Looking for a New Career Path? First, Articulate Your Professional Story

Most readers of this column have or soon will have a PhD in cell biology or a related discipline. Many of you, I’m guessing, are aiming to leave the traditional career path of postdoctoral fellow → academic principal investigator and look for a new and viable alternative. And you have probably already discovered the growing array of resources to help you identify a range of science-related professions to consider.1,2

If this resonates with you but you still haven’t figured out your next move, let me suggest that the hurdle may not be just a lack of knowledge about what your options are but also a lack of knowledge about yourself, specifically an inability to articulate, both to yourself and to others, what your natural strengths and interests are.

The aim of this article is to help you work on your career move by doing some self-assessment based on the experiences of real cell biologists. I recently explored a very well-thought-out professional self-assessment called Strengthsfinder,3 which was assembled by the Gallup Poll people and is based on lots of data they collected. I liked Strengthsfinder but thought it was too generic and wasn’t relevant enough to the experience of highly trained specialists such as experimental research scientists/scholars. So I developed the Science Interest & Aptitude Self-Assessment questionnaire (also known as the ScienSelfie). I did this in my role as career consultant/coach to life scientists, one of the several hats I wear.

If you choose to answer the ScienSelfie questionnaire below, you can use those answers to help narrow (or broaden) the selection of career paths you want to explore. In addition, you can use what you learn via this exercise to help develop new resumes that are organized in ways that best present your strengths. In other words, use your answers to tell your story.

ScienSelfie: Approaches to Biomedical Research as Exemplified by “Different” Types

The ScienSelfie assessment tool asks different questions of different types of researchers. Your type(s) is determined by the kind of research topic you prefer and the approach you like to take. To use ScienSelfie, select the types below that best describe you. But note that ScienSelfie is not a black-or-white type of questionnaire. There is overlap between categories, because that’s the way real life is. And my list of types is far from complete. I encourage you to expand it with types relevant to your own strengths, talents, and interests.

It is important that as you take the survey you don’t just think your answers; write them. The process of visualizing those thoughts and then recording them helps you brainstorm with yourself, and this self-assessment is meant as a brainstorming activity to help you articulate your own professional story.

The Hypothesizer. You do research in which you make predictions and then test to see if those predictions are correct. For example, you may be testing the hypothesis that a certain biochemical pathway is essential for the decision of neural stem cells to become glia or neurons. Ask yourself these questions about your research:

■ Do I typically get the expected outcome in the experiments I set up? When I get an unexpected outcome, what actions have I taken?
■ Do I feel stymied by the technical complexity of just setting up the experiment and getting it to “work right”?
■ What’s the part I like best about this type of work?
■ What’s the most frustrating part of doing this sort of hypothesis-testing research?
What resource (written or human) might I turn to help me get beyond this frustration, to solve the problem so that I can move on?

The Explorer. You do the type of studies in which you learn about a biological/pathological system by comparing two or more conditions in an unbiased way, perhaps by knocking out a gene and assaying for newly made proteins or mRNAs in the same cells under different conditions. Now ask yourself the following questions:

- Have I detected differences between the experimental and control groups yet? If not, do I have a predefined stopping point?
- Am I able to independently replicate the experiment and the results?
- During the conduct of these studies, have I been learning about the tools I am using, to understand the strengths and limitations of the assay systems themselves?
- Would I like to have assay systems that worked better?
- What resource (written or human) might I turn to for help in learning about the limits of the assay systems?

The Inventor. You see problems/limitations imposed by current tools and aim to build better tools, such as new software that can make existing databases more interoperable or an antibody that gives a stronger, cleaner result. Or you see a new use for old tools, like the current pioneers of synthetic biology. Ask yourself the following questions:

- Can I carry my plan to completion in my current setting or would I be better served by doing it elsewhere?
- Have I identified all the possible beneficiaries of my new development and am I making sure that I inform them of the new assay/device/application?
- What more must I do before I see if someone else can use the assay/device/application?

The Ponderer. You would rather think, and maybe talk, and maybe delegate and/or write, than do the work itself. Your analytical strengths and opinions outweigh your efforts at the bench. Ask yourself the following questions:

- Am I thinking/talking/delegating more than doing because I find the bench work
  - Physically taxing, preventing me from getting believable and satisfying results, irrespective of the outcome
  - Boring: Even though I can execute experiments well, I don’t care about the answer because I don’t find them (or the question) very interesting
  - Difficult to do, given the available resources
- How can I show progress for all the thinking/talking/delegating that I am doing?

The Interpreter/Communicator. You would rather teach, opine, or translate someone else’s work than do research yourself. Ask yourself the same questions the Ponderer asked. And also ask:

- Do I have a preferred audience? Other life scientists? Other scientists? Adults, young and/or old? Kids?
- Do I have a preferred medium (oral, written, visual, or some combination)?
- Do I get and take the opportunities to discuss my work at regular meetings (e.g., with the PI and/or at lab meetings)?
- Do I take opportunities to present my work at conferences?
- Can I effectively communicate my work to people outside my field?
- What aspect of communicating my work do I find satisfying? Challenging? Off-putting?

Questions for all. Readers of all types should answer these questions:

- Do I prefer working alone, with others, or a mix?
- Do I participate in peer learning, where nonexperts collectively educate themselves about a topic, e.g., finding ways to visualize data or write new code or helping each other with presentations or proposals?
- Do I care more about the big picture issues than the experimental details?
- What resources should I be tapping to help me overcome my weaknesses?
- Might I be suited better for work that rebalances my time, i.e., a profession that allows me to spend fewer long hours in isolation and gives me some free time at night and on weekends?
- What resources should I be tapping to help me develop my strengths?
How to Use Your New Professional Story
Now use what you’ve written—this new professional story—to develop a couple of different versions of your resume. (A presentation by Laura Malisheski of Harvard University offers information about resumes for academic scientists and provides several examples.) Then use your draft resumes with the goal of arranging informational interviews, i.e., interviews in which you can gather first-hand information about the kinds of jobs that intrigue you. (The University of California, San Francisco Office of Career and Professional Development offers an excellent informational interview template.)

To help you find potential candidates for informational interviews, discuss your resumes with colleagues and mentors. Discuss them also with resource people in your institution (e.g., in the graduate school and postdoctoral offices) and in professional societies such as ASCB and the National Postdoctoral Association. Also use online resources such as LinkedIn, searching on key words, to find people in jobs that sound like they might play to your natural talents, and request informational interviews from them. In other words, use your current story to help you find the next phase of your career.

—Beth Schachter
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Still Point Coaching & Consulting

References
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4 www.ocf.fas.harvard.edu/students/gas/gas_CVs_justforscientists.pdf.
5 https://career.ucsf.edu/sites/career.ucsf.edu/files/PDF/Medicineinformationalinterviewletter.pdf.

Notes
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