Radu's Rides: Notes to my Past Self

Contributing Editor Radu Craiu shares some advice that would have come in handy as a new researcher:

Once upon a time we were young and insolent (some of you still are). It was a time of questioning the authority of the discipline's stars and the norms they had created, while enviously eying their accomplishments and dreaming of surpassing them. Take, for instance, graduate school: a complicated and sometimes perplexing place where immeasurable talent is waiting to erupt on the grand stage of one conference or another, or to dazzle the world with an arXiv preprint (most cannot possibly dream about dazzling with a published paper, review times being what they are). Back then, we shared the cocky confidence that we would get there (or somewhere equally important) as soon as a few pesky little details were dealt with. Reading all those immortal papers which we were all trying to improve upon, we should have wondered about our future role in the Stat-o-sphere: player or spectator? Instead, we were taking in the imaginary splendour of what could be, while ignoring, like all young people, the dangers of what *is*. Looking back, I wonder what words of wisdom, what warnings and encouragements, I could proffer to my younger self. How could *he* benefit from *my* lived experience? The matter of career advice is like Medusa's hair, not only made of multiple threads each with its own life and potential to damage, but also annoyingly elusive. If you do not believe me, read on.

How do I choose my mentors? In grad school you could choose a well-established researcher whose word will travel faster and further in the community, but who will likely be busier and less inclined towards intellectual hand-holding. Or, you could bet your future on a junior professor, who will be more available at all hours, will scare you less and will still remember the trials of a young academic life. However, this simple and rather cold calculation is vastly incomplete as it ignores the personality aspect that is crucial in any mentor–mentee relationship. Most interesting projects will have more downs than ups and the associated strain is easier to navigate if those involved are congenial. Later in life, keep in mind that *simpatico* mentors and collaborators are to be cherished, so invest generously and do not ever take them for granted.

Should I doggedly pursue one theme throughout most of my career, or adopt a more protean approach to selecting research topics? Either path comes with a price tag. The obsessive, while highly respected in their narrow field, risk not being known outside it; the fickle will be vaguely known by many, but not really "at home" in any group. The annals of the discipline may be kinder to the former, as long as the field of their devotion has the stamina to survive. But more importantly, deciding whether to put all your ideas in the same basket or not has to do with temperament as much as anything else. If some contentment is to be achieved, you should follow your curiosity wherever it leads you.

Should I work on topics defined by others or try to create my own? Currently, there is large, unidirectional bandwagon movement in our discipline—people getting on and few getting off. Ten years ago, my answer would have been more nuanced, but right now I believe that building your own wagon is better in the long run. Alas, there is higher risk in finding your own line of inquiry. If, after a while, you find yourself alone studying it, interpret this as a sign that you need to move on to something else. If your problems become the problems of many, you have meaningful work to do.

Should I publish often or seldom? Publishing at high frequency is associated with publishing small, so large productivity will be met with skepticism unless it is accompanied by depth. Writing more slowly allows distillation of ideas, proper accounting of others' related work and consequential concatenation of MPUs (minimum publishable units) for larger impact in more visible venues. Big ideas have a tendency to outlive incremental ones, by a lot.

How do I know the impact of my work? You will likely not know for sure, exceptional cases notwithstanding. There are many ways, some more futile than others, to measure impact, and most of them will influence elements in your career path at some point or another. Promotions, awards and grants will be milestones by which you will be judged, and don't be surprised if sometimes they may feel like millstones. People will count your papers (see previous point), but also your citations, and they will want to recognize the name of the journals where you publish. Alas, none of these are sure bets for the *long-term* impact of your work. Timing is as important in science as it is in sports—the topic *du jour* will always be more favoured by the Impact Gods, at least in the short run. Finding a good vein of problems to work on (see answer to your second question) will go far in promoting your merits.

How do I stay sane? For some reason, this feels like a timely question... maybe it is easier to mention a few of the things you should avoid, and a big one is toxic negativity. In your professional life this implies staying away from: people who drag their (and others') personalities into scientific debate, unfounded criticisms, or working in toxic environments where infighting reigns supreme. Try not to compare your CV or any other element of your career path with others, and rein in your impostor syndrome—but not by letting all other aspects of life burn into the fire of your ambition. Don't forget to stop and look at something beautiful that doesn't end with QED.