Introduction

Success is where you have found your joy.

–From the movie *Papadopoulos and Sons*

Sometimes, as young academics, we get advice about how to play the "game" of science, meaning there are rules of the game, both explicit and implicit, that we must master to succeed. Used in a cynical way, the metaphor of the "game" implies that things might be rigged against us, and that there are rules we have to learn or manipulate to succeed. Indeed, there are a number of tricks of the trade – systematic ways to respond to a journal editor's "revise and resubmit" decision, or how to compile a tenure dossier – that can make your success as an academic or scientist more likely.

But this book isn't about such tricks.

In fact, we – Roel and Jen – think the "science as game" metaphor can be useful. But thinking about science as a rigged game in which you must always be on your guard, where you are going to be chewed up and spit out by savvier "players," or where you are stuck playing one stultifying role is of limited usefulness. Instead, we like to think of science as a "game" in its most playful sense, one that invites exploration and venturing into the unknown as "moves," and discovery as the "prize." We believe there is an inherent playfulness in the practice of science, and it is probably this playfulness that drew many of us to scientific inquiry in the first place. At its very best, "doing" science is an activity that matches our innate drive to learn and explore new territory. We believe the most successful, joyful scientists are those who are able to keep this spirit of play, even as they also work hard and maintain vibrant personal lives.

There is an inherent playfulness in the practice of science.

This book is about figuring out how to maintain this sense of playfulness and joy as a scientist in the face of pressures to "play the game" in less meaningful ways. Messages about how to succeed as academics, or about the sorry state of the university system today, are often negative or demoralizing, and can leave new faculty members bewildered about what to expect or how to feel and act. We do offer practical advice for success here, but this advice is not presented in a bulleted list of how-tos. Instead, our hope is that readers will use this book to identify and establish core values that will lead them to success from a deeper place of significance, satisfaction, and meaning-making.

The thrill of discovering something new is enormous, and it can lead to recognition and advancement. We often push our graduate students and junior colleagues to focus on how they can make a "contribution," and the mass media and our university public relations offices are certainly very keen on scientific "breakthroughs." Making a new scientific discovery not only

provides intellectual satisfaction, but also provides recognition, career opportunities, and possibly economic gain. In addition, scientific discoveries can be useful, which, in itself, is a satisfying reason to be a scientist. Scientific inquiry can help us to get a better grip on the world around us, and the discoveries of science have without a doubt shaped the world in myriad ways, from the introduction of drugs and treatments to cure diseases, to space exploration, to natural resource development, to the information revolution. One might view particular scientific endeavors with caution or delight, but it is hard to deny that science has shaped our material world. With modern instrumentation and dissemination of information, science has influenced the way in which we observe, understand, and experience the world, largely emphasizing the importance of data or objectivity in decision-making and policy.

A corollary to this objectivity, however, is that it may lead scientists to promote a purely mechanistic view of the world where only things that can be measured are considered to be real. This mechanistic view limits our abilities to interact with one another in satisfying ways. Addressing this limitation is one aim of our book.

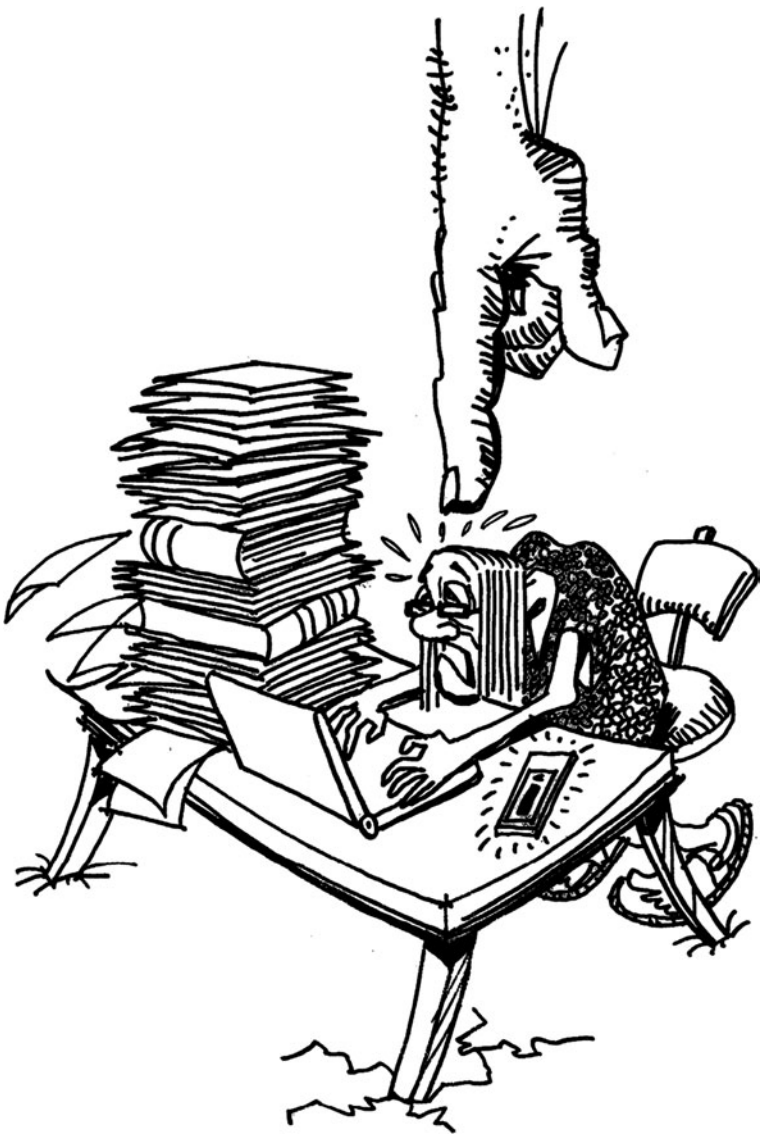
We also know that scientists are a trusted source of information. Despite the evidence that there is a "war on science" in the United States (Mooney, 2005; Oreskes & Conway, 2011) or that Americans seriously lack scientific literacy (Mooney & Kirshenbaum, 2010) many Americans still rank scientists very high on their list of trusted sources of information (Gauchat, 2012). Even given the prevailing stereotypes of the "mad scientist" (Frayling, 2005) going into scientific fields remains a respected career path, and one that is potentially financially rewarding as well. For many, therefore, becoming a scientist is something to aspire to. Books celebrating the activity of scientific research – such as an earlier book also titled *The Joy of Science* (Sindermann, 1985) and Barbara Minsker's *The Joyful Professor* (2010) – are useful resources. Our work hopes to build on this earlier work by

emphasizing not just the practice of science, nor the science of time management, but by helping us to articulate and then construct professional and personal lives that are in harmony and bring us joy.

Some scientists are already living harmonious, joyful, and successful lives. If this describes you, bravo! However, we believe that for many young scientists – and even for some of us who are more experienced – this somewhat romantic image belies the reality. In fact, many scientists live under enormous pressure. There is the pressure to produce scientific papers, encapsulated by the common wisdom to "publish or perish." There is the pressure to have a vocal presence at scientific meetings and to participate in committees and editorial boards. And for those in the academic community, there is the pressure to teach well, in addition to being innovative and productive in research.

Furthermore, many scientists view science as an activity that is inherently competitive. And there is indeed a competition to be the first to make a discovery, as there is pressure in acquiring research funding and job opportunities. These pressures, whether real or perceived, can be so large that the "joy of science" seemingly degenerates into the "survival of the fittest." These pressures can be aggravated by the expectation that in addition to having a successful career, we should also have a healthy and rich personal life. That personal life may involve raising a family with two working parents, children, and/or aging parents or loved ones who depend on us. And this says nothing of time needed to maintain or improve one's physical, mental, and even spiritual health. Trying to figure out how to make both professional and personal lives "work" puts an additional pressure on scientists, especially in the early stages of their careers.

But there is an even more insidious aspect to the pressure that many scientists feel, which is the commonly held belief that no matter how hard we work, *it is never enough*. Or perhaps we feel that *we* are never enough. No matter how many papers one



Working under the commonly held belief that no matter how hard we work, it is never enough.

might have written, one can always write more. Even though one may have attended many scientific conferences, there are always more meetings to attend, and there are always more committees and editorial boards one can serve on. There are more grants to secure and more students to graduate. To make matters worse, the metrics seem to be changing, workloads are increasing, and sometimes the resources we need to do our work diminish. What further drives this feeling of pressure is the common belief among scientists that to be useful it is necessary to be "the best." This belief is often fueled in the formative years of graduate school by advisors who, often with the best intentions, want their advisees to be productive and shine in the scientific community. To achieve this, advisors sometimes push their students ceaselessly to do more. This notion may be fueled further by the tenure system at many universities in which it is impressed on tenure-track faculty that one has to be among the very best to receive tenure.

And – to articulate something that often goes unspoken – we also think it is possible that a number of seemingly successful scientists and other professionals bury themselves in their work because the other areas of their lives are not going so well. Perhaps one's married life feels flat or unfulfilling or one can't find a partner to spend time with. Perhaps the pressure of raising children or caring for aging parents is overwhelming or one has difficulty sustaining friendships. Turning our focus to work can distract us from these problems, and provide a sense of control that we lack elsewhere.

This depressing account of the pressures on young scientists may sound familiar to you. Indeed, when visiting academic departments or scientific conferences one does not gain the impression that scientists are particularly joyful. In his book *Don't Be Such a Scientist*, former marine biologist-turned science communication expert Randy Olson (2009) writes that many scientists struggle to communicate both the outcomes of their research and their

passion for doing science. As a result they come across as dull or disinterested. Olson provocatively argues that scientists tend to live exclusively in their heads, rarely communicating from other parts of their bodies, such as the guts or heart:

> The doing of science is the objective part. It's what scientists are most comfortable with. A scientist can sit in his or her laboratory all day long, talking to the microscopes and centrifuges, and they will never talk back. I have heard scientist friends of mine over the years rave about how much they enjoy field and laboratory research for exactly this reason – it's all so rational, so logical, so objective, and . . . alas, so nonhuman – a chance to get out in the field, away from people. No politics, no bureaucracy, no administrative duties, just pure rationality.
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> *(Olson, 2009, p. 31)*

Similarly, one of the colleagues we interviewed for this book noted that all kinds of academics – from novice graduate students to accomplished, tenured professors – can "get caught in the performance trap." This trap leads one to believe that we are "defined by the recognition received in accordance with the academic lifestyle – the number of papers published, invited lectures given, research grants won, and awards received. But what happens when the music stops and the dance is over? Where does one then derive his/her sense of value or worth?"

This is exactly the question we are interested in. How does one find joy in and through one's work, but without sacrificing a sense of being a "whole person," or falling victim to the "performance trap?"

JOY AND SUCCESS

The earlier portrait of the academic scientist's life raises the question: Can we experience joy in our laboratories, classrooms, and offices? Can we communicate and share that joy with others? What does it mean to be successful *and* joyful? To be even more philosophical, does *joy* matter in our work? If so, why?

We answer these questions by suggesting that the road toward success is much easier to travel if it is propelled by joy and, in fact, joy is often a sign of success. We think of joy as related to psychologist Mihaly Csikszentmihalyi's concept of "flow," a state of deep contentment one finds when engaged in work or activities that make time seem to disappear (Csikszentmihalyi, 2008). Many scientists may find that they are able to find their "flow," as Olson notes when he describes scientist friends who "rave" about their research. But they struggle to find the same flow in collaborations, or in their home or personal lives. Others struggle with the inverse – they are happy socially and have rich personal lives but struggle to be "productive" at work as defined by traditional metrics, such as publications. The role models we have found most inspiring have found a way to practice joy and be successful in multiple areas of their lives; to experience flow in and outside of the office. Perhaps they are not always happy or "balanced." In fact, all of us get out of whack at times and need to make corrections. But we believe that the practice of joy – and the sharing of that joy with others – is possible across the long arc of one's career. The failure to thrive in this endeavor is one area where we believe scientists may struggle, leading to feelings of frustration or isolation.

We also believe that joy is not the *result* of success. We want you to have achievements you are proud of, and we certainly understand that not all aspects of our work lives can be filled with joy or in flow – some committee assignments come to mind! Yet, one aspect of the performance trap is that we do not often feel joy as a result of our academic accomplishments. We both have seen colleagues who have achieved the next big goal – getting tenure, a promotion, a grant, a recognition – but without being able to truly enjoy it. In fact, this was especially true for Jen, who actually broke out into tears when she heard she had received tenure, because it felt so anti-climatic, and also because she realized she no longer wanted to stay at the university

that had awarded her tenure and promotion – a valuable, but painful, realization that we can be successful, but that does not guarantee joy.

Rather than seeking joy in whatever the next success is, we find that joy has to come first, and is actually the main ingredient in building a successful life. The quote at the start of this chapter suggests that finding joy is in fact the definition of success. Success is not our end goal in this model; it is the byproduct of creating more joy in our work lives. For us, "joy" corresponds to a feeling of doing the right thing while thoroughly enjoying it; it is the feeling of being in the right place, having meaningful relationships and making an impact, and being able to declare some positive control over how our lives shape up and shape others. Viewed in this way, finding joy *is* success. Happily, finding joy will often also lead you to be "successful" in the traditional sense of the word; you will find it easier to work with others, solve conflicts, and make choices in your every day life.

We know from experience there are real problems and pressures on academics today, and we don't mean to belittle academics' very real struggles with institutional and systemic problems. Ideally, academics would organize themselves in ways that would allow them to modify policies and procedures that aren't working well for most of us. American universities are undergoing a tremendous period of transition in which job security, academic freedom, and faculty governance and autonomy are far from guaranteed (Gerber, 2014).

Given both internal and external pressures, then, is it any wonder that those of us who stay in science are confused about what finding joy in our lives means?

SOME PERSONAL QUESTIONS

In light of the challenges sketched here, we pose the following question to the reader: How are *you* doing?

This book is meant as a personal guide for developing a fulfilling and joyful career as a professional. It can serve that purpose only when used in a personal way; this book should not be seen as an academic treatise on the academic career. We ask the reader to answer the questions that follow before proceeding. This should not take much time. In fact, we recommend that you do this with little forethought; often our gut feelings and first reactions are more accurate than our well thought-out responses. But we do encourage you to *write down* your answers; it is otherwise too easy to skip over them or to get caught up in familiar internal chatter. In our experience, writing things down helps us to reveal our own thought processes to ourselves, to achieve specificity and clarity on our goals and desires, to question preconceived notions or misunderstandings, and to commit to new paths of action.

It is easy to over-analyze and over-rationalize, so we suggest that you take out a piece of paper to record your thoughts, write by hand (which might help you get out of your left brain), and give your intuitive reactions to the following questions:

- Are you fully and freely expressing yourself? What does this expression look like? How is it received by others? Or do you feel silenced sometimes? Do you find it difficult to say what you really think or feel?
- Do you think of the many parts of your life as being in balance, or in harmony? In what way? What would those closest to you say?
- Do you have personal or professional practices (e.g., carving out writing time, seeking feedback from mentors, meditation) that help you with your internal balance?
- Do you have any dreams in your personal or professional life you would like to fulfill? Or do you struggle to articulate a vision for your life, to explain where you would like to see yourself in five or ten years?

Perhaps all of the questions resonated with you; perhaps you felt a clear response to only one or two of them. That is all fine; there are no right or wrong answers to these questions. This is not a quiz or a test.