**Corporate research at Agilent: a casual conversation with scientist-in-industry Nick Sampas (PhD in physics)**

*By Monica Gates, 01/15/2018*

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Nick Sampas, a PhD in physics, is a senior research scientist at Agilent Technologies. He kindly sat down to talk with me about his job and how he got to where he is. I've known Nick for a long time, and know the basics of his position: he is one of the few industry scientists who has spent much of his career at a single company, working at Agilent pursuing biotech research for more than twenty years. Agilent provides analytical instruments, services, consumables, applications, and expertise to laboratories worldwide. The company is a spin-off from Hewlett Packard (HP) and focuses on six markets: food, environmental and forensics, pharmaceutical, diagnostics, chemistry and energy, and research.

I (Monica) am a graduate student in neuroscience / psychology blogging for Beyond Academia, and had a series of questions for Nick, based around the question of what career paths science PhD graduates can pursue. Within PhD programs, the "standard" path is that of academia—becoming a professor at a university and pursuing academic research. As such, I mainly asked Nick about what he thought about alternative career paths for graduates, but left the conversation open to different directions. In the ensuing discussion, Nick talked about the state of corporate research, research in startups, his career trajectory, layoffs and role changes, academia, how to get hired in industry, and management tracks, to name a few.

---------*Part 1. Where Nick is now: the state of corporate research*

**Monica:** "Thanks so much for talking to me, Nick. I'm going to start with the basics: what is your job?"

With such a broad question, Nick doesn't know quite know where to start, but he settles in quickly. He tells me that if I'm asking about titles, then his official one at Agilent is "Master Scientist". This is a more senior position, just below "Fellow".

**Nick:** "There are only a couple Fellows in Labs," he tells me. "At that point, you're a technical advisor to the director. Typically [Fellows] do things like finding companies to invest in, or setting up relationships with other companies or academic institutions, as well as shape the future directions of the organization."

**Nick:** "There are four tiers below Fellow," he elaborates. "Master, Expert, Career, and early career. I'm not sure what early career is called, but it's typically for the first few years." He was hired at a level like Career, which used to be called a "member of technical staff".

**Nick:** "Different companies have different names for similar positions," he says.

I'm curious about what these titles mean.

**Monica:** "What do you do at the different levels?"

**Nick:** "What you do doesn't really change that much. The early-career person is pretty much doing what they were hired for. Typically, you're hired to work on one or several projects, where there is a need for someone of your particular skillset—engineer, scientist, or whatever. And your skills are needed for that project or those projects. After you've been [working at the company] a bit longer, you get more freedom to choose your next projects. In fact, the managers rarely say that you *have* to work on specific projects in labs. In the business unit, you may be more likely to be put in a certain position doing a certain thing as long as they need those things to get done. In labs, and perhaps in other parts of the company, most of the projects come from the ground up— that is, from bench scientists up rather than from management down. And it's often, but not always, the more senior scientists and engineers who come up with the new project proposals."

Satisfied, I switch topics. Nick has previously told me that research at Agilent Labs is unusual compared to at most companies. He mentioned that the advantage of being a scientist in academia is you have a lot of freedom to choose your research field. In industry, your projects are mainly driven by product ideas that are more likely to have the potential to generate revenue for the company, so scientists have a narrower purview for their work. But sometimes scientists in industry can work toward generating papers to be published in peer-reviewed journals. Agilent is one of the few large companies that still has a dedicated research branch where scientists have more flexibility and wider scope in their projects.

**Monica:** "You mentioned offline that Agilent is, like, the most academic you can be within industry?" I ask, referencing the information above.

**Nick:** "Well, I wouldn't say the most—I mean, there's still IBM labs, Google Labs and a few other corporate research labs, but there aren't many companies with central research labs; most have shrunk or gone away. To give you an example, when I was at HP labs, there we had more than 1500 people in labs. But, of course, HP was a much bigger company. Then, after HP and Agilent split (in 1999), Agilent had about 450 people in Labs. Then, over the next 10 to 15 years, we downsized to about 150 people. That may have been typical because the model had changed: companies don't tend to have central research labs anymore, as new technologies tend to be developed more at startup companies. Of course, startups are risky, as probably >90% of them fail before ever making money."

**Monica:** "So, concerning the people who are going into science after their PhDs… are the people who were going into industry now going into startups?"

**Nick:** "I'd guess that a lot of them are going to startups, but it also depends a lot on the field. For example, the drug industry still has large companies with big research organizations. Drug

companies tend to have lots of wet-lab scientists—biologists, chemists, that sort of thing... But the technology companies can focus on one new technology and can be much smaller - many of those seem to revolve around software or web-services. The ones that focus on hardware or physical technologies—they often, again, develop their technologies at startups. Agilent does some development of new technologies in Labs, but more and more we're getting new technologies through acquisitions. In fact, we're down to only about 50 people in Labs now. So, we don't have the bandwidth to work on more than a few new technologies at a time. Other new technologies developed in the business units or are gained by acquisitions or licensing. So, to some degree, over the years the role of Labs has changed. Now, in addition to developing technologies in our own labs, we also evaluate opportunities for acquisition or partnerships, by visiting and talking with people, typically at start-ups to find out what they're doing and what their plan is. Sort of like venture capitalists, but instead of solely providing capital, it's also a way of opening up communication channels for potential relationships in the future."

**Monica:** "So is this science, or is this business, or what is this?" I ask, confused.

**Nick:** "Oh, I'm definitely on the science side of things. I never talk to—I never use numbers with dollar signs. The business guys do that, typically in meetings other than the ones that I go to. But every now and then they'll talk about 'how much do you expect to get in the next round of funding', that kind of thing. But, usually, I'm not involved in negotiations. My role is to come back and say whether I believe that their technology is or isn't breakthrough- novel, useful, you know, sometimes whether I believe their IP is or isn't strong…"

I'd never have known these tasks were part of an industry scientist's job. I suppose the academic equivalent is when scientists review scientific papers, or are on review boards to fund scientific research. It's interesting. Regardless, Nick's description seemed like the end of a thought, so I move along. I'm interested in whether these experiences are more general, and apply to all industry positions.

**Monica:** "So when people say they're an industry scientist, are they typically describing something like your job?"

**Nick:** "I don't know," Nick says. "I don't know, because I think there's a lot of variation across companies. And, some of what I've told you about what I do, I only know now that I've been there for a number of years. For most of that time, I was solely a 'technical contributor'—which is the other term they use besides 'member of technical staff'— on projects, rather than proposing new projects."

**Nick:** "Although, even in my first few years, I created a new project." He smiles, says: "Not intentionally—not like I said to my manager 'I'm going to create a new project'. Nothing like that. It was more like I saw a hole, a need for something so that I could analyze my data, and I filled that hole by writing computational software, and we came to realize that that kind of software tool was necessary for the project to move forward. Then, management put few more engineers on it, and it became a project. But, by then, I'd already been working on it alone for at least a year and a half," he ends, laughing.

Excellent. I process his words, then remember that I'm supposed to be following a list of questions, specifically with some focus on early career advice— what PhDs could do as soon as they graduate. I back up, and we begin a conversation about Nick's career trajectory.

*---------Part 2: Nick's career trajectory—finding a career*

**Monica:** "Then, to track back a little bit, your degree was in… what, physics?"

**Nick:** "My degree was in— all my degrees are in physics," he affirms. "I have a bachelor's degree in… physics. A Master's degree in… nuclear physics, and a PhD in… well, let's call it optics, but there was more to it than that, as the ultimate goal was gravitational research."

He pauses between each of his answers, trying to recall. Despite this, Nick has a characteristic way of speaking when he's enjoying himself—he speeds up, and sounds like he's savoring the pronunciation of phrases—putting a precise, staccato emphasis on certain words (*"…physics")*.

**Monica:** "And this was at Colorado," I ask, meaning the University of Colorado, Boulder.

**Nick:** "That was in Colorado, yeah."

**Nick:** "—But it was really still just called applied physics," he says, and I realize I interrupted his train of thought. "I mean, it wasn't like my degree was in those fields—that was mostly what I worked on while I was there."

**Monica:** "I see. And then uh, did you, wh-how—what was the decision from academia to industry?"

**Nick:** "—Oh, I forgot, there's one more—then, I did a postdoc at Stanford."

**Monica:** "Ah. In…?"

**Nick:** "In… more of the same, laser physics; laser stabilization was the specific area. Towards gravity-wave detection, which the group I worked with at Stanford eventually worked toward and helped to detect. In fact, I thought I was going to be a gravity-wave scientist myself. I dreamed that I was going to work on LIGO, and that I would spend the next *many* years of my life pursuing gravity waves."

**Monica:** "Huh!" I exclaim. I hadn't known this. "What's LIGO?"

**Nick:** "LIGO? That's the Laser Interferometric Gravitational-Wave Observatory. You might have heard that gravity waves were detected a couple of years ago for the first time? A year ago, a year and a half ago, something like that. Now they've detected 4 or 5 events… that is all binary coalescences. Sometimes of black holes—mostly of black holes. Sometimes neutron stars. I think the last one was a neutron star pair."

**Monica:** "Cool," I affirm. "And then, what was the decision to go into industry?"

**Nick:** "Well… I had several life events at the same time. When I went to Stanford, besides moving across the country, and having a long-term relationship come to an end, my father died suddenly of a heart attack. With changes, you tend to re-examine your priorities. I decided, then, that I wanted to do something more relevant, more medically oriented. So, some opportunities came my way near the end of my postdoc to work at a couple of fledgling biotech companies. And, one of them was to look at cardiac markers—do you know what cardiac markers are?"

**Monica:** "Uh… heart markers?"

**Nick:** "Yeah, markers in the blood for whether someone's had a heart attack." He switches back into the narrative.

**Nick:** "That seemed to fit particularly well. So, I decided that, much as I love science—the science of physics, and physics for physics— it didn't seem like it was going to change the world as much as medicine could. Or, at least, it wasn't going to have the impact on mankind as much as medicine. And, if it [gravitational physics] did, it would be—I mean it *would*, but in a more philosophical way than in a practical way."

**Nick:** "…No one's going to harness the power of black holes anytime soon," he adds, wryly. "Or gravity waves, for that matter."

**Monica:** I laugh, then say: "So you started working at a biotech company, and that…"

**Nick:** "Yeah. I consulted for two biotech companies. One was trying to do non-invasive blood glucose measurements. I was hired by venture capitalists to evaluate the idea, and see whether they should invest more money in that company's idea. I worked for them for about a year, along with a few other consultants, one from Stanford and one from another research lab, and we came to the conclusion that the technology that we were to investigate wasn't really the right technology for the job. We looked at other related technologies that were being published at the time, and after the venture capitalists had invested about half of the money they had made available, we came to the conclusion that we didn't really have a whole lot new to offer. Rather, if they wanted to get in the business by pursuing technologies that other people were doing, it would cost them many millions of dollars, and that they may be better off to hold on to the rest of their potential investment. Fortunately, at the time, I was consulting half-time for two different companies, and after that, I started working full-time for the other company, the cardiac marker company."

We chat for a few sentences about venture capitalists, then I return to the list of prescribed questions.

**Monica:** "So… do you recommend your career path to other PhDs?"

**Nick:** "Well, I don't know how anybody could choose a career path like that. It was more of a… I think what I'd recommend about it is playing it by ear— just seeing what comes up in the way of opportunities and taking that opportunity that looks most appealing. But not just waiting for

them to come to you. You have to look for them, you have to find them, and then … I probably told you about how I got the job at HP Labs?"

I tell him probably not. What follows is a description of how he joined HP labs, which is not very relevant to applying for jobs in today's world, but is fascinating historically.

**Nick:** "Well, I wanted a regular job–" He pauses, then changes directions. "I was hired as a consultant for that cardiac marker startup. I really believed in what we were doing. I believed in the team, I believed in the technology— and I knew that no matter what technology we decided to use, we were going to make it work, and we were going to be first to market. I believed that we had a great chance of being successful. Mostly because I believed in the team, in the management; I believed in the other people we hired, and I really liked everything about the company."

**Nick:** "I'd been hired as an hourly consultant, but I really wanted a regular job. I saw us hire probably 15-20 people who all got regular positions with salaries and stock options, and I wanted that. I didn't want to be an hourly consultant. In fact, I'd been charging a ridiculously low rate for a consultant, because I was looking at it as a stepping stone to getting a regular position, and I just kept waiting for them to make me an offer. But, of course, they didn't. So, finally, I decided that I wasn't going to wait for them to make an offer, because I'd already waited for like a year and a half. And I didn't want to just go to them and say, 'Oh, poor me, poor me, could you give me a job, I'd really like a regular job,' so instead I decided I was going to get another offer, then go to them from a position of strength, and say, 'I've got this other offer, think you can match it?'"

I make an amused noise of agreement.

**Nick:** "So I registered for a conference in LA, paid the registration fees, bought myself a plane ticket, and flew to a trade show and conference. I would post my resume on a bulletin board there. Back then, the resume was on paper… companies would post jobs on [physical] bulletin boards and you would drop your resume into the envelopes tacked to the board. I get to the conference and look at the bulletin board and there were about a dozen or so job openings posted. And one of them was at HP Labs, and it looked perfect for me. They wanted someone with optics, someone with some kind of biological experience. The job description looked almost like it was custom-made for my resume, which I'd printed 12 copies of, just before I left. I took one of them out and dropped it in the envelope. There wasn't anything else on the bulletin board that I got excited about, so as far as I can recall, that was the only resume I dropped off. Then the next day I'm walking around—" He backtracks, "but I figured I'd drop off more on the next day, and the next day."

**Nick:** "So, the next day, I'm walking around at the trade show… you know, there's thousands of people at these trade shows. And a guy walking the other way down the aisle reads my badge and says 'Oh, are you Nick Sampas?' And I was like, 'Ah, yeah, that's me.' And he says, 'Well, I got your resume yesterday."

Nick laughs, still incredulous at the memory.

**Nick:** "Turned out, he was the guy who posted the job opening, and he happened to see my name badge. And, he happened—unbeknownst to me—to have been in the Applied Physics department at Stanford previous to me. After our chance meeting, he checked with someone he knew from Stanford, and he brought me in for an interview [at HP labs] in Palo Alto."

**Nick:** "The interview was a weird thing," he tells me, remembering. "The interview was actually kind of fun, but also really exhausting. I don't know if you've done one, but you're basically taken around from person to person—I must have interviewed with 8 people, each for 30 minutes—and they varied all over the place in the questions they asked."

Nick then describes some of the people he interviewed with—a by-the-book engineer who gave him a written optics test, an electrical engineer who asked him electrical engineering questions, a mechanical engineer who gave him a gadget and asked him to figure out what the gadget was, a biochemist who asked him about monoclonal antibodies and a few things he just happened to learn at his biotech company. He concludes, smiling, with "As you may have guessed— I got an offer a few days later. That was the only job I really applied for [through a conventional process] and the only resume I randomly distributed." He laughs, thinking about it.

**Nick:** "Oh!" he exclaims, back to the story. "So, then I got an offer, a good offer, better than I'd expected. And, then I went back—remember that startup company?– I went back to the CEO. When I'd started this process, there was no doubt in my mind that I was going to stay at this startup company - I really believed in them and what they were doing. But HP had this reputation that I was very familiar with. I'd worked with HP's test and measurement equipment as a graduate student, and I knew they made the best (and most expensive) instruments on the planet! I already had a great deal of respect for HP. So, I was pretty excited about that opportunity. But I did go back to the startup, and told them about my offer. They offered to match my salary, and it was a huge increase. And they said they would give me 20,000 stock options! And they would give me an office with a door."

**Monica:** "Wow," I say, eyebrows raised. "A door."

**Nick:** "I was already working in an office with a door, but it wasn't really *my* office. They were going to give me an office with a door, whereas most of the staff worked in cubes. And they were going to let me bring my dog to work every day."

**Nick:** "Whereas before I had to leave the dog outside," he clarified.

**Nick:** "So, I was like: that's a lot better than I expected! … I thought about it, for a few days, and then I turned [the start-up's offer] down. I couldn't believe it, and they couldn't believe it."

**Monica:** "They let you bring your dog!" I gasp theatrically.

**Nick:** "I think the CEO couldn't believe that I was turning them down, because I was already working there, right? But I wanted to go someplace new. And, at the time, I thought I'd move

somewhere new every few years. But somehow I ended up staying… HP Labs became Agilent labs, and I'm still there now."

---------*Part 3: Layoffs and role changes*

"Still there now," I affirm. The fact that Nick has been at the same company for so long is actually very unusual in industry. I ask him about the possibility of being laid off, which he's mentioned before is a concern in any downturn.

**Nick:** "I've seen a *lot* of people laid off over the years," he replies.

**Monica:** "Where do they go? Once they're laid off."

**Nick:** "Well, they typically go to other companies. They look around; they find other jobs. But it can be hard during a downturn. There were several *big* downturns. The company lost money for a long period of time, and during that period the company downsized through a series of spinouts and layoffs."

**Monica:** "And [I presume] this happened not just to Agilent, but many other companies."

**Nick:** "Yeah, other companies. I don't know—Agilent might have been hit harder than a lot of them, but a number of them went out of business."

We sit silently for a moment, in recognition of recessions, before Nick rallies.

**Nick:** "But my job is unusual," he says. "I think it's very unusual in that it's morphed so much over time. I came in as an optical physicist, and I went from that to doing software—which may not really be that unusual—but then I went from doing one kind of software development to another. From technology to technology to technology, going from, say, image analysis to DNA probe design, and from probe design into sequence analysis, and at some point, I started coming up with new biological assays. And, over the few years I've worked on some hardware, I've done some physics, some wet-lab work, and some engineering in CAD. And right now, I'm doing a little bit of optics again. I really like the changes in direction!"

**Monica:** "And normally people don't change. Normally people come in as a—"

**Nick:** "Yeah, normally people come in as an electrical engineer and they stay an electrical engineer. If they come in a mechanical engineer they stay as a mechanical engineer—"

**Monica:** "And if they come in from science?"

**Nick:** "Say they're a computational biologist, then they always do computational biology."

I nod.

**Nick:** "So, I've morphed more than about anyone I've seen in my environment. But I'm sure people at other companies change fields too."

As an aside, since I'm not in biology, physics or engineering, I don't recognize everything that Nick is saying. He knows I have a basic science degree, and like many scientists, aims what he's describing in that direction and will happily explain further if I ask questions. There are a few ways of trying to explain technical work—I try not to use acronyms at all, but usually forget to translate terms that I'm using in a technical way but have normal meanings as well. "Noise," for example, has a common meaning, but I'm usually using it in the sense of "random fluctuations of data that hinders perception of an expected signal" (Wikipedia's definition).

---------*Part 4: Industry vs. academia*

I switch tracks.

**Monica:** "And how is it different working in your job compared to how it would be, working in academia for example?"

**Nick:** "Well, in academia you spend most of your time split between two main things: teaching classes, and applying for grants. And— a third fraction of your time guiding your graduate students and undergraduate students, depending on the school. (Unless you're a teaching professor, in which case it's all about teaching classes and advising your students.) But academic scientists do all those things, and a lot of their time is spent trying to get research grants, which involves both marketing and sales. You're marketing your skills, you're selling that you're more competent than other people at doing what you want to do, and you're coming up with new ideas. Meanwhile, you have to read papers, you have to stay up-to-date on the literature, and you have to do all this while trying to figure out how to manage a group. And that's… a skill set— you need 10 different skill sets!— Very few people have all ten of those skill sets."

**Nick:** "Okay, let's call it 5 skill sets. There's teaching, sales, advising / managing, grant-writing, and just having good ideas. Just being clever. All those are really different skills. And a lot of people have 3 or 4 out of those 5. And if you don't have all 5, you're in trouble. You're going to be a really bad advisor, or you're not going to get the grants, or you're not going to have good enough ideas to get the grants, or your students will rebel [if you're a bad teacher] and give you bad reviews then maybe you're not going to stay at that school."

All of the above information is true to my knowledge (I know quite a bit about academia at this point), but I've never heard the "these are the diverse skill sets you need to succeed as a professor" story told in this way. I quite enjoy the framing.

**Monica:** "So most people don't have all of [the skills], so they can't go into academia?"

**Nick:** "Most people don't. Only a few make it that far. And it is sort of a pyramid scheme— there's a lot of graduate students, there's fewer postdocs, and there's only a few professors that make it to tenure. And, so everybody gets—the vast majority of them get weeded out along the way, or find something else they want to do more."

---------*Part 5: Industry vs. startups*

**Monica:** "Hm. Where do people typically go—where do you see PhDs going?"

**Nick:** "Startup companies, I would say is usually the first choice. If they can work on a technology or have a new idea that they can take to a startup company."

**Monica:** "What type of PhDs are these?" I interrupt, remembering that this characterization might not apply to everyone.

**Nick:** "Anything, could be anything," he says. "Any PhD I can think of."

**Monica:** "Like STEM, though, right?" STEM being the U.S. acronym for degrees in Science, Technology, Engineering, or Math.

**Nick:** "I don't know much about how the humanities work, but yeah, I'm talking pretty much about scientists and engineers. I think relatively few engineers get PhDs, but a lot get Masters degrees."

**Monica:** "So then people can go into startups… you think that most people go into startups, if they can?"

**Nick:** "Well, I'm guessing that there's more people (with PhDs) that go to startups than go to big companies. Right now, if they're in computational science or software, I'm seeing some people go to big companies, —I've seen a few go to Uber, Google, Apple, because those big companies are pretty appealing. But I think many still go to startups. A few I've known have gone to pharma [pharmaceutical drug companies]; but that's more for the wet-lab, biology types."

**Monica:** "Huh! That's interesting. When I talk to other PhD students, I don't normally hear that they go to startups."

**Nick:** "You hear that they don't [go to startups]?"

**Monica:** "I don't know where they go, but I don't usually hear that people are going to startups. Sometimes I do, but it's not like, the main, other path."

**Nick:** "It could be I'm biased because it's been my path. In Silicon Valley, [startups may be] a common path, and that's also what I did. And, I've also had a couple offers from other [startups] over the years — opportunities come around, and it seems they're usually at startups." He pauses.

**Nick:** "Well, perhaps big companies aren't going to recruit you if you're already at a big company," he amends. "It's startup companies that need to find more experienced people."

---------*Part 6: How to get hired*

I'm still fascinated by the topic of startups, because I'm new to the San Francisco Bay Area and hadn't really heard of them before I got here. As an academic recluse, any sort of profit-based industry wasn't even on my radar, but by spending time in the Bay I've gained rapid exposure.

**Monica:** "Do people do startups right out of their PhDs?"

**Nick:** "Yeah, I did—well, I guess I had a postdoc. But people do go straight out of their PhD programs. You probably know that now PhDs do postdocs more than they used to too. It's not unusual to do a postdoc before you get an industry job. Sometimes they even [do a postdoc at] at the company where you ultimately get a regular position.

**Nick:** "Most employees are hired by the usual process: a requisition is posted and people see it and apply for the position. Another way that people get jobs is for them to work as ETWs, which is 'external temporary workers'. It's sort of similar a postdoc in that you get paid to work on one specific thing (not necessarily research). I would guess that they probably don't get paid as much as regular employees because they working for separate company, and that intermediate company gets some of what would have be an employee's compensation. And that other company provides whatever benefits the ETWs get. So, I would guess that [ETWs] are typically paid less, and they are temporary— fewer than 18 months. As I understand it, that's in the law. It may not sound great. But the upside of an ETW position it provides an opportunity for someone who may not have been considered for a regular scientist position, perhaps, because he/she may not yet have the related experience. But an ETW position gives that person a chance to gain experience, to prove his/herself, and if they do a great job, then sometimes they get a regular position when one opens up. But, far more often they move on to other companies. So, ETW positions have their pros and cons. The biggest cons, of course, are that it doesn't pay as well or doesn't have the stability."

**Monica:** "Do you see people leaving science, or do they mostly find a way?"

**Nick:** "[People are] not leaving science… Science? No. I mean, not the people who I've known, who've all had careers in science. I can't think of anyone who's left science altogether. I've seen people who leave big companies—I have a friend who worked here for 15 years, then left to start her own startup company, and she's been struggling to do that, but I think her company got funded recently. She'd been working in her garage for a while."

---------*Part 7: Management vs. technical tracks*

We move onto more casual chatting, then begin talking about the difference between technical tracks and management tracks. I've heard that people who are doing technical work can be promoted to work in management roles.

**Nick:** "I'll just say a few comments. At some companies, you can both manage and be technical, but Agilent has separate tracks for technical or science-type employees versus managers. And once you change tracks, that's what you do. You don't half-manage and half-work technically, or if you do, it's only for a short transitional period. You simply choose between the two."

**Nick:** “But you can move back and forth. I know a few people who have left the technical track to become managers. That’s the more usual thing—that’s how managers usually get to be managers. But I’ve seen it go the other way—there’s been a few I know who’ve [transitioned to management], then decided that management wasn’t really for them, and moved back to the technical track.”

**Monica:** “So [as a manager] you’re still managing science projects— I mean, the people [doing science projects]— you’re just not doing the science yourself.”

**Nick:** “Well, what I’m saying is that the managers are managing *people*, but in managing people, of course they’re also managing projects. And the technical people, they might even be technical leads, but the leads do not manage who works on what—though there may be a little bit of that—they’re more saying ‘this is what needs to be done’, helping to define the project goals. Defining the project goals, the product specifications, and defining what needs to happen but not necessarily who will do it. The managers help to guide who’s going to do what. But it’s not always by assignment. It’s usually more by convincing each individual that this [project or this task] would be good for the contributor’s career path. Sometimes simply by laying out options and letting the employee just decide on their own. But if you do that completely, not everything will get done, so it takes some finesse,” he finishes, grinning.

---------*Part 8: Conclusion*

And with that, Nick and I concluded the interview with the usual social niceties. I am very grateful to Nick, who provided a heap of information on what his job as a senior scientist at a large company is like, and provided plenty of implicit advice throughout. Neither of us were acting in an official capacity for anyone besides ourselves—I don’t represent Beyond Academia as an organization, and Nick is not speaking as an Agilent representative. Thank you Nick for all of the above!