates ... any limits on hours? Fixed price agreement? Pro bono?

What about authorship?

## Issue 7: What are acceptable statistical practices?

Any legal restrictions?

Standard practice?

Client requirements?

Software requirements?

## Issue 8: Who has ownership rights?

Decide at the beginning who owns what. Get it in writing.

## Issue 9: Security and confidentiality?

What needs to be protected?

How can you assure that it is protected? What procedures need to be in place?

Legal requirements?

## Issue 10: When are you done?

You may want to finish.

Client may want you forever.

Establish circumstances under which your participation is done.

You can always make a new agreement to continue.

## Summary

- We need to develop our skills (not just statistical skills) to be a good consultant.
- Most of client satisfaction is non-technical.
- Establish expectations to frame your role in a project.