

## More on working...

Consider the hourly rate you might charge if you were an independent solo consultant. Roughly speaking, this is the amount you need divided by the billable hours. We'll think about this in terms of one year, say, a year that you have an active vibrant practice, not for your first year, for which you would think differently.

How much do you think you need in a year? Think of how much you want to earn in year, and add in extra expenses for taxes (you're self-employed, remember), for insurance of various kinds, and for any other expenses you think you might have (computing, marketing, lawyer, accountant, etc.).

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How many hours do you think you can bill in a year? There are roughly 2000 hours in a year (50 weeks  $\times$  40 hours), but you won't be able to bill for time spent finding clients, doing your accounting, and other such things.

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So what's your hourly rate?

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I'll now talk a little bit about working at a University...

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From the ASA Statistical Consulting Section mailing list:

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I sometimes have trouble communicating with consulting clients about my level of expertise (or proficiency, competence, etc.) in a specific statistical area. Have others experienced this? Do you have ideas about how to convey this to clients? Those are my main questions, but I'll elaborate below.

This problem arises most often when a new prospective client and I discuss my potential contributions to their project. My conception of statistical expertise seems to differ markedly from some clients' conceptions, and sometimes this discrepancy impedes our communication about how likely I am to help.

For example, last year a prospective client contacted me about a project involving structural equation modeling (SEM). I told him that I consider myself competent with routine SEM applications but not an "expert," and I described my experience with SEM and related latent-variable techniques (e.g., graduate courses, consulting on several projects) as well as my background in statistics. He didn't hire me, saying he instead wanted an "expert" in SEM. That exchange left me wondering about his criteria for an expert, how he'd find one among available consultants, and how he thought hiring an expert would change his consulting experience.

I've experienced other examples that I won't describe. In some I was hired and in others I wasn't, and clients' assessment of my relevant expertise has probably varied from markedly underestimating it to markedly overestimating it.

Here are a few questions to stimulate discussion about what expertise means to statistical consultants and their clients:

1. How do clients assess a potential consultant's expertise relevant to their project? Do they accept the consultant's word at face value (e.g., from a website description), consider specific credentials or experience (e.g., course work, teaching, consulting, methodological publications), or other information?
2. How much do clients consider expertise beyond the specific technique(s) they're interested in, such as expertise in related methods, statistics more generally, or consulting? For instance, if Consultant A has run 200 survival analyses and Consultant B has never worked with survival analysis, Consultant B might still be a better consultant on a survival-analysis project if she's a better statistician and consultant in general.
3. In what ways do clients think their consulting experience will depend on the consultant's expertise in their focal technique(s)? How well can they judge what level of expertise is desirable for their particular project? What costs or tradeoffs are they willing to accept for hiring someone with more (vs. less) expertise?
4. Would a standard scale of expertise be useful in discussions with prospective clients? For instance, this might consist of about 5 levels, each with a number or label (e.g., unfamiliar, novice, competent, proficient, expert) and a description of that level's criteria or characteristics. A generic version is probably more feasible than numerous versions for specific statistical methods.

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This is a great topic and point you raise. Each client will come to a meeting with some idea of what they are desiring in their statistical consultant. A successful consultant wears not only a strong technical hat, but also a strong sales and communication hat.

The sales part involves the communication you are describing. For example, if the client asks if you were an expert in xyz, then ask the client, how would you know if I had the appropriate level of expertise in xyz? Ask them to describe more specifically what is important to them for their project to be successful. Ask them to "tell me more." Ask them if they have had projects in the past that have worked well and why, and ask what projects have not gone well and why? This will help you discern the costs and tradeoffs you mention in question 3.

The questions you pose to us, are the some of the ones to propose to the client. Each client is different. Find out about this particular client, and you will find out whether or not you are a good fit.

At least, that's my two cents. Good Luck!

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I feel that it is fair to tell a client that "you" are competent in something that you can do yourself or that someone who works with you, or can be hired to work with you, can do competently. I put "you" in quotes, because I mean you and those who are willing (usually for pay) to work with you. You need to have friends and colleagues that you can access for help. We had such a job recently, and we got some very good help to do it. We could not do it on our own. We looked in the literature and also met with an "expert" for an hour-and-a-half, and, I feel, we did a very good job on it. The client was very happy.

The one caveat to this is that I would not take a job for a legal matter (legal expert witness) on a topic that I did not know quite a lot about.

Bottom line: we do take on work if we know that we can do it ourselves or know that we can get appropriate help to do it. Statistics is vast, and it is very difficult (actually, impossible) for one statistician to know it all. The sense of community and helpfulness among most statisticians is a real asset. You should expect to pay your colleagues.

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*From the original questioner:* Thanks for your thoughts about this. Your recommendations for exploring a prospective clients' expectations and past experiences are certainly sensible, especially when there's ample opportunity for preliminary discussion with the client.

What's sometimes challenging, however, is that some clients seem to have set in mind a particular type of consultant – such as an "SEM expert" in my example – and may not realize what characteristics of the consultant are most important to their project's success. In some cases there's little opportunity to discuss this with them so we can each understand the others' needs, resources, expectations, etc. For instance, in my "SEM expert" example there were only three email exchanges: The client contacted me with a brief note about the project (but no details), I described my relevant expertise and suggested that we arrange a phone call, and the client politely declined because I admitted I didn't consider myself an "expert."

Perhaps a good lesson for me, drawn in part from your advice, is to avoid discussing my qualifications in an initial email response, and instead arrange a phone call (or in-person meeting) as a first step. This might help avoid prospective clients' making decisions without my being able to discuss with them my fit to their project.

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I believe that Colleen has made some good points regarding finding out what your customer needs to accomplish, and that you could perhaps have done a better job of eliciting those needs from the prospect. I try to always make a point of finding out what the client hopes to accomplish, simply because they probably don't really know what type of expert they need. Be that as it may, however.

I'd like to suggest one additional point. I've been doing this sort of consulting for quite a while now, and if there is one generalization that I can make it is that the prospective client who comes into the mix claiming that they know what the specialization that they need is usually the worst, most difficult, and most obnoxious client that you will find. They rarely do know what the proper specialization, and if they are by chance accurate in their assessment of the proper technique they most likely will find some way of making the project at least 300% more difficult than it rationally should be. This may have been a good project to not get, since it could have amounted to a huge time suck. While this may not be what you want to hear, especially if you need some billable hours right now, it is also something that might be useful to keep on your horizon.

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I'm of two minds on this question. Half of me says, never sell yourself short when talking to a client. I would tend to describe an "expert" in an area as someone who has published original methodological research about that area, and by that standard, I would not be able to describe myself as an expert in almost everything that I consult on. When someone asks if you are an expert, say that you've done SEM analysis for four different clients, that you've attended a training class taught by the guru of SEM, Ken Bollen, that you're familiar with two different SEM packages, or whatever. I bet that some of the things that you've done would be enough to establish yourself as an expert in the eyes of your client even though you don't feel like an expert yourself. Try to dodge any formal declarations of being an expert and stay focused on factual descriptions of what you have done. If they keep pushing, ask what type of background they are hoping to get.

The other half of me says that if a client finds someone else who is more qualified than I am, that this is a good outcome for all concerned. So in that sense, you did well by describing your limitations.

One thing that I don't do enough of is to contact people three or six months after an original inquiry. It costs nothing, and you might end up getting your name up to the top of his mind for future work (especially non-SEM work). You might consider this—send an email asking if that person ever did find an expert on SEM. Then ask how it worked out. You might even inquire about who this "expert" is by stating that you want to know that person's name so you can refer others. And if this person was less of an expert than you are, then you've learned a valuable lesson. The next time when someone asks if you are an expert, lie like hell!

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My experience as a consultant is that it pays to be honest with prospective clients about my level of expertise with respect to a technique or area of application. If I lie and say I know all about something when I really don't, I may get away with it once or twice, but eventually the lie will catch up with me and the word will get out that I'm not to be trusted. That is the kiss of death as far as consulting goes!

What I have noticed is that many of my clients, especially physicians, claim ignorance of statistics, but they know way more than they claim. Also, if I admit up front that I don't know about something, such as SEM analysis, many prospective clients will regard this as a positive and I may end up getting other business from them!

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I think that one should certainly be honest with clients or prospective clients.

However, in most instances, one need not be an "expert" in an application area in order to provide consulting services in the area. In those cases, I would represent myself as capable of doing the work (if I believe it to be true), but I would not call myself an expert in the area.

Another consideration is that many clients will have a much less rigorous definition of "expert" than will the typical professional statistician, and one can create a false impression with too many disclaimers.

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Another aspect to consider is what the ASA Ethical Guidelines say: [http://www.amstat.org/about/ethicalguidelines.cfm#responsibilities\\_funders](http://www.amstat.org/about/ethicalguidelines.cfm#responsibilities_funders)

In the section about Responsibilities to Funders, Clients, and Employers, the guidelines say: Clearly state your statistical qualifications and experience relevant to your work.

This guideline seems appropriate in this situation. If a client asks if you are an expert in a particular area, clearly state your statistical qualifications and experience relevant to this area. If the client pushes you to admit to being or not being an "expert", clearly restate your qualifications and experience and maybe add a statement about how confident you are in doing a good job.

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I agree that I could never call myself an expert in any statistical methodology, but I do have either 1) no experience, 2) some experience, or 3) extensive experience. In those cases where I have told prospective clients I have no experience, I offer to help them find someone who does. This sets me in a good light with the client and often they will accept my offer or they will return with other work. On rare occasions they have ask if I would be willing to learn about the methodology. In one such case, a prospective client asked if I had experience using R. I told them I had never used it. They had been asked by the FDA to use a particular module in R and wanted to know if I would contact the agency and learn about what was needed...the "learning" would be at their expense. I agreed to give it a go warning that I could not guarantee a successful outcome. I also offered to charge them a discounted rate in the learning process. I succeeded in learning enough R to comfortably run the module in question. Due to my experience in SAS, I was able to crosschecked the results with methods I knew to be similar. The study was inconclusive (a failure by the client's perspective), but they were pleased that I was willing to take on the work and that I had been

honest about my level of experience. They have since returned with other projects, some related to the previous work and some totally different work.

It never pays to over sell yourself. The statistical consulting world is fairly tight, especially in the biopharmaceutical sector, and news travels. The perception of not being forthright could end your career.

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I get calls from potential clients who think they want a particular type of expertise when they really need another. I often play therapist to them to figure out what their problem really is and whether I can help. I gather I'm not unique in this regard.

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I have forty some years of statistical consulting. YMMV, it is extremely rare for the presenting question to be the underlying question. This has been true whether the clients were university faculty, dissertation students, Senators, Members, etc. This should not be surprising since in medicine, law, counseling, social work, pastoral work, discussion lists, even such work as auto parts or plumbing supplies the first response has to be a series of questions.

On some occasions the whole consultation is helping the client move from the presenting question to the underlying question.

Name: \_\_\_\_\_

We discussed some more issues about working today.

What did you find particularly interesting or new to you?

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