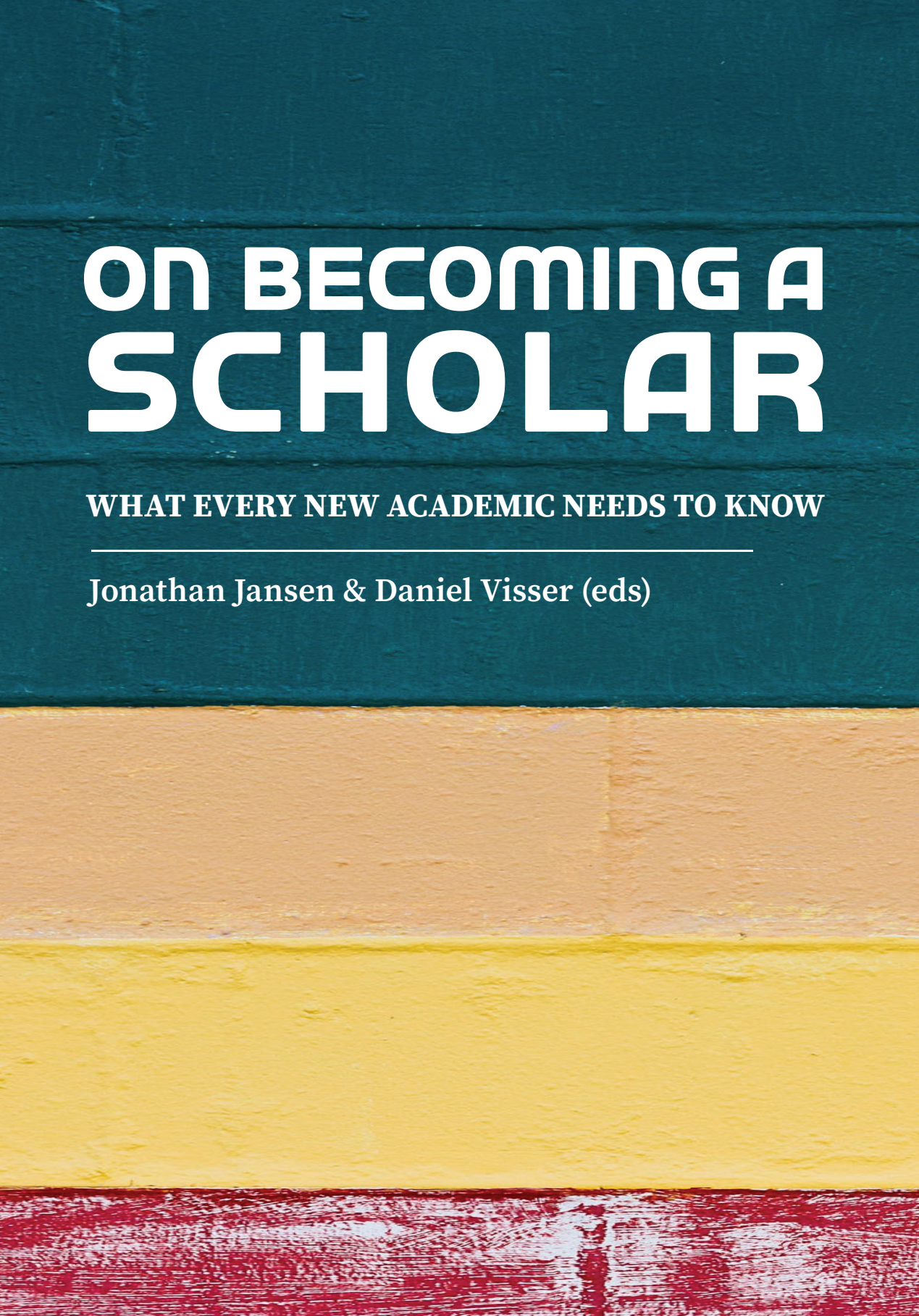

ON BECOMING A
SCHOLAR
WHAT EVERY NEW ACADEMIC NEEDS TO KNOW
Jonathan Jansen & Daniel Visser (eds)

Contents

The New Scholar’s Journey	12
“Now Do Research”: Getting Started as a Novice Researcher	22
Publishing High-Impact Research	40
Writing Your First Scholarly Book	48
Leveraging the Research Office	59
Navigating Research Ethics	79
Soft Money and the Early-Career Scholar	97
What Does Scholarly Teaching Look Like?	108
Research Networks	120
Knowledge Networks	132
Academic Duty	148
Editing a Scholarly Journal	160
Editing a Scholarly Book	170
How to Manage and Monitor Your Performance Metrics	182
When and How to Submit Your First NRF Rating Application	194
Applying for Promotion	212
The Wisdom of Practice: An Intergenerational Conversation	230
An Unexpected Duty: Academic Leadership as a Young Head of Department	239
Mentoring and Coaching	246
Supervision and Mentorship as Building Blocks for an Academic Career	259
Academic Well-being	270
Balancing Academic Work and Home Life	285
The Mom Penalty	296

On Becoming a Scholar

What Every New Academic Needs to Know

Jonathan Jansen and Daniel Visser (eds)

AFRICAN
MINDS

for all future professors

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Table of Contents

Acknowledgements *v*
List of Acronyms *vi*

SECTION I: INTRODUCTION

1 The New Scholar's Journey *Daniel Visser and Jonathan Jansen* *2*

SECTION II: BECOMING AN ACADEMIC RESEARCHER

2 "Now Do Research": Getting Started as a Novice Researcher *Lyn Holness* *12*
3 Publishing High-Impact Research *Stella Nkomo* 30
4 Writing Your First Scholarly Book *Jaqueline du Toit and Neil Roos* *38*
5 Leveraging the Research Office *Gaëlle Ramon* *49*
6 Navigating Research Ethics *Lyn Horn* *69*
7 Soft Money and the Early-Career Scholar *Valerie Mizrahi* *87*

SECTION III: BECOMING A UNIVERSITY TEACHER

8 What Does Scholarly Teaching Look Like? *Jonathan Jansen* *98*

SECTION IV: BECOMING ACADEMICALLY CONNECTED

9 Research Networks *Daya Reddy* *110*
10 Knowledge Networks *Jess Auerbach* *122*
11 Academic Duty *Jonathan Jansen* 138

SECTION V: BECOMING AN EDITOR

12 Editing a Scholarly Journal *Michael Cherry* *150*

13 Editing a Scholarly Book *Jonathan Jansen* *160*

SECTION VI: BECOMING GOOD AT GAUGING YOUR PERFORMANCE

14 How to Manage and Monitor Your Performance Metrics *Lucia Schoombee* *172*

15 When and How to Submit Your First NRF Rating Application *Brenda Wingfield* *184*

16 Applying for Promotion *Daniel Visser* *202*

SECTION VII: BECOMING AN ACADEMIC LEADER

17 The Wisdom of Practice: An Intergenerational Conversation *Tebello Nyokong and Siphokazi Magadla* *220*

18 An Unexpected Duty: Academic Leadership as a Young Head of Department *Philippa Tumubweinee* *229*

19 Mentoring and Coaching *Ahmed Wadee and Moyra Keane* *236*

20 Supervision and Mentorship as Building Blocks for an Academic Career *Chika Sehoole* *249*

SECTION VIII: FINDING BALANCE

21 Academic Well-being *Mothomang Diaho and Chantelle Wyley* *260*

22 Balancing Academic Work and Home Life *Nthabaleng Rammile* *275*

23 The Mom Penalty *Cyrill Walters* *286*

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List of Acronyms

AEC	Animal Ethics Committee
APC	Article Processing Charge
AREA	Anticipate, Reflect, Engage and Act
ARISE	African Research Initiative for Scientific Excellence
ASSAf	Academy of Science of South Africa
CIR	Considerable International Recognition
CSIR	Council for Scientific and Industrial Research
DHET	Department of Higher Education and Training
DMP	Data Management Plan
DOAJ	Directory of Open Access Journals
DORA	Declaration on Research Assessment
DSI	Department of Science and Innovation
EEC	Executive Evaluation Committee
FFP	Fabrication, Falsification of Data, Plagiarism
FRD	Foundation for Research Development
HoD	Head of Department
HPCSA	Health Professions Council of South Africa
IBSS	International Bibliography of the Social Sciences
iGOLD	International Gestalt Organization and Leadership Development
IOSD	International Organization and Systems Development
JIF	Journal Impact Factor
KPI	Key Performance Indicators

LMIC	Low- and Middle-Income Countries
NGO	Non-Governmental Organisation
NHA	National Health Act
NHREC	National Health Research Ethics Council
NIH	National Institutes of Health
NRF	National Research Foundation
NSC	National Senior Certificate
OA	Open Access
ORCID	Open Researcher and Contributor Identifier
POPIA	Protection of Personal Information Act
QRP	Questionable Research Practice
RC	Research Compliance
RCR	Responsible Conduct of Research
RE	Research Ethics
REC	Research Ethics Committee
RF	Research Fairness
RFA	Request for Application
RFP	Request for Proposal
RI	Research Integrity
RIMS	Research Information Management System
RM	Research Misconduct
RPL	Recognition of Prior Learning
RR&I	Responsible Research and Innovation
RRP	Responsible Research Practice
SACNASP	South African Council for Natural Scientific Professions
SAVC	South African Veterinary Council
SAICA	South African Institute of Chartered Accountants
SANS	South African National Standards
SARIMA	Southern African Research and Innovation Management Association
SARS	South African Revenue Service
SFARS	Soft-Funded Academic Research Staff
SIG	Special Interest Group
SJR	SciMago Journal Rank
SNIP	Source-Normalised Impact per Paper
TT	Technology Transfer
WHO	World Health Organization

Section I
Introduction

"Academic orientation at universities remains a mainly hit-and-miss affair."

1

The New Scholar's Journey

Daniel Visser and Jonathan Jansen
University of Cape Town and Stellenbosch University

Imagine that on your first academic appointment in a university, your head of department or dean gave you a book with the title *What Every Academic Needs to Know*, a guidebook of essential knowledge to launch you in your new career. The topics covered range from teaching in higher education to writing your first scholarly book to preparing for academic promotion. Such books are hard to find.

The origins of this book lie in a long incubation period over hundreds of hours of workshops, seminars, and one-on-one mentoring sessions concerned with the essential skills required for new academics entering university for the first time. They brought home to us that there is a need for a *vademecum*, a handy compendium of ideas, plans, and strategies for building a productive and fulfilling academic career to guide the host of academics that embark on an academic career each year.

On Becoming a Scholar is geared to help you, as a new or relatively new scholar, to construct personal futures and to find your way through the 21st-century university. It is intended to be a map, and like any map it does not contain all the contours and details of the landscape, but rather seeks to show you the important pathways and milestones of your journey. Drawing on highly experienced academics and accomplished professors in their different fields, as well as promising younger academics already on their way, this book offers a concentrated resource of practical wisdom.

Many universities have made important improvements in the orientation of new lecturers and you may have benefitted from any one of an array of programmes and initiatives that have become much more common nowadays than they were a decade or two ago. Induction programmes, teaching and learning support initiatives, and emerging researcher development strategies are now more prevalent at university-wide level and sometimes individual faculties develop systematic programmes to guide new staff in at least their teaching and research functions. Yet, in our experience, these learning opportunities are often truncated and dedicated to specific issues if they are available to staff generally; or if they are more comprehensive in nature, they tend to be resource-intensive and can thus serve only a limited number of people. And, sadly, in many universities such supportive mechanisms are wholly lacking. The result is that academic orientation for a great many new lecturers in South Africa remains mostly a hit-and-miss affair, dependent on a course offering here or there and, if you are lucky, a skilled mentor in the department or faculty. Most academics still stumble their way through the early years of their academic careers, losing valuable time and missing out on vital opportunities along the way.

The topics are broad and, cumulatively, they seek to answer the many questions that experienced mentors encounter every day in their work with new academics. The advice that they give to new academics is characterised by an emphasis on agency: ask yourself what you want to achieve and find out what is required to do so; consider what your university expects of you and work out how you can fulfil the expectations while being true to your own ambitions; and calculate the costs and benefits of your options.

The first theme is *Becoming an Academic*. Research is the essence of universities, the main justification for their existence. On the commandment "Now do research" hangs all else that universities undertake. This is the title of the first chapter under this rubric, in which Lyn Holness posits a three-fold injunction to start building a successful research career, as distilled from her encounters with newly appointed academics: know yourself, empower yourself, and believe in yourself. Her contribution is followed by that of Stella Nkomo, who offers advice, born of experience, about the ingredients for publishing high-impact research.

This is again followed by Jackie du Toit and Neil Roos's insightful analysis of the varied aspects that you need to consider when publishing

your first scholarly book. Next comes the contribution of Gaëlle Ramon, who explains in a detailed insider-perspective how important it is to utilise the resources of a university's research support services to advance your research career. This is followed by Lyn Horn's comprehensive introduction, from a lived experience, to the details and importance of adhering to ethical imperatives when conducting research. In the final chapter in this section, Valerie Mizrahi shares her intimate knowledge of how that vital and oft-neglected component of modern university research, soft-funded researchers, can best navigate their way in universities that are simultaneously reliant on their efforts (and hugely so in research-intensive universities), but constrained by their budgetary policies to adequately recognise their contribution.

The second theme is *Becoming a University Teacher*. Teaching is the second core function of universities. It is a central duty of every academic and, in its best form, it is a deeply scholarly activity and a fulfilling experience. Here Jonathan Jansen draws on his experience in all the facets of university teaching and learning to unpack what scholarly teaching looks like, concluding that it is "rich, deep, engaging, transparent, interactive and committed"; that it is characterised both by intensive intellectual engagement in its planning, and personal engagement in its delivery to the students; that it is publicly visible; and that it is self-reflective.

The third theme is *Becoming Academically Connected*. To fulfil its full potential, a scholarly life must be a connected life. Daya Reddy opens this section with an explanation, based on his extensive experience, of the central role of collaboration in research, the different forms that it may take and, most importantly, how research networks can best be initiated, structured, and managed to maximum effect. He cites the evocative description of the various scholarly communities that develop between researchers as "mutual-aid societies of lifelong learners".

The next chapter by Jess Auerbach links up with his chapter and explores how networking, that is, establishing networks of mutual support across the whole range of academic endeavour, "knowledge networks", can benefit your career and enable you to help others. It brims with knowledgeable advice about how to go about establishing these networks in the various settings in which academics work.

In the last chapter in this section Jonathan Jansen explains the connectivity and advantages that flow from doing one's "academic

duty", the label that he attaches to the activities expected of academics outside of their contracted deliverables (both within their universities and in the wider scholarly community), such as acting as an external examiner, providing a referee's report for appointments or a National Research Foundation (NRF) rating application, reviewing an article for publication, serving on university committees, and similar important duties that rely for their fulfilment on an unwritten code of collegiality.

The fourth theme is *Becoming an Editor*. Ensuring the quality of research and communicating it effectively are vital cogs in the machine of knowledge production. Editors play a central role in ensuring both: by choosing and working with peer reviewers they ensure the quality of what is published and they give strategic direction to what finds its way into print. It is a heavy responsibility. Michael Cherry, a seasoned editor, provides the lead-in to this section with a detailed guide to editing a journal. In this contribution he considers what the advantages and disadvantages are of taking on an editorial role in a journal; what time in one's career is most suited to taking on such a role; what it entails to be, respectively, an associate editor and an editor-in-chief, with pointed advice on how to approach the tasks that come with the job and how to handle the issues that typically arise in this context. Editing a scholarly book is a very different undertaking to being a journal editor and Jonathan Jansen draws on his own experience, starting when he was a newly minted PhD, to reveal the secrets of producing a meaningful edited volume, including a step-by-step guide to the process of bringing such a book into being.

The fifth theme is *Becoming Good at Gauging Your Performance*. Managerialism, driven by government policy and acquiesced in by universities, is responsible for a creeping shallowness in academic life: the production of work that does not add anything new or of much value. For instance, in South Africa the Department of Higher Education and Training's funding formula is only minimally concerned with quality and emphasises quantity. This is fortunately countered by the NRF's approach, which weighs rather than counts. The obsession with measuring and counting can stifle creativity and produce perverse judgements on the value of work. When Peter Higgs won the Nobel Prize for physics in 2013, he famously told *The Guardian* that he "believes no university would employ him in today's academic system because he would not be considered 'productive' enough".

But there is another side to the story: the ubiquitous performance metrics do signify something if they are correctly interpreted and used – and there can be no doubt that they *are* used by universities and other organisations and they will have consequences for your career. From the point of view of her deep immersion in performance metrics, Lucia Schoombee provides an erudite tour through the many different metrics that feature in the academic world; and she explains how metrics, despite their controversial nature, matter in both a passive and an active way: others will use them to judge, "from afar", your eligibility for awards and funding and your suitability for employment or promotion; but you can also use them actively to describe your scholarly impact, to frame your research identity, and to plan for the future. The most reliable exercise for the measurement of research performance in South Africa is the NRF's rating of individual research performance. It is not free of controversy, but it is generally recognised as the best available independent assessment of the impact of research and it has been widely incorporated into universities' procedures wherever research performance needs to be evaluated. From the vantage point of participating in the rating exercise throughout her career (both by undergoing rating and serving on the rating structures of the NRF), Brenda Wingfield provides a clear and thoughtful guide to participating in the system, explaining what all the ratings categories mean in practice, when you should apply for rating and what you should take into account when completing the rating application, interspersed with advice on what is important in your ongoing scholarly life to secure a good rating.

In the last chapter under this heading, Daniel Visser gives advice on the often emotive issue of applying for promotion to a higher rank in your university. He explains what universities expect at the different academic levels; how what you do in the time leading up to your application is crucially important to a successful application; and that you can and must take active steps to enhance your chances of promotion. Acknowledging that promotion is an arduous process, he explains that high standards are the norm internationally, and cautions that your main focus must not be on promotion, but on aiming high in the execution of all the facets of the academic job – an approach which is bound, apart from being a reward in itself, to bring the appropriate recognition.

The sixth theme is *Becoming an Academic Leader*. The young scholar of today will be tomorrow's academic leader. What is the pathway to

academic leadership? The four contributions in this section provide insight into what this entails. The first offering in this section is akin to a fireside conversation in the African tradition, in which an elder gives advice to younger people by sharing their life story. Siphokazi Magadla poses questions to the distinguished scientist Tebello Nyokong on how she got started in academic life, what her values are, what strategies she employed to reach the heights of success that she did, learning that it is important to "get going" with a good idea and not wait around for a big grant, to seize opportunities, to take risks and to be prepared to fail, and, importantly, to cultivate your connections with fellow scholars. As we listen in on the conversation, it becomes clear that, although the road to the pinnacle of research is often paved with serendipity, it can only be travelled if you have good ideas and are prepared to put in the hours.

In the next contribution, Philippa Tumubweinee relates her own, sudden and unexpected, elevation to the headship of a department and the growth of her understanding of the importance of this aspect of leadership and how it ties in with the scholarly project. Linking seamlessly to Jonathan Jansen's contribution on academic duty, she explains that before taking on the headship she had thought that the various administrative tasks in a department and the university were quite separate from one's intellectual project, but that she, in the course of doing the job, came to the conclusion that "the two are not separate, they are not even two sides of the same coin. They are the same thing"; and that you need an understanding of the former to construct a viable intellectual project.

But the road to self-realisation need not be travelled alone. Ahmed Wadee and Moyra Keane (sometimes speaking together and sometimes separating out their individual voices) tell of the advantages of mentoring and coaching. They explain the difference between the two forms of assistance, what each entails, how you should decide on the one or the other at different stages of your career, and how fulfilling being a mentor to others can be – noting that this activity is completely consonant with the embeddedness of mutual assistance in university culture. The final contribution in this set of narratives on becoming and being a leader is provided by Chika Sehoole, who tells of his journey from an aspiring young academic working on his PhD to being the dean of a faculty. He relates, through the lens of his own experience, how the difficulties that young scholars encounter can be overcome and how the building blocks of a complete and accomplished academic career can be put together.

He stresses, with powerful examples from his own experience, tying in with the previous chapter, the central importance of being mentored and of mentoring in an academic career.

The final theme is *Finding Balance*. In the first contribution Mothomang Diaho and Chantelle Wyley sketch vividly the prevalence and intensity of stress in the academic environment and they provide insight into the steps that universities, and individuals within universities, can take to counter the effects of stress and to ensure well-being. They advocate for the availability of access to preventive-care tools to manage stress, anxiety and depression, in particular the availability of coaching, which they typify as one of the most effective ways for individuals to build resilience. They share their experience as coaches of the fellows of the Future Professors Programme. They give a detailed account of their methodology, the messages that they have conveyed to the fellows and the effect of their coaching in reducing stress. They report that the coaching resulted in the fellows feeling less alone, that they appreciated being part of a community in which they felt a sense of belonging and the freedom to share experiences and to ask for advice in regard to challenging situations, which led to less self-judgement and to supportive sharing.

This section, and the book, is capped by two moving personal stories of finding balance. These stories resonate with what we learn from the chapter by Mothomang Diaho and Chantelle Wyley and provide a first-hand account of actual struggles to balance home life and work life. In the first, Nthabaleng Rammile shares her early experiences in a university position to convey to other young academics that "regardless of the challenges that they might be facing, it is possible to make it in an academic career". She shares the hardships that she faced, the mistakes that she made, and the solutions that she found, stressing the central importance of good planning and of being connected with your colleagues and mentors to craft that crucial balance necessary to take care of yourself to ensure a fulfilling career.

Cyrill Walters titles her contribution "The Mom Penalty". Like Nthabaleng Rammile she started her career as a young mother and her story emphasises the hard fact that whatever advances have been made towards ensuring equal opportunities for women, they continue, especially when they have children, to face a particularly steep uphill in their academic journey. Her description of her serene existence during a

residency at Emory University, with excellent healthcare for her and her unborn child, while working on her doctorate stands in sharp contrast to the picture that she paints of her postdoc years, alone with her son at home during the COVID-19 pandemic. That period completely changed the meaning of "home" for her: it was, she says, more "a living-at-work situation than working-from-home situation". Her vivid description of the stresses that this situation engendered will resonate with all young mothers in the process of establishing themselves as academics while contending with impossibly onerous and conflicting demands. She pays special tribute to her mentor, who played a central role in her making the right choices at the right time and in finding balance. This adds to the constant theme, throughout all the contributions, that mentorship is of the utmost importance in a successful scholarly life; and brings us to the many recurring themes in the book.

A variety of important, shared insights emerge from the different contributions. A particularly strong insight is that an academic life is a shared life. Without gainsaying the competitive element in academia, it is abundantly clear that the support rendered by peers to each other, the mentoring by more experienced scholars to younger colleagues; and the undertaking of mutual tasks, that is, the scholarly duty of doing the multitude of chores that academics undertake at each other's request, make the academic world go round. Sharing experience does not take away from the person doing the sharing, while it enriches and empowers the recipient. That this is such a prominent feature of academic life can only give comfort to you as a young scholar – and it should be the trigger for you to seek out the mentors and empathetic colleagues who can always be found if one only cares to look; and also to make use of the formal support that universities offer, whether it be to assist you in developing a research career; or in becoming a good teacher; or in maintaining your physical and psychological health. As you receive these benefits, let the generosity with which they are given be an inspiration to you to continue this tradition of collegiality.

A further insight, that ties in with the first one, is that the scholarly community is a worldwide one and that it is as important to embed oneself as a citizen of the global academic community as it is to be a good citizen of your own university. This correlates with the strong headlining, in so many of the chapters, of the importance of curating your visibility, especially by using the variety of tools that modern technology makes

available; and with the importance of creating networks that bring many, often unexpected, benefits.

Yet another insight that pushes to the surface on reading the contributions in the book is that in the different chapters one sees a strong convergence of the attributes that are considered important for a young academic to cultivate: know yourself, be true to your values, be realistic, cherish your reputation, and aim high. The message is that the lifeblood of universities consists of authentic contributions by the best aiming to do their best, serving the greater good of society. The contributions in the book do not shy away from the weaknesses in the university system as it exists today, but the focus is on how best young academics can conduct themselves in an admittedly imperfect academic world.

Our book is aimed primarily at a South African audience because such general guidance as there is in the international literature mostly does not take account of important aspects of this country's academic landscape, which is not to say that audiences beyond our shores will not also benefit from the insights collected here. And, although the book's primary audience is younger academics in their early careers, those with years of experience in higher education may also benefit from some of the ideas contained in this book, as would mid-career professionals who enter university teaching later in life, professional support staff who want to change course to an academic career, and colleagues have been stuck with overloaded teaching commitments and now want to break into serious research for the first time.

We dedicate this book to all future professors – wherever they may be.

Section II
Becoming an Academic Researcher

"When in doubt, write."

2

"Now Do Research": Getting Started as a Novice Researcher

Lyn Holness
University of Cape Town

Many people, especially those with little or no experience of academia, would identify with this dictionary definition of a lecturer: "a person who gives lectures, especially in higher education". Those who are immersed in academia, however, know that this is only a partial description of the contemporary academic role. We soon discover that the term "lecturer" embraces (at its most basic) a three-fold portfolio, broadly described (and with institutional nuances) as teaching and learning, research, including Master's and PhD supervision and community interaction/ social responsiveness.

My experience in working in a mentoring capacity with new, and mostly young, academics is that many are initially mortified by the expectation that they "do research". The reality is that for most people new to academia, actual research experience will probably be limited to having completed their own degrees – the ones that qualified them for academic appointment. Many new appointees, whilst aware of research expectations, do not know what the research starting blocks look like, let alone trying to get out of them! Yet the pressure is there from day one, and the prospect sometimes daunting.

In 2003 I was briefed with starting a programme at my institution

specifically designed to support new academics in embarking on a research trajectory. The aim was clear: to set colleagues on the road to establishing robust research profiles by developing personal research skills, producing quality research outputs, and for them to access the resources necessary for this. My own background is in the humanities/social sciences, and very soon we had someone with a science background on board as well, to establish a parallel stream of support for those in the science disciplines. There is obviously common ground in the two streams, but also significant differences. This chapter will have specific relevance for those in the broad humanities/social sciences disciplines. It is observations and lessons from personal experience of getting alongside individuals on their research journeys, over a 14-year period, that I would like to distil and share with you in this chapter.

To get our conversation underway, let me pose the simple question I asked myself early on, and whose answer has morphed a bit (or rather, been honed) over the years. I asked it in order to clarify for myself the role of research in academia, notably from the vantage point of the novice academic. Here is the question: What is the function of the research dimension of academia? In answer to it, this is more or less what I came up with. I think that, broadly speaking, a significant part of the academy's role is to advance knowledge, but also to have a transformative impact on individuals and especially on society. Requiring both basic and applied research, this role is paralleled by, and integral to the personal formation and growing the disciplinary competence of those doing research in the various disciplines.

That last phrase, with newly appointed academics in mind, is arguably the most significant: growing the disciplinary compliance of those doing research in the various disciplines. Its significance lies partly in the fact that many novice academics are "bewitched" from the start by the idea of interdisciplinary research. We will return to this topic later, for it is an important one with many facets and nuances. Others yield to the temptation to flit from one area of interest within their discipline to another, without putting down roots anywhere. This is bound to happen early on to some extent, for not many people take up their first academic post clear about the area in which they want to invest their time, energy and intellect. But this period should not be enduring. So, for now, my mantra is this: get yourself grounded in your own discipline, trying to identify a niche area within it for which you can aspire to become, in

time, *the* go-to person, with recognised competence in the field. Only then will you be equipped to venture, where this is appropriate, into dialogue and cooperation with other disciplines, and with different fields within your own discipline.

For the purposes of this conversation, I have tried to distil the essence of first and subsequent meetings I have had with newly appointed academic staff members, anxious for guidance about doing research. In retrospect, the areas we covered in those initial meetings about getting going with research were premised on a simple three-fold injunction: *know yourself, empower yourself, believe in yourself*. Each of these presumes a realistic self-assessment.

To *know yourself* includes acknowledgement of both personal strengths and weaknesses. It means to identify skills gaps, inadequacies in relation to research, and possibly fear of and resistance to research – and then being pragmatic in finding ways to get over these hurdles. One person may have a tendency to avoid things that threaten her or him; another might have a mental block or resentment towards the obligation to do research. Someone else may be lacking in self-confidence, or own up to being a procrastinator. Yet another person might be ignorant as to how to access funding for a project. A common reason for delay in "getting going" is having no idea of the area in which you would like to do research. And this causes stress and even panic. To identify and acknowledge things about yourself, addressing areas that need attention and building on known personal strengths, is an important early milestone in the research journey.

My colleagues and I have encountered new academics deluded by unrealistically high levels of self-confidence in relation to the research component of their jobs, and who may thus be unwittingly setting themselves up for disappointment. On the other hand, we have worked with highly competent people whose low self-image prevents them from recognising their capabilities and achieving their potential. Part of the brief of a research development facilitator or a research mentor is to help colleagues identify things that might be holding them back – and then to arrive at a realistic assessment of where they are in relation to the research component of their academic jobs, and to identify ways to progress.

What about *empowering yourself*? Those who have effectively established a research trajectory know that, most often, empowerment comes by taking small incremental steps (and sometimes feeling temporarily

stuck on one or two of them). A serendipitous conversation with you head of department (HoD) that triggers an idea in your mind that you then follow up on would be one significant step. Another would be to follow up on an article mentioned by a colleague, that seems to tie in with things you have spoken about. An important move towards empowerment comes in familiarising yourself with the research resources at your university – its libraries, research funding opportunities, etc., while another is to clarify exactly what is expected of you in terms of research.

Following on from this, identify any skills in which you may be lacking – for example, you may need to take a research methods course if that is where a weakness lies. Or to brush up on reference management skills. In a nutshell, I think that empowering oneself for research can be managed by an honest and pragmatic response to a three-part interrogation: Where am I now in relation to research? Where do I need to get to? How am I going to get there? The answers to these questions (particularly the last) might include things that we have already spoken about: learning to manage time; identifying someone to be a research mentor and someone else to be a research "buddy" or conversation partner, familiarising yourself with current work being done in your discipline generally, and being sure that (certainly to begin with) there is someone qualified to guide you in your chosen area.

Even a door closing can become a step to empowerment. To set all these steps out in a linear way shrouds the reality that they are all equally important to the journey as a whole, and that there is constant interplay between them. The point is that each small step feeds into overall personal empowerment, enabling you gradually to flesh out ideas for getting going with research, while being able to dismiss others.

As a third injunction to someone new to academia, I would say: *believe in yourself*. But do so *realistically*. This, of course, ties in with the imperative to know yourself, and relates to the confidence/competence tension in many new researchers. Steps towards believing in yourself may at first be small and incremental. An example here might be preparing a draft proposal, or perhaps the outline of an article based on your recent dissertation, eventually to be submitted to a local journal. These are confidence-boosters. But remember, even rejection of one's first article can be a sharp learning curve and hence a critical stepping stone on the research journey.

Aiming too high and too soon can shatter self-confidence and be demotivating. It is critical to strike the balance between believing in and stretching yourself, and being realistic in your aims so that you do not set yourself up for failure. Real confidence grows slowly, but surely.

In sum, to begin with the research journey is to take these small, interacting, incremental steps that count, for these are confidence boosters.

Something that many new academics own to struggling with is how to manage their time. Yet, as we are all aware, good time management is critical to efficiency and self-empowerment. The most common dilemma is how to find time (and energy) for research when teaching loads and related responsibilities are high, and when administrative issues take up time. Time management is sometimes particularly acute for those with family, health and other issues to consider, and other stresses to manage. Hence the frequently asked question: How do I find time for research?

I would suggest a simple three-fold strategy to manage time and get the research ball rolling, which we will discuss in this section. This may spur you on to think of other creative strategies, at the source of which is something critical: research planning. Without these two elements, research planning and time management, good research will never happen. All the intentions in the world will come to naught because, in my experience, for the majority of people there will always be something else that pushes its way to the front of the attention queue. One reason for this is that, unlike with teaching and administrative responsibilities, there is no built-in accountability structure when it comes to research. We are only penalised when an end-of-year review notes the gap, or when we unsuccessfully apply for funding or promotion.

So, as a start, let us try to construct a supporting framework for research, which might just help to avoid floundering down the line.

Here is a strategy worth trying:

- be attentive to, and creative with time and space;
- plan your research, setting short-, medium- and longer-term goals; and
- be accountable to someone – a colleague, a mentor, your HoD.

When it comes to *being creative with time and space* my mind goes back to many seminars on research planning and time management, where

various issues were raised by participants. Early on it became clear that "one size" definitely does not "fit all". It is too easy for someone without family responsibilities or other pressing concerns to be dogmatic or mandatory about what works and what does not. But there are some strategies worth trying. I well remember a stage of being so desperate for time and solitude to write, that on many occasions I drove to a local sports field parking lot and sat in my car writing for an hour or so.

Without presuming that this is easy for everyone, I would urge everyone entering academia to try and identify a regular time and (if possible) a consistent place designated by you for some sort of research activity. Sure, there will be times when keeping this personal appointment will not be possible or when it needs to be tweaked, but it helps immensely to have it as a default habit. For some, this will be at home after the children are asleep. For others it may mean coming to work an hour earlier, and to focus on research before lectures begin and other responsibilities call. Some departments, in negotiation with the HoD, allow staff to have a designated "research day" each week, where they can work in a place of their choice. In any of these ways (and there certainly are others) it is possible, and crucial, to identify a regular time and default place to devote specifically to something research-related. Interestingly, the time period need not be long. Some new academics with whom I worked found it useful to start off with setting aside just half an hour each day to focus on research or some research-related task.

Some would suggest that there is an important caveat to take into account here. You are in your office working on some aspect of research (or lecture preparation or catching up on administration) when there is a knock on your door and a student asks to speak to you. You have a responsibility to attend to student queries and study-related problems, so you allow yourself to be disturbed and to switch gear from the journal article you were trying to get into to inviting the student to come in and sit down. You have no alternative, for students have a right to consult with their lecturers. But wait. This type of situation can be avoided if you have a simple notice on your door, approved by your HoD, indicating times when you are available for student consultations. Students will learn to respect this. Of course, there may be emergencies, and these must be timeously dealt with. But normally, provided you allow for reasonable access to yourself, students will adhere to consultation times.

The important thing in making research progress is the regularity, which presupposes the habit, of setting aside time for research. This makes possible the consistency and incremental progress that are both critical in establishing a healthy research profile. In this way, something that you may have feared or resented can morph into something that is rewarding, challenging and enjoyable. I have personally witnessed this in scores of people.

Let us turn now to the actual *planning of research*. As with time management, without planning, quality research will simply not happen. Other things will creep in to crowd it out. Research planning involves the setting of short, medium and long-term goals, and for this it is useful to compile something graphic in order to chart the various research milestones.

There are different ways to do this, but in constructing a research plan there are a few points worth noting. Some people find it useful to construct different plans for the short, medium, and long term. The first (short-term) would be more like a time management schedule – what might be called a "micro plan" for a week or a month or the semester ahead – or all three. This plan requires quite detailed management to meet relatively small targets, all of which feed into a "macro plan", which might stretch three or four years into the future and culminate in graduating with a PhD and submission of an article from it. Or it might be for the year ahead in preparation for giving a conference paper leading to a publication. We even had one young academic who constructed a fifteen-year plan to take in her promotion to professorship and a good National Research Foundation (NRF) rating!

A research plan is similar in principle to a Gantt Chart[1] used in many large projects, and probably familiar to many of you reading this. The essence of a Gantt Chart is to

- describe in detail the work that needs to be done for a project, including;
- when each sequential task needs to be completed;
- in order to feed in a timely way into the project itself; and
- to ensure its completion on time.

1 https://www.apm.org.uk/resources/find-a-resource/gantt-chart

There is no right and wrong in the creation of a research planning template. The only non-negotiables are that it should be specific and not general, should encompass a particular time frame with tangible goals, and should be realistic and enabling for you. It is critical that your plan should indicate how a particular target plays into the next one and how the short-term plan is but a magnification – with all the detail – of a stage in the journey to a bigger goal. This demonstrates, *inter alia,* a facet of cohesion in research, which is a key issue not only in performance assessment, but in your academic development and credibility.

One word of caution: do not be over-ambitious in your planning, setting yourself up for failure. This can be devastating, and contributes to demotivation and loss of confidence in yourself as a researcher – and sometimes to resentment. Stretch yourself, but be realistic. And check the viability of your plan(s) with your mentor or a senior colleague.

This takes us into the third step in research strategising: *accountability to someone.* This might be someone who has agreed to be your research mentor. Or, while you are doing your PhD it could be your supervisor. It could be a colleague at much the same level as you, with whom you make a mutual accountability pact. Then there is, of course, the *de facto* accountability that you have to your HoD, but usually this would be in addition to, and not in place of, someone else in this role. The critical thing is that someone familiar with the road you are travelling, and who can therefore identify with it and look objectively at it, is regularly updated on both your progress and your challenges.

Now that we have identified these fundamental issues in research planning and strategising, which in a way form the supportive backbone of research, I would like to move on to some very concrete topics which are really a fleshing out of the supportive framework we have been trying to construct. Some of them are very obvious, others less so, but all are integral to an academic's ultimate success as a researcher. I have identified seven such topics for this discussion, each with the same importance, and all of which feed into each other, as you will realise. But note: this is not to suggest that there are not more issues worthy of consideration, some of which may be specific to the nature of your particular research, and on which it may be useful for you to reflect and to seek advice as necessary.

First: *Know what is expected of you in terms of research.* What are the key performance indicators (KPIs) against which you will be measured

for the research component of your academic job? KPIs are sometimes regarded as a threat, and become the sole motivation for doing things. But this is to put a very negative spin on them. KPIs are useful instruments, and should *serve* you rather than *threaten* you. One definition I came across was succinct and particularly helpful:

> A KPI is a quantifiable measure of performance over time for a specific objective. KPIs provide targets for teams to shoot for, milestones to gauge progress, and insights that help people make better decisions.[2]

In academic research, KPIs include the process and completion of higher degrees (notably a doctorate), publishing in accredited journals, authoring or contributing to scholarly books, and supervising postgraduate students to graduation. In relevant disciplines patents would also be included under KPIs, as would peer-reviewed research outputs in the creative disciplines.

Awareness of what is expected of you is vital, impacting down the line on critical things like promotion (see Chapter 16) possibilities. As our conversation continues below, it will hopefully bring about greater clarity on what is usually expected in terms of research, raising awareness of possible pitfalls and offering some strategies to enable you to set out with confidence and excitement on the next step of your own research journey.

Second: *Work towards identifying and honing a research area.* Some people are actually excited by the stark injunction reflected in the title of this chapter: "Now do research". Others resign themselves to it. Yet others are mortified, often because, although they know the expectations, they have no clue how and where to begin. This, of course, is precisely because "doing research" presupposes a measure of clarity about the area in which you want to work, and being equipped with the tools (including personal skills) to do it. But for many people this is not the case at all.

In meeting with newly appointed academics to discuss their research trajectories, a common question is "Where do I start?". This

2 https://www.qlik.com/us/kpi

is particularly so in disciplines where solo research, rather than team research, is the norm (the default position in many disciplines), with no obvious place to slot yourself into.

My immediate response would be to ask, first, if there is anything you are particularly interested in researching. Are you passionate about anything? This is always a good starting point. Then I would suggest that you make it your business to find out what is currently being debated and explored in your discipline, locally, nationally and internationally. Talk to more experienced colleagues, refer to current journals, discuss it with peers, and ask yourself if there is a topic or area that "grabs you". And, importantly, find out if the necessary resources to support such research are available locally (including, but not limited to, your institution). Apart from other benefits, these simple exercises will help you to identify a gap that perhaps you could contribute to filling. And, of course, there may be research opportunities in the areas in which you are teaching. Sometimes this is first prize!

Third: *Do a PhD if you do not already have one and do it soon.* A reality facing new appointees is two-fold: A PhD is expected of you and there will never be an ideal time to do it. But the refrain, echoing the title of this chapter, is clear: "Now do a PhD". Do it you must, but this does not, however, preclude being strategic about it. Strategising is essential.

For example, it makes sense to time it so that you will be due for sabbatical leave at an opportune time during the process, possibly for data collection and analysis or perhaps working on the final draft. Or you may need to acquire certain skills or knowledge first, necessary for the type of investigation you plan to undertake. It may also be that a research visit is appropriate, possibly to meet with an international specialist in your field. Strategising in these and other ways reminds me of a colleague I worked with whose topic was associated with the working and social conditions of a certain category of manual workers. To equip herself appropriately, and by arrangement with management, she actually joined the labour force of this operation for a period in order to experience the conditions to which those employed there were subjected. In this way she was able to speak with first-hand experience to her topic.

But let us go back a step. Many people are faced with a very basic dilemma: they have no idea what they would like to research for a PhD, nor do they feel confident enough about their own research skills. Yet

they also feel constant pressure to do it. Institutional or departmental pressure for PhDs is sometimes intense. There is no definitive response to these pressures, but there are a few things we can usefully keep in mind.

The first thing to remember is that your PhD is not your *magnum opus*. It is rather a key stepping stone in your academic journey. Remember also that it will never be the final word on the topic, but it should make an original contribution in the sense of adding to the knowledge base in the field, perhaps by exploring an angle that no-one else has focused on. Earth-shattering originality and findings are not required, and are a bonus if they emerge. Taking the discipline a step further in a particular area is what is required. It is originality in this sense that is one of the hallmarks of a PhD. In addition, there are different ways of being original and thus adding to knowledge. An allied, and critical, point is knowing what is out there already before deciding on your topic, which may then require tweaking.

Before moving on, a word about PhD supervision. A personal reflection might be appropriate at this point. My own PhD supervisor, who eventually worked with me in researcher development (and I think would support what I am about to say) may not, at first glance, have been the ideal person to choose. He was not a fundi on the narrow angle I was about to pursue and I suspect had never given thought to the particular position I was taking.

But it was not for these things that I chose him and had confidence in him, or why he agreed to supervise. You see, he was an experienced supervisor, was part of a wide international community of scholars in the broader area of the discipline and within his own speciality, and also in the wider context of my particular topic. He had many contacts, and was open to journeying with me in the area I had chosen. He was an excellent facilitator, had a good supervision track record, and we were compatible as colleagues. This is my story. Yours will be different, and specific to you. The point I am making is that in finding a PhD supervisor there are a number of issues worth taking into account, some much less obvious than others, and at times requiring a measure of compromise. Important too is the realisation that by the end of any PhD the student will know more about the topic than her or his supervisor does!

Fourth: *Graduate supervision.* Integral to the research responsibilities of an academic is to supervise and graduate Master's and PhD students.

In other words, you must supervise thesis production and examination. Different institutions may have different types of Master's degrees, for example a taught Master's (coursework and a mini-dissertation) and a research Master's (thesis only).

Graduate supervision, the area that most closely interfaces with teaching, is something that initially (and understandably) terrifies many new academics. There are two main areas of support for novice supervisors. First, to be mentored through the process by someone with both experience and a good supervision track record. Second, to co-supervise with a colleague with existing supervision experience. Different universities may have specific protocols for first-time graduate supervision, and it is important to familiarise yourself with these at your institution. This is where negotiation with, and counsel from, one's HoD is critical.

Fifth: *Start publishing and/or producing other types of peer-reviewed output appropriate to your discipline.* Because publishing is the form of research output most common across the disciplines, this is where our focus will be in this section. This in no way undermines the importance of other discipline-specific research outputs, and I urge you to familiarise yourself with relevant expectations and criteria within your discipline.

The cliché "publish or perish" is imbued with more truth than many people at first realise. Subtly or overtly it is there from day one. Some academics start out resentful of this imperative. Others panic at the pressure to publish. These situations are both sad and unnecessary. Publishing in its various forms is arguably the most effective way to get yourself and your work known in the scholarly world. It is also possible to derive immense satisfaction in the process.

There are various ways to launch yourself into the publishing world, all guided by two seminal issues: what to publish and where to publish. As to the former, one of the secrets is to begin modestly and realistically, possibly using material from your thesis, with the article co-authored by your supervisor (sometimes, but by no means always, a default practice).

Do not aim too high to begin with, and consult with more senior colleagues working in your field. Make it your business to find out which topics are current in your discipline and more specifically, in your area of interest and growing expertise. It is important to be aware of *where the debate is currently at*, because you are more likely to have an article accepted if you will be making a contribution to an ongoing conversation in your field of research.

Equally important if you are writing a journal article is to ascertain if your article is *suitable for the particular journal* you have your eye on. Allow me to illustrate with a personal story. In the days of my naivety regarding research publishing, I was urged by an experienced, internationally renowned colleague to submit an article I had recently written to a particular highly rated international journal (the fact that I had met the editor socially and had in fact, with a group of colleagues, had dinner in his home, spurred me on). I duly submitted my article, and it was rejected. This was hard to swallow, but it represented a steep learning curve for me, as I hope it will for you who read this chapter. You see, while I was passionate and by then fairly knowledgeable about the subject on which I had written, I failed to take into account some key issues.

I did not consider the type of article usually published by the journal, or the type of subject it favoured. This was a fairly conservative, highly regarded international journal, and my article was a tad controversial. Linked to this is a second, related point: I gave no thought to the current debate in which the journal might be engaged. Third, nor did I give a thought to who typical subscribers to this journal might be. Finally, the editor of this journal was a person and scholar of integrity, who was not willing to compromise by including an unsuitable, untimely article. This was a hard-learned lesson, and one from which I hope you, the reader, will learn in advance of making the mistake that I did.

On that somewhat sobering note, let us consider a few specific issues relevant to publishing, remembering that publishing is not an optional extra, but a KPI in the world of academia. For newly appointed academics, the big question is: Where do I begin? There is no definitive answer to this question, but a few suggestions might be useful.

In some disciplines a novice author might be afforded the advantage of co-authoring with her or his supervisor or perhaps another colleague with publishing experience. This is an opportunity not to be missed, for it can provide a smooth introduction to the publishing world. For the most part, however, the onus will be on you to launch yourself into publishing, so savviness is critical!

Constructing an article out of one's own thesis is a possible place to begin. Remember, however, that dissertations and journal articles belong to different genres, so a great deal or reworking, summarising, selection and thought for readership needs to go into preparing an article from a thesis for publication.

When it comes to journal publications, be aware of which journals are accredited and hence qualify for subsidy by the Department of Higher Education and Training (DHET). So, select a journal with care.

Having said that, it happens that some important journals do not receive DHET accreditation, so are without subsidy. For example, in some of the professional disciplines, non-accredited publications (a) have a wide and influential circulation and/or (b) are contributed to by significant persons in the field among whom, frequently and appropriately, are academics. The secret, really, is not "either/or" when it comes to publishing, but rather it is sometimes a "both/and". Regardless of this caveat, remember that the default position should be to select accredited journals, known to have a good reputation in your discipline, for submission of articles.

Now for a very sobering word on journal selection. One afternoon a bright young colleague, fairly new to academia, bounced into my office to share the news that his first article had been accepted by an international journal. He was ecstatic. Initially I was delighted too, but his answers to a few questions made me a bit edgy. I probed further, and later did some research on the journal. My fears were realised: this was a "predatory" journal. There is no globally agreed definition of a predatory journal but there are tell-tale characteristics which you should look out for:

- Author is frequently required to pay for publication of an article;
- Unsolicited e-mails or invitations;
- Lack of traceable credentials, for example, an editorial board;
- Relatively easy acceptance of articles, without peer review and with fast turn-around from submission to publication; and/or
- Often subtle discrepancies in their claims.

In a word, these journals promise the world but give nothing in return because they will add nothing to (and possibly detract from) your credibility as a researcher. So, before submitting your article for publication check out the targeted journal with an experienced colleague.[3]

Up to this point we have only spoken about publishing in journals. In some disciplines authoring of or contributing chapters to books is a big

3 I recommend the following presentation: "Predatory publishers: How to recognise them and why we should avoid them" by Dr Cheryl Tosh (library@up.ac.za).

part of publishing convention. The DHET has specific subsidy criteria for the accreditation of books and chapters in books, and these should be noted before committing to a book project. As with having occasional articles published in non-accredited journals or professional publications, so it is with some books: there may be times when it is appropriate to contribute to a non-peer-reviewed book in the broader interests of the discipline or profession, and in the interests of scholarly relationships. But this should be carefully measured against the university requirement for subsidy-earning peer-reviewed publications.

There is a great deal more to be said about publishing but hopefully this will give you food for thought – supplemented by our next theme, integral to publishing: academic networking (see also Section IV in this book).

Sixth: *Networking.* Over the years I have worked, broadly speaking and with the risk of generalisation, with two types of academics: those who were born networkers and thrived on any opportunity for intellectual interaction and cooperation with others (or who certainly did not dread the prospect), and those who cringed at the very thought of networking in any way. I instinctively belong in the latter group, but was effectively mentored into realising that networking in its various forms is critical in the academic world. This is precisely the message I want to communicate now.

To be successful in academia (which essentially means to make your mark locally, nationally and internationally), networking opportunities should be seized (see Chapters 9 and 10). Equally important is to be strategic about this, remembering that networking is a mutually beneficial feature of the scholarly world, and is integral to it. So, developing networking skills is critical. And there are many situations that facilitate it.

At least five components of an academic's research portfolio immediately come to mind to underscore the importance of networking, and there certainly are more: finding examiners for postgraduate students; planning research visits and sabbaticals; getting on the radar of journal editors; taking opportunities for conference presentations; and being invited to participate in collaborative research initiatives.

Networking is about getting yourself known among your national and international peers, putting yourself and your work out there, and thereby insinuating yourself into the wider community of scholars in

your field. The reality is that human beings, academics included, are instinctively drawn to people they know and respect rather than to complete strangers, so getting yourself known in the wider field of your research is imperative. This requires networking skills, among which is learning to recognise networking opportunities.

A question I have been asked many times, usually by shy and unassuming colleagues, is quite simply: How do I start networking? The answer lies partly in the fact that networking takes various forms, and seasoned academics habitually demonstrate how it is possible to use the wide spectrum of scholarly interaction as occasions for networking. Let us learn from them.

Arguably, conference attendance and participation provides the broadest networking platform of all, and there are numerous ways to exploit the opportunities thus provided. Here are a few ideas of how to make conferences work for you. There may well be others you can think of.

First, select appropriate conferences, and try to get yourself on to the programme of presenters in your area. Having presented a paper, follow up with attendees who ask significant questions or make valid comments. Second, in preparation for the conference, scrutinise the programme to see which noted scholars in your field will be there. Attend their presentations, and introduce yourself appropriately to them afterwards. Third, be on the lookout for possible collaborators in a shared project – usually peers working in the same field as you. Fourth, having in advance identified the appropriate journals for your field of research, seek out and introduce yourself and your area of research to journal editors. Find out if there is a special issue coming up, with a theme that may be aligned to your own research. Fifth, be on the lookout for possible examiners down the line for your postgraduate students. Each of these suggestions needs to be fleshed out, of course. But for now it is simply the idea of identifying and exploiting conference networking opportunities that I am trying to communicate.

Seventh: *Disciplinary research and crossing disciplinary boundaries.* Increasingly – and appropriately, given the complexity of the world we live in – the days of knowledge silos are ending. Disciplinary expertise continues to be critical. But our existential reality is such that it is imperative that different disciplines, each with its own realm of

expertise and *modus operandi*, come together and work cooperatively in a world that on every front is increasingly complex, requiring a combination of knowledge and skills in order to address the issues.

However, you need to be well-grounded in your own discipline and eventual area of expertise before committing to such collaborations. This is critical. Not only is this an indication of your competence as a researcher, but your contribution to any of the branches of interdisciplinary cooperation hinges on the disciplinary competence that you can offer to any particular project.

It is interesting that if we look back in history, we see that many of the people we admire as "greats" were polymaths, intellectuals with interest and expertise in a range of fields, some of them quite unrelated to their primary vocations: there are individuals such as Sol Plaatje, Sara Ahmed, Edward Said, Leonardo da Vinci and Gregor Mendel, to name just a few, spread over time, whose intellectual, creative and applied competence branched into several areas. There are parallels to this in almost every culture, which we should not overlook.

Building on the foundations of these great thinkers and doers, around 200 years ago modern disciplines slowly began to emerge. Each one developed with its own parameters and conventions, specific categories of knowledge and later, specialisations within the various disciplines themselves – with an eventual split between the sciences and humanities. The world has scored enormously from disciplinary specialisation, as it did before this with the thinkers who dared to be experimental in pursuing interests different to their primary area of competence, and with the accomplishments for which they are best known.

Now, as we know, in multiple ways the expertise from different disciplines is coming together to provide multi-faceted solutions to complex problems. This dynamic has facilitated the unprecedented creativity and progress that stems from inter-, multi-, cross-, and transdisciplinary research (note: these are all different, and terms should not be used interchangeably).

Having acknowledged all of this, my mantra to new academics remains simple: get yourself grounded in your own discipline, in time identifying an area of expertise you wish to pursue. Only in so doing will you be properly equipped, and have sufficient confidence, to commit to

projects dependent on any of these disciplinary collaborations. You will then be in a position to contribute usefully (i.e., to bring unique insights and perspectives) to the projects emerging from such collaborations.

And so, we reach the end of this chapter. We have covered a lot of ground, very quickly. I hope you have found it useful. Now get on and do that research! I wish you well.

3

Publishing High-Impact Research

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If you expect a checklist in this chapter, you will be disappointed. Publishing high-impact research is not simple. It is a science, an art, and a process. My goal is to offer advice about the ingredients required for publishing high-impact research. How you mix and blend these ingredients is up to you.

A prerequisite to doing high-impact research is how you think about its place in your being an academic. Doing research and disseminating knowledge through publication is a core expectation for a successful academic career. It is more than a perfunctory element in the conventional academic work triangle: teaching, research, and community engagement. Research is central to our identities as scholars. Research allows us to interrogate, explain or solve societal problems and puzzles about phenomena. It is a privileged undertaking to become part of a community that creates knowledge to enable a better world.

However, it may not always feel that way. Our universities often reduce research to outputs like widgets on a manufacturing production line. For early-career academics, it may be tempting to succumb to pressures to publish for instrumental reasons (i.e. monetary incentives or promotions). Doing so can compromise an academic's ability to publish high-impact research. Publishing research that contributes significant knowledge to a discipline should be the goal from the beginning of your academic career. Notice I said "should be".

Some of you may have pursued a doctorate because you wanted to teach at a tertiary level. If you only want to teach, you do not need a PhD. This may sound harsh, but I have said it to many prospective doctoral students. Many of you know this because you held a lecturer post without a doctorate. Hopefully, during your doctoral journey, you realised the core meaning of a PhD (Doctor of Philosophy) degree. Across disciplines, the standard foundation of this degree is in-depth training in the philosophy of science. A PhD prepares one to engage in scientific inquiry to build knowledge about phenomena. It is an earned *research* degree, not a teaching degree. Obtaining the degree requires completing an original research study that contributes to knowledge in a discipline. Choosing an academic career comes with an expectation that you will continue to do research and publish.

A well-respected scholar encouraged me to think of writing and publishing as a scholarly conversation with others in my field. Yes, we occasionally have the opportunity through conferences and other platforms to engage directly with scholars who have similar research interests. However, publishing the knowledge we produce is perhaps the most enduring means of conversing with current and future scholars. Our published work will remain long after us. Moreover, we are often in conversation not only with fellow scholars but also with practitioners who may use the knowledge to improve practice and policy.

Completing a thesis was your debut into the scholarly conversation about your topic. External reviewers assessed whether your thesis significantly contributed to knowledge and practice. This criterion remains a *sine qua non* of high-impact research. What you contribute to a scholarly conversation is judged by those already within it. Your peers decide whether you are adding knowledge worthy of publication.

Thinking of publishing as a scholarly conversation provides a gateway to understanding the complex knowledge, skills and processes needed to publish high-impact research. There are many facets to consider: doing significant research, deciding on the type of publication as well as outlet quality, collaborating with other scholars, acquiring infrastructure and resources, and developing a writing practice.

Publishing high-impact research begins with making a significant contribution to knowledge in your field. As with any conversation, those conversant with the topic do not want to hear things already known. Whether judging a conference paper, a journal article submission, a

book or book chapter, the central review question is always about the significance of the contribution to the field.

Thus, publishing high-impact research requires understanding what constitutes a significant contribution to knowledge. Identifying a knowledge gap (i.e., no-one has ever studied this question) is not an automatic route to a high-level contribution. Not every gap is significant.

There are, however, generic markers for what might be the makings of a significant contribution. Does it offer new theoretical insights? Does it integrate and challenge previously established relationships or processes in a way that improves predictions? Does it make a methodological breakthrough that discovers new knowledge? Does it bring in theoretical developments from other fields (or related fields) to shed new light on existing knowledge? Does it improve the understanding of (or contribute towards solving) a grand challenge in society? In short, significance comes from asking and researching essential questions or topics that matter to other scholars in your field and to those who may be affected by them.

At the same time, the research should matter to you. This may sound contrary to the emphasis often placed on maintaining objectivity in doing research. However, sustaining the motivation and energy to produce significant scholarly contributions throughout an academic career is more likely if there is curiosity, commitment and interest in the focus of your research.

While your thesis brought you into the scholarly conversation, the challenge is choosing a research focus going forward. For some, it may be a continuation of a thesis topic. Others may wish to pursue a new research interest. In either case, you need to find ways to untether your scholarly voice from your supervisor's. This does not mean never collaborating with your supervisor again. It is about claiming independence as a scholar. Our postgraduate education may steep us in the theory of our disciplines, but it does not always address the profound task of developing one's scholarly voice.

What do I mean by scholarly voice? It is about choosing an area of inquiry and embracing a methodology and epistemology that enable you to bring authenticity to why and how you engage in scholarship. Claiming one's scholarly voice means a deep reflection on: "Why did I choose an academic career? Why do I want to write? What contributions do I want to make to knowledge in my discipline or to society?" No

matter what discipline you are in – whether it is the social sciences or the natural sciences – scholarship is about determining the contributions you wish to make through your research.

Making significant research contributions to a scholarly conversation requires in-depth knowledge of theoretical and empirical developments in your field of interest. These developments take place locally and globally.

You may be thinking about the impossibility of finding the time to keep up because of everything else on your plate. Find a way to do so that works for you. It does not mean reading every new publication but having a plan to keep abreast of the leading scholarly conversations. Advancements in the technologies for managing knowledge and research networks make this task less daunting than it was years ago. At a minimum, focus on high-quality sources and the work of scholars leading the conversations about your topic. Selectively reviewing for quality journals in your field is also a way to remain current with developments in your field. Reading work from adjacent or cognate fields can trigger conceptual blending to unleash new thinking about your research.

Doing research also requires good infrastructure. This is a challenge that most early-career academics face in transitioning to new research projects after exhausting their doctoral work. Research infrastructure consists of the physical, monetary and human resources needed to achieve high-quality scholarship. Specific needs will vary by discipline. But doing significant research requires material resources. Apply for research support within your institution and also pursue national and international grants. Although it may not be possible to supervise doctoral students immediately after obtaining your degree, attracting doctoral students and postdocs is essential to publishing high-impact research.

Deciding where best to publish your research is a complex decision. First, you have to consider the best type of publication. The impact of different publication outlets varies by discipline. In management and economic sciences, journal articles have greater impact than book chapters and even books. On the other hand, for other fields, like literature, history and political science, a significant book publication is expected. Conference proceedings have a greater impact in engineering than in other fields. It is challenging to achieve impact if you publish in the wrong outlets or do so at the wrong time of your career. For example,

if you are in the natural sciences, it may perhaps not be wise to focus on review articles or chapters early in your career. There may be a disciplinary expectation for you to publish the results of laboratory or field research.

The valuation of different outlets can also change. In the social sciences, edited handbooks are gaining influence. Top scholars typically edit handbooks and solicit invited chapters or articles from leading authors. Handbooks garner large citations because they provide an accessible means for learning about the state of knowledge on a particular topic.

Second, research requires achieving both quality *and* quantity. Many low-quality publications will never equal significant impact or garner respect within your scholarly community. At the same time, only two high-quality publications over ten years may be inadequate to achieve impact in a field (unless, of course, they are Einstein-level breakthroughs).

Third, you will need to understand the indicators of research quality in your field. Early career academics may find navigating the contested terrain of what constitutes quality confusing (see Chapter 14). There are ongoing debates about journal lists and ranking systems. Generally, there is heavy reliance on impact factors for journals and in the case of books, the publisher's reputation. Research published in high-quality outlets typically garners more citations. So a general principle is to choose the highest quality publication outlet commensurate with the contribution level of the research. Publishing in elite journals where only 3 to 5 per cent of submissions are published is not always possible. While it is generally better to aim for the very highest quality outlet, impact can be achieved by consistently publishing in good quality journals in your field. Do not assume all journals on the Department of Higher Education and Training (DHET) list are of the same quality. Lists cannot capture all of the nuances in journals.

Those researchers who publish high-impact research have intimate knowledge of the journals in their fields. This knowledge comes from socialisation during doctoral studies and cognisance of where top scholars publish and where novel scholarship appears. You must become intimately knowledgeable about the journals in your field. You should invest time to know their standing, the types of research they publish, the contribution level that they expect, and how your peers view them. If you are not sure of the best fit for a paper, reach out to senior scholars

for their advice. Other sources are discipline-based ranking lists based on research conducted by scholars in a field. Knowledge of the best journals will ensure you do not become prey to predatory journals. Work published in predatory journals can never have an impact.

I want to dispel the notion that it is difficult to publish research conducted in South Africa or Africa in international journals. We should not write ourselves out of the global scholarly conversation. In addition to the fact that many South African scholars regularly publish in international journals, editors have increased efforts to make them truly international. Opportunity exists for early-career academics to accept these overtures without sacrificing local relevance. The onus is upon you to articulate the implications of the research not just locally but globally.

Collaboration is critically important given the increasingly high bar for a significant contribution to knowledge. Collaboration with other scholars in your field, or even interdisciplinary collaboration, increases the possibilities of publishing knowledge at the frontier. Besides bringing additional intellectual expertise to a research project, collaboration eases the burden of working solo and securing resources for the work.

It takes time to build authentic and fruitful research collaborations. Invest in building a concentric network composed of scholars in your department and university, at other universities in South Africa, the rest of the continent, and in other parts of the world. Join the premier national and international academic associations in your field. Regularly submit papers to their conferences so you can engage with potential collaborators. Selectively seize opportunities to participate as a reviewer or serve on committees. This allows other members to get to know you and your research. Your peers during doctoral studies or those you subsequently meet in programmes targeted towards early-career academics are also potential collaborators.

Academic writing is arduous work. You can master the techniques, but getting each publication to the finish line requires a process. So one of the important things is having a writing practice that works for you. A writing practice consists of habitual procedures used to write and submit work for publication – institutionalising *when, where* and *how* you write. It may take a while to figure out the practices that work for you. However, your confidence will increase as your writing practice leads to success.

When to write requires making time to write. This is particularly challenging for early-career academics because of the multiple demands on their time. It is a mistake to postpone doing research and writing until a large block of time is available. Yes, that is ideal but not always possible. Finding a way to make time for research and writing as a regular activity is one of the keys to productive publishing. For example, one of my practices is to keep mornings aside for writing. Why? Because my energy and thinking are freshest in the early part of the day. Some days it may be a couple of hours. On other days, it may be a larger block of time. Cumulatively, regular blocks of time can move you towards the completion of a writing project. Set achievable tasks for each block of time. Doing so will provide momentum and further motivation. However, the time you make has to work for you and your context.

Where to write is about finding an ambient space for writing without distractions. Create a writing environment with the physical arrangements, tools, materials and mood enhancements you need to be productive. For some, this space might be a university office. Others may prefer a space at home or another site. At the same time, take advantage of writing retreats, writing workshops and those rare large blocks of time (i.e. workload reductions, teaching buy-outs). The trick is making sure you use such opportunities for their intended purpose.

How you write is the last element of a writing practice. Again, writing is very hard work. Getting each sentence right and constructing a compelling and well-supported contribution to knowledge can lead to despair and frustration. However, it is achievable through diligent craftsmanship and panel beating. It is a process of writing and rewriting. Write to get your thoughts down but be prepared to rewrite them if they do not capture what you want to convey. Drafting and re-drafting are necessary for clear communication. Remember, you are conversing with others in your field. They will not be able to evaluate or appreciate the contribution of your research if it is not written clearly and coherently.

Communicating clearly requires meticulous editing to make sure your work is technically and grammatically accurate. While you need to learn to self-edit, use a language editor if necessary. Submitted work must adhere to the style requirements of the publication outlet. One of the rookie mistakes early career academics make is not to seek friendly but honest reviews of work before submitting it for publication. Ask those in your scholarly network to read your work before submission. Do

not be defensive about negative feedback. Instead, use it to improve your manuscript. Working in this way mitigates the chances of an outright rejection by peer reviewers and editors. Rarely will manuscripts be accepted without a request for revisions. Re-thinking and rewriting are also critical to successful revisions.

All of this may sound daunting. Publishing high-impact research is hard work. Even top scholars will readily acknowledge that high-impact research never gets easier. However, it is core to our identities as scholars. It is a privilege, a heady endeavour to have the freedom to think deeply about a phenomenon, to engage with others in a lively conversation about uncertainties, problems, and the possibilities for improvement and progress for society.

Each success will still the doubt that you cannot do it. Dwell in the joy of publishing research that influences the thinking of fellow scholars and policymakers. As one of my early mentors advised, "When in doubt, write. Scholars who do not write can never publish high-impact work."

4

Writing Your First Scholarly Book

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As scholars, we are regularly reminded of the importance of journal articles. Rightly so, but in some disciplines, it is the book rather than the article that establishes and marks your academic reputation. Usually your first book comes from your doctoral thesis. The decision to publish your first scholarly book will also often coincide with the most important juncture in your professional and scholarly career: applying for a permanent teaching position at a university, or, increasingly also in the humanities and social sciences, applying for a postdoctoral position. Ideally this position would be at a university different from where you completed your PhD and then your unpublished thesis becomes part of your currency – along with any teaching experience and an existing publication record – that makes you attractive to a prospective postdoctoral host or employer. Your thesis is evidence of proficiency and it represents a promise of future publication. But, getting that coveted postdoctoral or teaching position may put additional pressure on you to make a decision about the publication strategy for your thesis.

Publishing a book from your thesis will involve more than dusting off the thesis, deleting your review of the literature and methodology sections, and sending it off to a publisher. In fact, if any publisher is willing to accept this as a basis for publication, it should be a red flag – a point to which we shall return later. First, you have to decide whether your

thesis lends itself to being published as a book. There are many different styles in writing a doctoral thesis. Some set out a complex methodology, present research data and then undertake analyses. Others take the form of a set of discrete yet connected essays, each setting out and answering a problem. Others still, tell a story, from beginning to end. These are the doctoral theses which most easily translate into books, although we must emphasise, many very substantial books emerge from theses structured around the first two.

How then do you decide whether your thesis lends itself to being published as a book? The first inkling is usually an external examiner's report indicating that your work is publishable. But this does not necessarily tell you what kind of publication strategy to follow. In many instances you will have a network of more senior scholars within your reach by the time you graduate. These include your supervisor and also senior scholars whom you have met at conferences, workshops and seminars. You will find that senior scholars are, as a rule, generous and wise in their advice. Write to them, especially those who have published books. Ask them whether they think that your thesis could be publishable. They may give you an immediate answer or they may ask to see copies of the examiner's reports, the thesis itself or a book proposal. This is a good sign as it shows interest and that they are taking your question seriously. The exchange might follow different avenues but the point is that you begin this conversation with your more senior peers about the kind of book your thesis might become, what its key focal points should be (that might be entirely different from your thesis and almost certainly exclude the methodology) and which publisher you might most fruitfully approach.

Make no mistake, publishing a book is not easy. It is a challenging task to translate a completed and successfully defended doctoral thesis into a publishable book manuscript. First, by now you have worked for several years devoting time, intellectual and emotional labour in completing your thesis. Most of us are a little weary at this stage of our academic life cycle and the prospect of another working up of the material is daunting. Second, doctoral theses and books, although they might come from a similar body of evidence, and may share a broad narrative unfolding, serve different purposes and communicate with different readerships. A doctoral thesis demonstrates your competence to undertake research as well as your mastery in a particular discipline. You need to apply these

competencies in addressing a new and original research problem, which is more likely part of a broader set of questions being asked by scholars in your field. Your primary readership comprises your supervisor(s), your dissertation committee, your examiners – and your mother.

A scholarly book, on the other hand, does something else. Its purpose is to communicate and prove a set of arguments rather than demonstrate a set of competencies. That is why, for instance, you will seldom find a methodology section or a write-up of results in a published book. It also has a broader readership consisting of a market of peers, as well as people from other disciplines who might be interested in the topic that you are writing about. For instance, if you are a political scientist, and write about fascism, you might expect that your book should also appeal and be accessible to others with an interest in fascism from disciplines like history, sociology, anthropology, English literature, law, and so on.

A seasoned scholar once advised us that while your thesis is read by people who are paid a salary or honorarium to read it, your book should aim for a wider readership of people who will moreover have to part with money to buy the book. The same scholar grumpily cautioned one of us, as a newly minted PhD, that it would take at least two years to turn this fantastic doctoral thesis into a publishable, serious book manuscript. We thought he was being curmudgeonly, or perhaps a gatekeeper, but this prediction was right, almost to the month. Working with younger scholars over many years we have seen that this is indeed a reasonable and viable timeline for the tasks associated with transforming your thesis into a publishable and accessible book. A real scholarly book that looks and feels and reads like a book rather than a PhD thesis, microwaved and placed between glossy covers.

One thing is assured, if you work in the South African higher education system, whether you find yourself in a postdoctoral position or a new academic appointment as lecturer or researcher, your institution is going to expect you to publish, publish, publish. This is how the engine of research subsidies in South Africa works. And as we indicated above, it favours quick turnaround, best achieved by regular journal publication. This incentive structure and the pressures it imposes on universities as well as your dean, your head of department (HoD), your professor and, ultimately, on you, are inimical to book publication. Recall our observation about the two-year period of preparation required for a manuscript.

Many young scholars make the mistake of satisfying those pressures

for immediate publication by carving up significant parts of their thesis into journal articles. You cannot publish all of the chapters from your thesis and also use this material for a book. What should you rather do? We suggest, as is often the case, that communication is the key: communication as a solution or a plan. When you start your new position, speak to your immediate superior and explain your research strategy. Explain to them that you are working on publishing a book and that this is a long undertaking. Also offer them something more, which is also quite important for your positioning as a scholar and for the reception your book will receive when it is published. Explain that you are not going to milk every drop of publishable material from your doctoral thesis by way of journal articles but that you will publish one or two essays which predict and pre-empt what will come in your book, and which will alert the scholarly community of the work that you are doing.

These essays are highly important for a scholarly career because they do in effect announce your arrival now that you have your PhD in hand. Because of the strategic importance of these essays, great care should be taken where you place them. You want them to appear in journals that are likely to be read by the same people you want to read your book. Put differently, these essays have to be placed where you want them rather than simply in a journal which will take them and which might appear on the Department of Higher Education and Training's (DHET) list of accredited journals. You must think far more strategically and more ambitiously than that list, which sets a very a low bar. These essays should also help to meet the publishing demands of your position that your institution will expect of you. For now, what we do emphasise is that you do communicate to your academic supervisor that this might be a project stretching over more than one year, and, within the context of the South African higher education system, will be closely aligned in timing with the submission of your first NRF rating application, discussed in another chapter of this book (see Chapter 15).

As you begin to think about revising or reworking your thesis into your first book manuscript, you should have some idea of a publisher. Again, your circle of advisors, mentors, friends, peers and of course your supervisor, should be able to help you identify a number of publishers with which your work could be a good fit. This is quite important: will your work be a good fit with a particular publisher's interests and lists – or perhaps a book series in the publisher's stable? Do your research.

Look at the books published by any particular publisher. Do they look and feel like the kind of book you want? Are the topics convergent? For example, has this publisher published works you have cited in your recently completed thesis? Or put another way, do you think it likely that people who bought other books in that publisher's catalogue, would buy yours? Then look at some of these books – really look at them: do they feel like the kind of book you envisage yours could become?

At this point there is little to be lost and potentially much to be gained by writing informally to a publisher to ask if they might be interested in the book that you envisage. Alternatively, you might approach a series editor associated with a specific publisher. Perhaps your supervisor, as a senior scholar in your field, might even know the editor well enough to make an introduction. This is not a formal submission of a proposal and their answer will not be binding. But it will help you picture in your mind the kind of publisher who will eventually publish your book. This is a crucial task as you eventually rework your manuscript but, more immediately, as you prepare the book proposal for the publisher.

A book proposal, like a curriculum vitae, is not a one-size-fits-all document and you should never simply develop a generic proposal and presume that this will serve you equally well with multiple publishing houses. Each publisher has very specific guidelines for the submission of proposals. You should consult the guidelines carefully. A little considered but important element in identifying a publisher is the country of origin of that publisher. Even presuming that your book will be in English, there are different scholarly traditions in different parts of the English-speaking publishing world – this aside from the disparity of intellectual traditions. At an elementary level you need to decide which audience your book will speak to in the first instance and which publisher publishes for that audience. For many scholars this boils down to choices about whether you want to publish in a South African or African press; whether your work might be more appealing to a British or American press or perhaps from another part of the world such as an Australian or Indian press. This is a topic seldom raised because it is open to rather problematic generalisation, but we do think that in order to give your manuscript the best chance of success and get your book into the hands of the readers you wish, you should not entirely ignore where your press is based. This question can become quite complicated. For instance, Oxford University Press in the UK and Oxford University

Press in the US tend to publish quite different kinds of books. You need to be aware of these particularities and tailor your book proposal accordingly.

Once you have identified a press or presses and have had perhaps an initial communication with the publisher, we recommend that you complete the book proposal. The proposal guidelines will ask you all kinds of questions which you do not encounter elsewhere at early stages of your scholarly career, for example, a list of recent books which either complement or compete with yours; and what courses and at what universities your future book might be assigned as a reading. You will also in most instances be expected to submit a table of contents, a chapter synopsis and one or two sample chapters. Do not simply send on one or two chapters from your thesis. Rather, what you send must not only pique the editor's scholarly interest, but should demonstrate the style of a book rather than a thesis. As we point out above, it should be readable and accessible and interesting to people beyond the immediate circle of your supervisors and examiners. This means reducing discipline-specific jargon and, of course, your methodology.

A good test of readability is to pass your sample chapters on to a scholarly friend outside of your discipline. Listen to and watch their reaction: do they want to read more; do they understand what you are trying to say? Do not be defensive. If these friends do not follow your argument or battle to decode your prose and cut through disciplinary jargon, this is a sign that you need to further revise your manuscript. One of us passed the first chapter of a proposed book on to two friends, one a physicist and the other a biologist. They were polite and kindly but clearly lost by disciplinary jargon and name dropping that still marked the version of the chapter that we sent to them. Things had to change. A rewrite was needed, a calibration had to be made and a lesson was learnt.

The same care should extend to the table of contents. We sometimes forget that the table of contents is not merely a summary of the chapter headings. Rather, think of it as most often the first part of the proposal an external reader reads to get a sense of the material. It has to tell a story and fulfil the same purpose as an abstract or synopsis. Moreover, in the act of transformation from thesis to book manuscript, you will remove large sections such as the review of the literature and methodology sections, and move other sections around. This will inevitably create gaps and imbalances might appear that are often most obviously

detectable in the table of contents. This might mean that even at this early stage of transforming your thesis into a book, you may have to think about the reorganisation of sections, of chapters and even, in some instances, splitting chapters to create greater balance in how your table of contents relates your narrative.

A perennial question is whether to send your proposal to one publisher or to several at the same time. Publishers often advise, sometimes as a condition, against sending it out to more than one. We do not know the answer and there are professional, ethical and timing arguments for and against either option. If two publishers accept it, which do you decide to send it to? The world of publishers and editors are closely tied to your long term scholarly career and we suggest that you weigh the implications of sending it to either one or more publishers very carefully.

Once you have submitted your proposal, do not panic if you do not hear from the press in short order. It will take anything from two to six months to get a response from the press as they need to identify reviewers and send your material out for review. This takes time. In the meantime, we suggest that you start laying out the material for your chapters. We do recognise that the book will have a slightly different feel depending on the publisher, but once you have decided on your table of contents, this should remain standard wherever you eventually publish. Do remain open to the idea though that your reviewers may recommend a different organisation to the one you submit in your proposal.

Emotional work is needed as much as intellectual work at this stage of the book project. You have worked hard and over long years to complete your thesis. You have worked equally hard to submit a book proposal and some sample chapters. There is a possibility (or, if you are like us, a likelihood), that even if the publisher wishes to proceed with your manuscript, the reviewers will ask for substantial revisions. We urge you not to be discouraged by this but also not to neglect the emotional energy and toll critical feedback demands.

When the reviews come in, read through them very carefully – and again. Do not send any emails in response, except to forward the reviews to one or two of your intellectual confidants. In our case, a trusted peer (this is the best), or your supervisor or mentor (also an excellent option). Ask them to read and interpret the reviews for and with you. This will provide you with some objectivity and emotional distance. You will be asked by your publisher to respond to the anonymous readers' reviews

and explain how you will use the reviews to refine and improve your manuscript. This is the case even if the reviews are very positive. Do not rush to respond. Rather, work carefully through all recommendations and suggestions and think how you might like to respond to them. In some instances you will not agree with the recommendations and in these cases you will have to think about – and explain to the editor – why you will not take these particular recommendations on board. This is a productive exercise as it pre-empts and helps to prepare you for subsequent possible criticism of the book.

What do you do if the reviewers recommend that the publisher does not proceed with your manuscript? Once again, do not send off a furious email. When you are ready, write to the publisher briefly and thank them for their consideration: you may wish to publish with that editor or press later in your career. Carefully weigh the points made by the reviewers – our emphasis here is on weigh, rather than dismiss, as a strongly defensive posture is unlikely to enhance the quality of your manuscript and it certainly will not change the decision of the publisher. In other contexts scholars have pointed out the value of even harsh reviews. They are never good to receive but occasionally they do offer valuable foundations for learning and improvement. Moreover, negative reviews when carefully read, do usually offer some avenues for future work and for improving your scholarship.

Let us go back and assume that you have received a positive response from the publishers (even if one or two or three turned down your manuscript, you should eventually find a publisher of repute to accept your work). You have cause to celebrate. At the very least, let your former supervisor, your professor or HoD know. They will be equally glad and appreciate your accomplishment. This moment of celebration is important as this is also where the hard work starts. A danger at this stage is leaving your book project on a hard-to-reach shelf as you have worked on the material for a few years and you may have a new research project that demands your attention. Furthermore, the challenges set to you by the reviewers may seem not only demanding but also overwhelming and wearying. One of us did nothing for 18 months after receiving the reviewers' comments. This is not a good idea. Your work may soon become dated, which will require including new material; another book on a similar topic may make the need for your book obsolete; or you may simply lose interest because of the demands of work and a new project.

A good way to start is perhaps to ask a peer to sit with you, go through the reviews and tabulate the tasks to which you must attend. These should fall into two categories. Editorial changes such as, for example, changes in terminology, the fixing of chapter headings and organisation, referencing style, etc. Then there may be more substantial changes where your reviewers suggest that you include an additional case study, an additional angle or something requiring further research. This is where you need your circle of confidants to help advise you on how much research would be appropriate: it is unwise to dismiss the recommendations of the reviewers, but simultaneously their suggestion is not an invitation to research another PhD.

Once your tasks have been tabulated, your best guide or road map to prepare your manuscript is the table of contents. You now have the tricky task of working your thesis material into the organisation provided by the table of contents and, quite possibly, rewriting substantial portions of it to make your book accessible to the audience you have targeted. Some scholars like to start this task with the preparation of a substantial abstract of between 200 and 400 words for each chapter. While neither of us have used this particular methodology, we do recommend it strongly. More so, as your publishers will request this for marketing purposes before your book is published. A chapter abstract or synopsis will give you a better sense of the objectives of the chapter, its cadence, balance, organisation and trajectory. In other words, just as the table of contents gave you a roadmap for the book as a whole, a good abstract will give you an even better, detailed roadmap for the chapter. Then start to write. The temptation will be to simply cut and paste sections from your thesis. Certainly, this is possible, but we do urge you to be guided not by what you have already written but rather what features in the abstract.

Carefully consider your prose. For example, when you write "as Dlamini has noted", or, "in the well-known commentary by Jansen", does your reader, who might not be in your discipline but is interested in the topic you are writing about, know Dlamini or Jansen? If not, provide your reader with adequate scaling and entry points. Remember that accessibility should be a key feature of your text and name dropping or the use of jargon seldom serves this purpose. What we would like to emphasise at this point is to stick to the word length agreed upon with your publisher. A young scholar we know prepared a manuscript more than twice the length specified in their contract. It was an almost

impossible task to cut it by this much while still retaining the integrity of the argument, the shape of the book and its fluency.

At this stage of the writing process, we have both found it useful to present versions of the chapters we have written at conferences, seminars or workshops. In the case of the latter, ask your peers and friends to invite you – they usually do – or organise a workshop yourself. These activities serve as an extra form of peer review, they allow you to test and refine your argument and, importantly, they send a message to the academic community that you are working in a particular field and that a book is on the way.

Something that you are seldom warned about when embarking on a book project is that you will need access to research funding. While you will be assigned an editor at the press, your editor is more properly an acquisitions editor and you will be expected to undertake the editing of your text, to do proofreading, at a later stage to do copy editing and, finally, to prepare an index. Some scholars undertake these tasks on their own. However, in the interests of accuracy and making the best use of your time – you are a scholar, not an editor – we do advise that you find someone with professional credentials to undertake these tasks for you. In current terms, in South African currency, you can expect to pay between ZAR 20,000 and ZAR 50,000 for this work. If you have a position at a South African university, you should approach your research office in anticipation of this expense. These divisions tend to look favourably on requests for assistance to publish books. That is provided you can give assurances that the book will be published by a credible publisher with a good reputation and proper blind peer-review protocols in place, because books will ultimately bring in considerable publishing subsidy to the university. A small but crucial consideration is that, in your acknowledgments and in the abbreviated author biography that may appear on the back cover, you must cite your institutional affiliation and also do thank your sponsors and funders.

There are two kinds of presses to be considered where you might publish. The first is a university press, and the second is what is known as a trade press. A trade press explicitly targets a readership beyond professional academics. In South Africa and in many parts of the anglophone world, either are suitable vehicles for your academic book with one crucial proviso: if you do opt for a trade press, you must be very clear with them that your manuscript has to be subject to blind peer review.

Without this, its credibility will be undermined and it will not be eligible for any subsidy funding. As an early-career scholar working on a first book, you want things to work for you – you do not want or need credibility or legitimacy questions obfuscating the impact of your book. If you work at an American university, the chances are that as you proceed towards tenure, the option of publishing your first manuscript with a trade press is not open to you, so please check with your departmental chair and the research division, wherever you are based, if the press that you are considering is a satisfactory option for your professional purposes.

A further consideration is the existence of predatory presses. As these enterprises have a tendency to constantly refine their operations, it is difficult to list all of the features of a predatory press, but beware of some of the following red flags: a publisher that eagerly approaches you shortly after you have completed your PhD and immediately guarantees publication; a publisher that offers to publish your PhD as a book with no changes; a publisher that promises a quick turnaround time of a few weeks, or a month or two; a publisher that asks for money to publish your manuscript; and, finally, an unknown publisher with a name that sounds nearly, but not quite, like a press you are already familiar with.

A final point concerns the writing of your conclusion and giving your readership (and more importantly, yourself) a sign post towards your subsequent work. As you draft your conclusion, which will probably entail some kind of summary of your chapters and deductions, it should include another element. What questions does your book raise? What lines for further research does it suggest? What is it unable to answer? If these questions are in your opinion either unanswerable or can be answered over the beer or wine, tea or coffee that you deserve when you finish your book manuscript, then they are either too abstract or too shallow. If, however, you look at them and they suggest that research over two, three or four years could provide the answers, then you have the kernel for a mid-term, four- to six-year intellectual project and an idea for your next book. While the DNA of your first book comes from your PhD thesis and gives it a particular feel, even after you have revised and reshaped and rewritten, your second book will have a very different character. This is the book that will most probably launch you into the professorship and make your reputation in a particular area.

5

Leveraging the Research Office

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You might not readily feel familiar with the term research office, and there is a good reason for that. Depending on your institution, this office may carry a different name, for example, research support or research development (it usually falls under the broader portfolio of research and innovation). Also, the research office may not have featured a lot in your early academic life, or if it did, you might only have been exposed to its postgraduate/postdoctoral funding arm.

In this chapter, the term "research office" will be used to refer to the department whose function is to empower an institution's researchers (whether emerging or established) and to support the institution's research enterprise. The research office can therefore have quite an important role in enabling your research career.

As a first step to becoming acquainted with this department, you should look on your institution's website and find out about its name, its location, and its structure. Depending on your institution, the research office's structure may vary, but, generally, it is a central office that serves researchers and the practice of research across faculties. In some instances, though, large research-intensive faculties may have established their own research office branch in order to better serve their community, which may need specialised and targeted support for the purpose of raising and managing large grants from international funders. Such faculty research offices would therefore serve the

research enterprise locally (i.e. at the level of the faculty) but would also work hand in hand with the central office to strengthen the institutional research strategy and vision, applying ethical research practices, and respecting national and international standards while remaining true to the institution's own value and policies.

For example, it is not uncommon to find a local research office dedicated to health sciences matters due to the resource-intensive nature of the research in the medical field. Medical research is often a costly and collaborative exercise that requires researchers to apply and secure large grants from the National Institutes of Health (NIH), the Wellcome Trust, or the Bill & Melinda Gates Foundation (to name a few). These grants not only require scientific excellence but also expert management (and capacity) at both the pre- and the post-award stages.

If you belong to an environment with multiple research offices, it might be difficult to assess who does what and where to address your queries. Find a contact person who can guide you and build a good rapport with them. You will encounter many opportunities to draw on their knowledge and skills and sometimes you need only one contact to enable you to gain access to the various areas of expertise that exist within the research office. Essentially, you should engage with your research office and build a healthy relationship with its staff, whose role it is to ensure that researchers are successful in their research endeavours.

But who works at the research office and why should you consider relying on its staff to blossom in your research career? The profiles of research office staff are as varied as the portfolios held in that space. To make things more complicated, in the past, there was no clear pathway to follow when people were aspiring to work in a research office. Therefore, while some may naively assume that the research office is mostly populated with finance and purely administrative staff, they would be surprised by the diversity of skills and know-how that this department comprises.

Research offices need to be high-performing environments to support one of the most important pillars of the institution: research. It will come as no surprise that to support this prominent agenda, highly qualified professionals would need to be recruited. For example, some staff would have a first-hand understanding of what it means to conduct research as they joined the research office after an academic career, which may have lasted for a number of years or even decades. Enriched by their past experience, they are well placed to advise academics who can consider

them peers. Many research office staff have postgraduate qualifications and have experimented with research, while others are registered professionals (e.g., attorneys in the sector that deals with research contracts and intellectual property protection). One of the hidden gems in research management is that there are often staff who have previously worked at funding institutions, like the National Research Foundation (NRF). They come with invaluable insider knowledge and precious contacts. Thus, you can feel comforted that the research office staff are well prepared to receive and address your queries.

The benefits you can draw from interacting and creating links with your research office people should not be underestimated. It is true that, at first, it can be daunting to figure out how to access the resources that are available to you. But do not despair – you will find your way and remember: until you reach the professoriate, you are part of a special cohort that your institution is anxious to retain, nurture and develop in order for you to reach your ultimate potential and become one of the leading researchers in your field.

So how do you leverage the research office's resources? An easy point of entry for you will be to contact the section that offers capacity building and will likely have a special interest in developing you as part of the next generation of scholars. They usually provide training to researchers across disciplines and may have different levels of support for their training programmes, depending on the stage of a researcher's career. Whether they offer a formal programme in which you are able to enrol for a limited period or whether you get to choose to participate in events as your need for specific skills arises, you need to be intentional and proactive in this engagement. Therefore, whether supported by someone in the research office or a mentor, you must identify and periodically update your research goals as well as your areas of development. This will guide you on your journey and allow you to focus your attention on what you have defined as priorities (for both the short and the long term). Most of the topics offered by a development programme will likely address gaps that exist in your curriculum vitae, and they may lead you to consider logical steps for your career. Once you engage in the training, you want to ensure that the newly acquired skills are exercised and built into your research practice. Furthermore, the training sessions will connect you to, or make you aware of, various other portfolios in the research office.

Being a researcher, one of your main concerns will be to identify and secure funding for your research. The funding landscape is broad, complex, and competitive. Your research office might send out regular newsletters to the research community to communicate funding opportunities for which they provide support or which they believe will improve and impact positively the research carried out at their institution. The funding calls will be a mix of local and international grants, with varied eligibility criteria and research foci. Most researchers are anxious to secure funding so these newsletters may be the perfect tool for you to start becoming acquainted with the funding environment and the first step in starting your fundraising journey. Therefore, check that you are registered to receive the newsletter.

When reading through the calls, be discerning. Check that you are eligible to apply, that the funder's interests are in line with your research, and when the submission deadline is. This is basic but crucial information required for you to ascertain whether you can apply (eligibility), should consider applying (fit), and have sufficient time to prepare a robust application.

While the institutional newsletter will be a good starting point, researchers should not limit themselves to information supplied by the university and will need to expand their hunting grounds. Remember that funding is limited and extremely competitive. For this reason, you should have more than one option at hand to ensure the sustainability of your research. Furthermore, if your research topic is not one of the "sexy" ones (e.g., hot topics right now are often crafted along the lines of the Sustainable Development Goals), you may need to carry out a broader inspection of funders to see who is interested in your kind of research. You have several options to do such an investigation. You can use a simple Google search or even talk to seasoned colleagues who have tried and tested different funding calls. But with such an approach, you may be limited in the options you can reach. This is where *funding databases* are extremely useful and powerful since they allow you to scan the funding landscape far and wide. Unfortunately, they are not free, and their services come at a price: your institution will need to buy a licence. Owing to their resources and research strategy, institutions may not all have access to such databases, but if your institution does, it is a great asset you should exploit.

To make these databases work for you, you will need to learn how to use them (a service which your research office will offer). For instance, it is important to know how to carry out and set up automated searches. If you cast your net too wide with a generic search, you will feel overwhelmed with the number of results that the searches generate. On the other hand, if you are trying to tick too many boxes of your research agenda at the same time, your searches may not lead to many results, if any. Therefore, the more time and care you apply to defining your search parameters, the better targeted your results will be. Remember to set up different searches for different purposes (research expenses, bi-lateral collaboration, travelling, sabbatical) or different projects/foci.

To be an informed researcher, you need to be aware of what *internal (institutional) funding* is available. Because these grants are managed by your own institution's staff, you can directly contact the person managing the call and receive guidance as well as feedback on your application. These grants are usually good entry-point funding, and they are often linked to your conditions of employment, so check your eligibility. Internal funding tends to be targeted and the advantage of applying for internal funding is that it is less competitive. Additionally, these pockets of funding are a more forgiving option to try out and develop your grant-writing skills and budget motivation. They are also a good source of funding to either serve as seed funding when you are starting out on a project or to complement the budget of earlier awards.

In an effort to support the research enterprise during these challenging times, institutions may issue new strategic funding opportunities to promote or strengthen research that contributes to achieving the institution's vision. Keep an eye on these calls as some may be directly relevant and benefit you.

In South Africa, there are several *national funding bodies*, but the NRF is the largest local funder of South African research. As such, a large portion of the research office's grants management activities is dedicated to the NRF funding calls and awards. As a result of this unique position, the NRF has developed a special relationship with the research institutions and their research offices. Let's take the example of the NRF to illustrate how you may draw on your research office when applying for funding.

When the NRF publishes and opens new calls, they inform your research office, whose role it is to communicate the information,

together with the supporting documents, to its research community. Sometimes the information newsletter is followed by an information session where research office staff present the calls together with tips and/or grant-writing advice.

In this process, the research office plays an important role, since they sit at the interface between the NRF and the researchers. The research office staff working on the funding calls will usually be able to answer directly any questions posed by the researchers at their institutions and will also assist the researchers when they are faced with challenges relative to their applications. Over the years, each research office team will have developed an intimate knowledge of the various funding calls and funders' requirements. They are usually able to respond in a timely manner to questions that are addressed to them, but in the event of an unusual question, they will liaise directly with the NRF to obtain an answer. This way of proceeding has multiple advantages. It enables each institution to build relationships with its own researchers and, at the same time, to nurture the relationship with the funder in question. The funder is also sheltered by the research office from receiving a flood of (often repetitive) requests that can be easily handled at the institutional level. By fulfilling this role, the research office becomes the preferred interlocutor through which the researchers gather information about their funding calls. It also gives the research office the opportunity to provide additional support to the researchers. For most calls, an internal (institutional) deadline will be established, by which all researchers intending to apply will need to have submitted their applications.

When the researchers submit their application on the internal deadline, the application is first directed to their institution (and not the NRF as one may think). Upon receiving the application, the institutional team does technical checks, that is, whether the applicants are eligible and have respected the budget limits, categories, and exclusions. If capacity and time allow, some research offices task their staff to conduct more in-depth reviews and provide further feedback to the researchers by checking for gaps in the narratives and whether the various sections link to one another in a logical way. In the case of emerging researchers who are still developing their research skills and expertise, an added disciplinary expert might be brought in to ensure that the scientific merit of the application is of the highest standard. If you are still building your

own disciplinary expertise, you should use this approach systematically when writing grant proposals. It will enhance your chances of success. Ask a mentor or an established academic in your field to read through your application before you submit it. This is a good approach because you cannot expect the research office staff to have the level of disciplinary understanding (or time) to assess your project on the scientific level.

If you feel confident in the robustness of your proposal, you can forego the scientific merit check, but please carefully consider the comments and requests for amendment made by the colleagues from the research office. Their input should not be disregarded, and if you do so, know that it is at your own risk.

Once the technical (and scientific) reviews are completed and you have done the necessary amendments, you will be asked to re-submit. After some final checks, the application will be pushed to the NRF where it will be assessed, and an outcome will be reached as to whether your project will be funded or not.

If your project is funded, you will receive a letter of award, containing the conditions of grant, which you will need to read carefully, sign, and submit to your research office before the funds are released. Make notes of the binding conditions listed in the letter you sign as you will need to abide by and deliver on them, whether they are about the management of your budget, the monitoring and evaluation reports, or research outputs you have promised to deliver. Throughout the duration of the funding, you will remain in close contact with your research office as its staff will assist you with your project and its management: for example, for budget re-allocations or carry-forward or the submission of annual reports until the funding cycle comes to an end and the funding is concluded. You will normally also work in parallel with the finance department for matters that relate directly to project expenses.

Because of the current climate (R&D expenditures are below one per cent of South Africa's GDP), funds are dwindling and the NRF cannot remain the principal funder researchers consider when they want to make their research sustainable in the long term. Diversifying the source of their funding is an important strategic move that researchers must make as the waning economy and various political crises affect countries' funding policies and priorities across the globe. Therefore, researchers should consider multiple local funders and/or move their attention towards international funding.

Applications to international funding calls have increased dramatically over the last decade as a response to the rising demand for research funding both in terms of numbers (larger pool of active researchers) and growing budgetary needs.

If you are applying to funding for the first time, you should consider not applying for international funding. Yet, there are very attractive funding opportunities available to African researchers that can be real game-changers for your career (e.g., the NIH Forgarty Emerging Global Leader Award or the African Research Initiative for Scientific Excellence (ARISE)). To secure these awards, one would need to demonstrate not only cutting-edge ideas in one's research field but also in conceptualising a winning grant application.

Some research offices have recruited expert grant writers to support their researchers when they apply for (large) international (often collaborative and multidisciplinary) grants. These expert writers may also come in handy if you wish to try your hand at applying for international funding. They will not only assist you with the writing of the proposal but also guide you through the application process which is invariably much more complicated than is the case with local funding applications.

For the international grants that target more established researchers, you would often need to be involved in collaborations (or demonstrate common interests with partners and a clear vision for your nascent collaborations). Writing grants with (one or more) contributors can be challenging. Also, the scope and budget associated with the project can grow exponentially, and so can the administrative and management load. Ask yourself whether you are equipped and ready for this. If you need a few more years, you may alternatively want to consider being involved as part of a research team (instead of being the principal investigator) to keep your level of responsibilities for the overall project manageable but nonetheless benefit from familiarising yourself with the process of applying, securing, and managing an international grant.

Whichever way you take your fundraising efforts, whether internal, national, or international, stay on the lookout for new opportunities as this is a dynamic environment. Be prepared to grab opportunities at short notice by being proactive and ready to spring into action: have a clear idea of the next few projects you want to tackle and draft a proposal for each of them in advance (inclusive of budget). If you have

these at hand, when you find an enticing funding call, you can use the draft proposal to craft an application with narratives that align with the funder's interests.

Make sure that you resource your project well, both in terms of financials and capacity (Do you have the right team?) … and never wait for your funding stream to dry up before you pursue new funding avenues. Finally, if you are applying to multiple funders at once, check that you do not inappropriately request financial support for the same items (double-dipping). If you do, you will only be allowed to accept one of the awards. A better approach would therefore be, if possible, to build complementary budgets, in the event you are successful with more than one grant.

Before you can consider yourself to be "covered" in terms of funding, you should not overlook resourcing your postgraduate students and postdoctoral fellows. Consequently, you should remain abreast of funding opportunities that offer bursaries and fellowships, and you should also be ready to assist your (future or returning) students when they apply for bursaries. Your input on their project narratives and providing a convincing recommendation letter will be extremely valuable and can shift the outcome of the funding request in the right direction. Do not spare your efforts as you will be rewarded by having a funded (and thus focused) student join you on your research journey. Furthermore, if you work closely with your postgraduate and postdoctoral funding office, you will also be supported with information on how to supplement your students' bursaries, on what is the maximum allowance permitted, and on the various processes that you and your students need to abide by.

As you become more established, there will be a shift in how you conduct research. At first you will probably run projects on your own, but as your projects grow, so will your research team. You may start by recruiting postgraduate students, or even postdoctoral fellows. Then collaborate with colleagues in your department. As your projects and resources expand, you may end up at the head of a significant team of researchers who are working together to achieve common goals that fall within your niche of expertise. It may not be in your immediate plan to register an *accredited research grouping (unit, centre, or institute),* but you should know that the research office will assist you when you do decide to establish such a grouping. Obtaining an accreditation for your research group will strengthen its identity and branding and provide an officially recognised structure for collaboration or fundraising.

While working on your research projects, it would not be uncommon for you to be working with external parties (whether they are funders or research contributors). When you are undertaking such research, the research office's team will work with you to draw up the necessary contracts. These contracts will define the rules of engagement and agreements between the different contributors whether they are individuals or organisations (universities, industry, or government). The contract terms will be negotiated not only with you (the researcher) but also with the structures you belong to (your department, faculty, and institution); and your finance office will need to approve the budget's amount and its structure. Contracts may vary widely and will cover all aspects of your partnership agreement. For example, they may limit or control the disclosure of results or establish the intellectual property ownership of the findings based on the funding model. In negotiating and formulating these terms and conditions, you will be assisted by professionals who will have your and the institution's best interests at heart.

If you know that such a contract is likely to result from a particular funding submission, find out what the minimum turnaround time is for the finalising of such a contract. These things take time. So, be sure to notify your finance and contracts teams well in advance if you want to be ready for when the contract must be drawn up.

Securing funding and conducting research is a but one part of a researcher's life. To grow their skills is another, and researchers across the academic ranks (from the most junior to the most experienced) must remain alert and informed about all issues and developments relevant to the research endeavour. Researchers, especially newer researchers, often participate in information and/or training sessions aimed at enhancing their skills and performing potential. Whether formal or more loosely structured, the research office's *researcher development programme together with capacity building and skills training* contribute to the advancement of a researcher's career. Furthermore, this work plays an important role in transforming the academic landscape to one in which the next generations of researchers are empowered and given the tools to perform and attain the professoriate.

What kind of topics can you expect to have access to in such a programme? It will depend on your university and its capacity-development team. But typically, you may have access to seminars and workshops on

grant writing, publishing research, postgraduate supervision, project planning and management, NRF rating and similar important topics.

While most academics will work on developing their profiles through various activities that fall directly under their job requirements (remember the four pillars: teaching and learning, research, administration and leadership and social responsiveness) that will attract the appreciation of their institutional community, it is also important for them to measure themselves against other standards and *engage in benchmarking exercises* other than that which happens in the institutional promotion processes. Such benchmarking exercises can be formal or informal and examples are when they publish their work in prestigious journals, attend and present at international conferences and assert themselves as experts and rub shoulders with their peers, and initiate networks and collaborations with them.

Despite having reached significant milestones, academics are often hesitant to volunteer their profile to be considered for *awards recognising their contribution and excellence*. Yet, unless they put themselves forward, while waiting to be nominated by a third party, they can miss out on receiving deserved recognition. It is therefore important for you to engage in this benchmarking exercise and to ask for your research office's support in this process. Awards are important features in an academic CV, and one does not need to wait until one reaches the twilight of one's career to apply. Awards exist for all career stages, and across disciplines, and vary in prestige and scope depending on whether they are institutional, national or international recognitions. Do not be reticent and add awards as one of the items that should feature in your CV.

While the former type of accolades may have a tenuous influence on one's advancement in academia, obtaining an *NRF rating* is an exercise in which institutions invest significant efforts as they use the number of rated researchers at their institutions as one of the proxies to measure their research excellence. Often a rating will sway promotion committees towards a successful outcome, and at other times, notably when one wants to reach the professoriate, an NRF rating may become a prerequisite. If you are not familiar with the NRF rating, you should investigate further with your research office and carefully read Chapter 15 of this book. It will help you understand the impact that having an NRF rating (or not) may have on your career. The NRF rating is a South

African benchmarking recognition based on one's research excellence, using disciplinary (national or international) experts' assessments that consider the quality and impact of the research outputs of the applicants over the last eight years prior to profile submission. Depending on your field of expertise, NRF ratings can be more or less popular. When NRF ratings were first introduced, they were applied only in the (natural and medical) sciences and engineering, where the impact of research was more easily appraised using proxies like citations and impact factors of journals. Later on, as assessment models were refined and became more discerning, the rating exercise was extended to the social sciences and humanities. If you decide to apply for a rating, contact your research office which has a great deal of information about, and experience of, the process. They can advise you on the various categories, about your readiness to apply and assist you in preparing your application. In order to improve your chances of success when applying for an NRF rating, start discussing the process early, inspect your current track record and plan the next steps accordingly.

A final strategic exercise that contributes to strengthening your position in your institution (and more widely) is to actively *promote your research and researcher's profile at your institution.* Sharing the major milestones achieved in your research has the potential to raise your and the university's profile and visibility at both the local and international level. As a researcher, you want your research to be visible in multiple ways. Thus, if you have made major findings, over and above publishing your work, you should promote it widely. Do not feel shy and share with your institution: every university loves sharing success stories. It does not only promote you as a productive researcher, but it also renders your institution as an exciting employer to work for. You can also contribute to your visibility by writing for popular media (newspapers, magazines, blogs) or *The Conversation*, or by taking part in radio or television interviews. For all you know, you may also motivate young aspiring students to study your field and come work with you!

Seeing that we were just talking about publishing, maybe you do not know all that there is to know about your institution and research outputs. You will be aware of the obvious, namely that research outputs, whether they are publications, creative outputs or innovations, are one of the currencies of research and are utilised to disseminate the results of your work, to register your ownership, and to stake a claim to

your contribution. What you may not know though, is that in 2005, the Department of Higher Education and Training (DHET) started to implement a new framework (based on a 2003 policy that was updated in 2015) to reward the production of quality research outputs at public higher education institutions. The end goal was, and remains, to increase research productivity and to sustain research at the national level. In this framework not all research outputs are considered and only the major types of research output produced by higher education institutions can be allocated government subsidies, namely DHET-accredited publications: articles in DHET-accredited journals, peer-reviewed books and chapters in books, and peer-reviewed published conference proceedings. Each year (n), South African universities submit their publication count (i.e., a detailed account of all accredited outputs) for the preceding year (n-1) to the DHET in order to receive their incentive money (in n+1). The institutions are therefore anxious for their researchers to not only publish their work in accredited (subsidy-earning) journals but also for them to declare and register all the publications they have produced on the institutional database.

How are subsidies calculated? All journal articles receive the same level of subsidy (1 unit) irrespective of whether they are published internationally or locally or in high- or low-impact journals. A chapter in a book will be allocated the same as a journal article (1 unit). A book may be subsidised to a maximum of ten units, based on the number of pages. Conference proceedings papers will be allocated a maximum of half of a unit (0.5). The full subsidy will be received, if all the authors are affiliated to the claiming institution. For a given output, should the authors be affiliated with two or more institutions, the subsidy will be shared between the claiming institutions.

But how much money is a subsidy unit worth? We are not talking about pennies here. The amounts are adjusted at every cycle and for the incentive money awarded in 2022 for the 2020 outputs, the value of one subsidy unit was ZAR 127,962. Now you can understand why your institution is investing a lot of effort in this exercise and is anxious to claim every qualifying entry. Make sure to play your part because everybody ultimately benefits from it.

When institutions receive their incentive money, they do not manage it the same way. There are, at best, three models:

1. Those who give a portion of the incentive back to the researchers into their personal account (financial remuneration as added, taxed salary).
2. Those who give a portion of the incentive back to the researchers into their research fund.
3. Those who do not give money back directly to the researchers.

Models 1 and 2 are sometimes combined to give rise to a fourth hybrid model.

The model that you will be submitted to will be dictated by your institutional policy. It is therefore important that you establish robust standards for your own research practice, how you may navigate and at times leverage such incentives (if any).

Remember that finances come and go, but a damaged reputation is difficult to salvage. Thus, you need to have a strong body of published work. Aim for quality rather than quantity. Do not play the numbers game with the excuse that it will look better on your CV. Experts who assess your performance will see through this weak strategy (e.g., during the promotion process). As far as possible, try to publish in accredited journals, your institution will be grateful to you for that. Should an important journal in your discipline not be accredited (yet), you can consider requesting its inclusion in the DHET list with the help of your research office. In the meantime, select a journal that will serve your academic profile best (independently of the subsidy consideration). Aim for prestigious, high-impact factor journals rather than going for a quick and easy publication in a less visible and less stringent journal. And finally, beware of predatory journals that are unscrupulous entities driven by financial gain (publication fees), that promise quick turnaround time for publication and do not provide quality checks nor editing services to authors. In the end, the articles and resources are lost and so is the reputation of the vulnerable individuals who naively submit their work to them. To assist you in being discerning, you can, for example, consult the resources available on the website: thinkchecksubmit.org/.

But what about the responsible conduct of research (RCR)? (See Chapter 6 of this book.) Thus far, we have talked about you as a researcher (and your need to engage in continuous development and benchmarking), the resourcing of your research, and the outputs arising from your projects. This was based on the assumption that whatever research activities

you are embarking on, you will comply with the principles relating to the RCR principles and perform your work with the highest level of research integrity (RI). But history has shown that such principles are not necessarily uniformly adhered to. Therefore, to maintain good practice, institutions have put in place policies and compliance processes in line with national and international standards. To implement and safeguard research at the faculty level, research ethics committees (RECs) need to review proposals and provide ethics approvals before any research activity, where human and/or animal subjects are involved, is conducted. Ethics approvals are a non-negotiable step that ensures the protection of human and animal subjects as well as the data collected and generated by the research. It is of the utmost importance for research subjects to not be exposed to any harm, be treated with respect and their information kept confidential. They should have the right to be informed of and benefit from the outcomes of the research (in the case of clinical trials, for example) and that the results be communicated in a considerate manner.

In 2010, the Singapore Statement on Research Integrity, which is a global guide to the RCR, was published and promptly adopted internationally, including in South Africa. You should (must) familiarise yourself with this statement and strictly adhere to its principles. But you do not have to do this alone. Your research office will likely have a team "centrally" working on RI and matters of ethics, whose main role is to guide and advocate for best practices, provide training and support to the university community, as well as advise about resolution options when issues arise. You should engage with them to be educated about what RCR looks like. In fact, they may have training in which you can enrol, and they will be the best people to speak to about issues of authorship, plagiarism, research misconduct and questionable research practices. They may also help you when it comes to navigating research collaborations and conflicts of interest. These considerations will be further developed in the next chapter (Chapter 6) where an expert will guide you.

Conflicts of interest can arise when stakes are high, for example, when your research leads to a major breakthrough. So long as the terms and conditions of the project have been defined in a contract, you should be protected. But what if you make a significant discovery that is patentable? If you make a BIG discovery, the first thing you do is … keep quiet! Any inkling of disclosure could compromise your chances to

register a patent claiming your findings' intellectual property (IP) and related benefits (like commercialisation). If you file a patent, you should remember that it will define the ways the invention can be exploited for a specific country over a defined period (typically 20 years).

What do you do once you have shouted "eureka!" a few times and are over the excitement of your discovery? You go to your IP specialists, and behind closed doors, you discuss with them the details of the next few steps. First, there will be an assessment of the invention itself, then it will be measured against what is public knowledge and established patents. Consideration will then be given to the funder of the research, as they may have claims to the IP, and whether there is any evidence of prior disclosure. Once IP protection has been secured, you will be able to disclose your findings, present them at conferences and even publish them. Therefore, you do not need to strike a compromise between IP protection and disseminating your results; you simply need to follow the right procedures.

Academics are not commonly seen as entrepreneurs and we often hear people referring to academics as living in ivory towers or that people in the real world do not see or benefit from the research carried out in the "labs". Yet there is great potential for academics to be innovators and for their scientific and technological developments to be made accessible and be exploited widely (by academics themselves or third parties) for the benefit of society.

Technology transfer (TT) is the process through which an invention is developed and translated to the market. This is the stage at which an invention becomes an *innovation*. This process can be facilitated and guided by your research office through which you registered your invention's IP. It would be short-sighted to think that innovation is only about the manufacturing of products or technologies. Social entrepreneurship and social innovation are playing a more important role in today's world, hence you do not have to be a scientist or an engineer to be an innovator. Of course, not all inventions will make it to the final stage and enter the market. This is what you will try to establish by working with your TT specialists who will accompany you on this journey that will notably comprise market assessment, feasibility, business plan development and fundraising. Since you will need to secure funding to support the various development stages of the TT, enquire what kind of funding is available at your institution and what your other options may be. It could

be the case that there is seed funding available to assist you in the first phase of your TT, but whichever option is readily available to you, you will require multiple rounds of funding to take the project to completion, that is, taking your invention from proof of concept to the market.

Technological developments have an impact on how you produce and submit data, whether it is to your funders, your collaborators or your institution. There has been such an explosion in the research enterprise that support departments have developed systems to keep track of their portfolios. It will come as no surprise that your research office will have its own platform with specifically customised modules to record the data generated by the university's research-related activities. Being a researcher and driving research, you will be required to participate in this intense data collection for the institutional records. You may have already come across your institution's research information management system (RIMS) (e.g., InfoEd, Converis or similar system). Depending on the modules available, you may have used the RIMS to apply for internal funding, register your research outputs for the publication count, lodge a request for finance approval before submitting a research proposal with an external funder, or logged a successful funding award. If you are unfamiliar with your institution's RIMS, do not shy away from using it; instead, request access to training material as such platforms are becoming central in how research is managed worldwide.

While you and your research will be the subjects of the institutional data gathering and record keeping, in your own research area, you will be the person generating data (sometimes in large amounts). Nowadays "everything is data". You are certainly aware that with the Fourth Industrial Revolution (4IR), we have entered the age of Big Data and that new technologies are needed to serve the research enterprise. These ever-evolving technologies have helped shift, accelerate and transform research, enhance disciplinary and transdisciplinary projects and allow for improved large-scale international collaborations by connecting people and their data.

Some technology will serve the day-to-day management of research and the safeguarding of data (cloud-based infrastructures include servers, storage (Google Drive, OneDrive, Dropbox)), databases and software; others will be dedicated to managing your data throughout the various stages of your research project's life cycle in line with your institution's, funders' or even publishers' policies. As a first step, you

will need to become familiar with your institutional policy on the topic. Furthermore, when applying for funding, you are often committed to follow the funder's data policy, therefore you need to consider carefully what it involves. The NRF, whose budget comes from taxpayers' money, stipulates that data needs to be preserved and available:

> Extract from the conditions of grant 2022 of an NRF Thuthuka award:
>
> **DATA STORAGE, USAGE AND DISSEMINATION**: Where the Institution decides that the NRF-funded research outputs should not be protected under Intellectual Property Rights, the Institution shall be obliged to make the necessary arrangements within its powers to ensure the availability of the research output data to the larger research community through existing specific research fields or other generic databases and has complied with national legislation in this regard [sic].

For this reason, funding applications often require researchers to present a detailed data management plan (DMP) for their project. In the DMP, the applicants need to detail how data is handled during (collection, storage, and analysis of data) and after the project is completed (storage, dissemination, and availability).

Investigate the options with your information technology specialists to obtain access to the tools best suited to your needs, whether it is storage or even high-performance computing for the analysis of your data. Ask for support to develop your DMP and identify the IT solutions which will aid and power up your collaborations and the outcome of your research.

For this highly technical section, you may realise that support is not solely located in the research office but also across other support departments such as the libraries and/or the IT department.

Why you should rely on the research office and what are realistic expectations for the support you can obtain? The research office typically falls under the leadership of the Deputy Vice-Chancellor (DVC) Research and as such, it is the natural home for everything research. Its staff strive to serve the research community in the knowledge that their hard work impacts directly on the institution's progress towards achieving its vision and strategic research goals. You can rest assured that no efforts

will be spared to assist you, but you also need to be realistic about the outcome you are expecting.

The research office staff are specialised, but they are not experts in your field of research; rather they are experts in their own area of practice. Therefore, they will tackle the task that you have placed before them with their own set of tools and knowledge, and it would be unrealistic to expect input that falls outside their scope of work. Do you remember when we discussed the fact that the research office may run technical reviews for funding applications and that they may also "conduct more in-depth reviews and provide further feedback to the researchers by checking for gaps in the narratives"? Here, there was no mention of scientific merit. This is because the research office staff is likely not to have any significant background in your field. They also trust you to possess adequate knowledge and that you have built on the literature to propose a robust project. If in doubt, this is where you should take ownership of your work and decide whether you need additional help from an academic in your field, or not.

While the research office will always endeavour to respond to your requests in a timely manner, because they are servicing the entire research community, their capacity can be constrained. If you need support or help that falls outside of the defined processes, send your query in advance and with a manageable deadline, for instance when a contract needs to be drawn up or when you need to secure institutional endorsement.

Working with the research office can help you develop essential skills and realise your potential. Make sure that you start building your relationship with them at the earliest opportunity and nurture this relationship throughout your career. Yet, at times, despite their efforts and your own, your attempts may not be met with success. For example, your funding application might be rejected (depending on the success rate of a funding call, this scenario may be quite likely, so be prepared!). While upsetting, the fact that your funding proposal was rejected should not be the end of the world; rather you should see it as an opportunity to learn. Ask for feedback to understand where you fell short of the expectations of the funder and use the feedback to improve your application before resubmitting it or when applying elsewhere. If the feedback you received is flawed, ask for your research office's backing, and consider putting in an appeal with their help. Do not fight this alone.

In conclusion, if you had any doubt before, I hope you now trust that the research office will be by your side and enable you to achieve your goals. The research office can be your best friend if you give it the chance. Trust me, I work there, and it is my strongest wish (and that of my colleagues) to see every academic/researcher succeed. So, go to your research office's website and explore. Come visit us, ask questions … and call on us, we are here to empower you!

6

Navigating Research Ethics

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This chapter aims to persuade you that having an in-depth understanding of research ethics and integrity is essential for the responsible researcher. Many early-career researchers see this domain as a series of unpleasant hoops and obstacles that must be navigated to get to the research they are hoping to conduct – enough to make the most enthusiastic new researcher run in the opposite direction. Influence from colleagues and even mentors may have a role to play in this perception. However, accepting that responsible research conduct, and the training that may be required along the way, is just one component of the set of professional skills that any up-and-coming researcher or academic needs to acquire, is the best approach to take. Imagine a set of Matryoshka dolls that fit one inside the other – the outer doll represents the overarching domain of Responsible Research and Innovation (RR&I); inside this is Research Integrity (RI), then comes Research Fairness (RF), Research Ethics (RE) and finally, the inner most layer is Research Compliance (RC). I shall unpack each of these in this chapter, starting from the outer layer and working inwards. This will provide you with a high-level roadmap. It is essential however that you develop your own far more detailed roadmap for your research "locality". Every research field is different and has different requirements. A philosopher who never conducts empirical research will have fewer or different ethical and RI challenges to the historian who delves into sensitive archives, the statistician who can choose to manipulate

data in various ways, the geneticist who wishes to share genomic data, the laboratory scientist who works with animals, or the physician who is enrolling his own patients in clinical trials.

RR&I is a framework that has been established recently by funders, particularly in the United Kingdom and Europe. RI is about honesty and accountability in all aspects of the research. RF is quite new to the conversation but acknowledges that unfair and inequitable research practices that are influenced by a biased politics of knowledge can have a significant negative impact on the value and integrity of the research output. RE focuses on the principles that govern research involving humans, animals, and the environment. Finally, RC involves adhering to specific requirements from funders, institutions and national regulatory bodies or laws.

The RR&I framework reminds all researchers that we should never lose sight of the big picture, that is, that we live in an unequal world with many "wicked problems" and "grand challenges". RR&I needs us as researchers to keep the public interest at heart and be socially responsive in a creative way. This perspective is particularly important for researchers whose work is funded through public funds and for those working in low-resource settings where the high burden of disease, poverty, and the impact of climate change are so prevalent. Ultimately, it is our responsibility to keep this bird's eye view in mind, even when we are involved with implementing research studies in our local domains and on a small scale.

United Kingdom Research and Innovation (UKRI) (an umbrella body for the various research councils in the UK as well as the UK's innovation agency) describes four principles that it encourages researchers to use when applying to it for funding: anticipate, reflect, engage and act (AREA). As researchers we need to anticipate and explore the possible impacts, both negative and positive, that could arise from our research; to reflect adequately on both the purpose and justification of the research; to make sure that these reflections are open and shared with stakeholders and that, as a result of this reflection and engagement, we are in a position to act constructively and ensure our research moves in the right direction.

The RR&I frameworks adopted in the European Union are similar, with diversity and inclusivity, anticipation and reflection, openness and transparency, and responsiveness and adaptive change as key principles.

These frameworks have been developed in the Global North but are particularly relevant for researchers working in low- and middle-income countries (LMIC) and provide a good starting point for more in-depth discussions of RI and RE.

RI is about the validity and trustworthiness of all aspects of research and involves activities, conduct and choices at every stage in the research life cycle. RI hinges on the attitudes, motivations and influencing forces of every researcher, whether they are working alone, in small teams, or as part of large collaborations or consortia. Responsible Conduct of Research (RCR) is a term used frequently and interchangeably with RI, often in the context of training programmes. Many funders are now requiring RCR certification, meaning proof that the funded researchers have completed an RCR training programme. Typical RCR training covers a variety of topics that touch all aspects of the research life cycle. This includes ensuring integrity during the research development, project proposal and funding phase; managing of conflict of interest; retaining integrity in peer review and mentoring, as well as in the data collection, management, storage, analysis and sharing; and finally, integrity in the reporting, publishing, and translation of research outcomes. The discussion below on questionable versus responsible research practices (RRPs), will shed more light on RCR.

Increasingly, a "virtue ethics" approach to RCR training has been implemented by those responsible for delivering such programmes, because researcher behaviour and choices are so important in underpinning RI. Virtue ethics is an approach to ethics that was first proposed by Aristotle but has gained considerable traction recently. Instead of focusing on rules and principles, virtue ethics pays attention to motivation and character traits. Aristotle believed that the primary function of humans is to live a life that aimed at "the good", meaning well-being and optimal human flourishing. To achieve this, he argued that we need to cultivate certain habits or character traits that he called virtues. In essence, virtue ethics prompts us to ask not "What can I do to be a successful researcher?", but rather, "What will make me a 'good' researcher?" The virtue ethics answer to this question is that researchers need to cultivate certain character traits or habits to ensure this. Alternatively put, a strong internal moral compass is essential for a "good" researcher, as vexing moral dilemmas will almost certainly crop up from time to time during the research process. Virtues particularly

relevant to research include honesty and transparency, trustworthiness, courage to both respect and push boundaries and to speak up or challenge when required, as well as respect for colleagues, processes and applicable regulatory systems. This does not mean that one cannot protest against inefficiencies or suggest changes to improve processes or systems, but rather suggests that you abide by them until such changes have been brought into effect.

Research Misconduct (RM) involves intentional actions that are unethical or fraudulent and includes fabrication, falsification of data or plagiarism (also known as the big three or FFP). Different institutions have different policies as to what is considered RM and it is thus important that you are aware of your own institution's policy. Questionable research practices (QRPs) are practices that are reportedly far more common and probably do more damage to scientific integrity than the less frequent cases of intentional wrongdoing. In a recent national survey of researchers in the Netherlands (The Dutch National Survey on Research Integrity) conducted in 2020, eight per cent of participating researchers admitted to research fraud and more than 50 per cent of researchers admitted to QRPs in the previous three years.

QRPs can occur at every stage of the research life cycle, and it is important that you are aware of them and make a habit of avoiding them. For example, at project-development stage you may decide to include certain researchers in your collaboration or consortium primarily because they will provide access to desired research sites. At the data-collection stage of the project, poor supervision of inexperienced students or field workers may compromise your data integrity. QRPs in peer review are quite common, such as delaying your review of a journal article so that you can get your similar paper out first, or allowing your own PhD student access to a thesis you are examining as an external examiner because the ideas or data presented will be of great use to your own student. Storing data irresponsibly, for example on a flash drive or other vulnerable mechanism (including some cloud-based options), is another example of a QRP, as is statistical data manipulation to support your hypothesis. Two examples of this are "p-hacking" by making various intentional choices in the analysis, that can produce the desired p-value of 0.05, or Harking (hypothesising after results). This is another QRP that may be quite common in certain disciplines but is increasingly frowned on by those working to promote

RI at research-producing institutions. It involves presenting a hypothesis developed only after you have collected and looked at the data in a report of your research (e.g., published article) as if you had thought it up before data collection. The above examples are just a few. The survey mentioned earlier noted that 53 per cent of PhD students admitted to having committed at least one QRP in the previous three years. On the flip side of QRPs are RRPs.

Another example of a frankly detrimental but historically common and still prevalent research practice is the inappropriate use of race in research questions, data collection and analysis. The now infamous "coloured women study" published by researchers at Stellenbosch University in 2017 led to a justifiable public outcry and investigation by the university. A 2022 article by Walters and Jansen discusses research using the Kirsten Skeletal Collection housed at Stellenbosch University. This paper highlights how a racialised politics of knowledge continues to hold sway at historically white institutions in South Africa, long after apartheid has been formally disbanded. Using a small collection of "coloured" skeletons, researchers continue to draw conclusions about how race determines health outcomes, ignoring relevant social determinants of health and continuing what Walters and Jansen describe as "misery research". This trend is not unique to South Africa and continues to occur globally. Hence it is essential that responsible researchers reflect very carefully and justify explicitly the use of race, ethnicity, or culture in their research, as oftentimes adequate reflection will lead to the conclusion that the use of race as a comparator is not justified.

The Netherlands experienced one of the biggest incidents of research fraud in recent times. The 2011 Diederik Stapels case (of which there is much information available on the internet) involved a psychology professor and former dean at Tilburg University who made up data for about 50 research articles and at least ten PhD theses. (His students wondered why he insisted on always providing them with the data and not allowing them to collect it themselves.) Research producing and funding organisations in the Netherlands used this incident to overhaul their national research-integrity code in 2018 and it has become a benchmark for other countries and institutions. This code identifies 61 constructive practices that also follow the research life cycle. Many of these mirror some of the QRPs discussed above but there are others that are particularly important and useful. I suggest you access this

code, which is freely downloadable, and make a note of these RRPs as described in chapter three. Currently South Africa does not have a national code of conduct for RI that is as detailed as this, but does have a "Statement on Ethical Research and Scholarly Publishing" available on the website of the National Research Foundation (NRF).

The *Hong Kong Principles* for fostering RI in researcher assessment were published in 2020 and encourage institutions to use five principles when assessing researchers for performance and promotion. This holistic assessment values practices that promote RI and requests institutions to move away from using narrow assessments such as "number of articles" or "impact factor of journal" as the primary metrics. It is essential that emerging researchers are familiar with these principles as they can then ensure that if assessed against them, they would measure up favourably. The five principles are:

1. Assess researchers on responsible practices from conception to delivery, including the development of the research idea, research design, methodology, execution, and effective dissemination.
2. Value the accurate and transparent reporting of all research, regardless of the results.
3. Value the practices of open science (open research), such as open methods, materials, and data.
4. Value a broad range of research and scholarship, such as replication, innovation, translation, synthesis, and meta-research.
5. Value a range of other contributions to responsible research and scholarly activity, such as peer review for grants and publications, mentoring, outreach, and knowledge exchange.

It is likely that some South African institutions will start adopting these principles in the future and even formally endorse them. They should be encouraged by emerging researchers to do so.

Like most other aspects of life, research can be adversely affected by unfair practices, inequity, and the lack of diversity and inclusivity in research contexts or by a "politics of knowledge" that marginalises some groups and gives preference or allows dominance of others. The examples discussed above, regarding the use of race in South African research, illustrates how a skewed knowledge politics remains influential, even today. Unfairness and inequity in research contexts can have a

detrimental effect on both the integrity and ethics of a project. This topic is currently attracting much attention, particularly within the context of inequity in North-South research collaborations and the research-support systems underpinning those collaborations. However, lack of diversity and inclusivity at a project level can also impact negatively on the project by narrowing perspectives and introducing bias.

One of the most highlighted issues related to inequity in research particularly in Africa relates to authorship and publication. There is now a body of literature that adequately demonstrates how African researchers can become glorified data collectors and often get left off authorship lines despite having contributed significantly to projects and been instrumental in data collection. Inadequate financial support from local governments and funders can reduce opportunities for top-level mentorship for LMIC researchers and put them at a considerable disadvantage compared to their Global North colleagues. This perpetuates or leads to unsurfaced power imbalances in collaborations. This can also adversely influence research agenda and priority setting, with local needs being overlooked and consequent researcher frustration and breakdown in collegiality. Inadequate research-support systems in low-resource settings may lead to disadvantages in full-cost budgeting, legal contracting including data or material transfer agreements, funding contracts and intellectual property protection. All of this can put the LMIC researcher at a considerable disadvantage. A full discussion of this topic is beyond the scope of this chapter, but is included here as a red flag for the new generation of researchers to be aware of and to actively ensure that their voice is adequately heard in all research contexts and collaborations.

Research activities involving humans or animals, or ones that could impact the environment negatively are now governed by a well-developed set of principles, norms and standards known collectively as "research ethics". The ethics of health research on humans has an infamous history that has led to the prevailing situation today, where human-health research ethics is a highly regulated and quasi-legal field. Health research took off in the mid-20th century when there were no research ethics committees (RECs) or ethics guidelines in place other than the Nuremberg Code, a short ten-point document that originated from the post-Second World War Nuremberg Trials. The Nazi-era experiments on humans were a subject of these trials and led to the first

directive relating to human research: human beings have the right to be fully informed about the experiment and must consent entirely voluntarily. However, even this document was mostly ignored, and several research-ethics scandals started to hit news headlines.

The most famous of these was the Tuskegee Syphilis "study-in-nature" that started to recruit African-American crop-share workers in the 1930s to track the natural course of syphilis. The researchers from the United States Public Health Service (USPHS) told the men they had "bad blood" and offered them, many who were semi-literate, various inducements to get their cooperation, including assistance with burials and funerals. They performed lumber punctures under the guise that this was a form of treatment. When penicillin became available in the 1940s, and a recognised successful treatment of syphilis (still used today), local doctors were given lists of the men on the study to make sure they were not given penicillin. When the Second World War broke out many African-American men were drafted into the army, but this group of men were excluded in case they were given an antibiotic. Left untreated, syphilis is fatal and often leads to blindness and other neurological complications. USPHS decided to continue the study into the 1970s. By then many of the men had died and many women had probably contracted it and passed congenital syphilis on to their babies. A new USPHS employee, Peter Buxton, a man with a conscience, attended meetings where the decisions to continue the study were documented. After a period, he blew the whistle to the *Washington Post* in 1972 and the world found out how health research can completely ignore common morality and human rights.

Prior to this many physicians were starting to get a sense that rapidly advancing clinical research was happening by exploiting vulnerable research participants including children, the elderly and patients with cancer. The World Medical Association published the first *Declaration of Helsinki* in 1964 to guide the conduct of clinical research. This document has been updated seven times over the years, most recently in 2013 and remains an international standard for clinical research. Unfortunately, similarly awful stories were covered in the media in quick succession in the 1970s. This led the United States Department of Health and Human Services to establish a formal commission of enquiry into ethical issues related to health research. The commission concluded its work in the late 1970s and released the *Belmont Report*, another seminal document

in the history of research ethics. The *Belmont Report* articulated three principles which have become the pillars of both health research ethics and bioethics. The three principles are autonomy, the right to self-determination (from which the requirement of informed consent is derived); beneficence, the obligation to "do some good" and the derivative principle of non-maleficence to "first do no harm"; and lastly justice, meaning that both the burdens and benefits of research should be fairly distributed.

Research vulnerability is an important concept for all researchers undertaking research involving human participants. Traditionally, research ethics has identified lists of persons or groups that can potentially be seen as vulnerable participants. These include children, pregnant women, prisoners, the mentally and physically disabled, those highly dependent on medical care, and people living with HIV, to name some examples. Not all members of these groups are vulnerable and sometimes they take exception to being labelled vulnerable and excluded from research that is relevant to them on the grounds of vulnerability. A more useful approach is to understand the underlying conditions or contexts that could lead to research participants and their communities being exploited or being unable to provide truly valid informed consent for research. Factors both inherent and external to a participant can contribute to vulnerability. Inherent factors can include being severely ill, having low self-worth or social worth (e.g., a widow or low-caste women in some communities). Having a worldview that is quite different to a traditional Western one, for example where illness is understood in terms of a spiritual rather than a biological framework, is another inherent factor that could increase research vulnerability and compromise consent. External factors can include power imbalances between researcher and participant, poverty and anticipation of ancillary gain, poor education and literacy, restricted opportunities for self-determination or being part of a marginalised or stigmatised group.

Assessing participant vulnerability is an essential component of the ethical assessment of any proposed research and should not be left up to the REC. As a responsible academic, you should identify the extent to which your proposed group of participants is vulnerable, how that vulnerability can be mitigated, and then include this information in your research proposal.

It seems likely that in South Africa, with its apartheid history, similar instances of exploitation and abuse in the name of research have

probably occurred. However, for the most part these have remained unsurfaced. One incident that involved a British anaesthetist working in Zimbabwe in the 1990s, Dr Richard Gladwell McGowan, did in fact go to court in 1994 and was found guilty of gross negligence and culpable homicide for carrying out medical experiments on over 500 black patients without patient knowledge or consent and without other approvals. The University of Cape Town acknowledged that many of the cadaver remains and skeletons that it procured for education and research purposes was done unethically and even included the exhumed remains of farm workers. Attempts to engage with affected communities and return these remains have occurred in the recent past. In modern times exploitation in the name of research continues; as has been illustrated in the recently published book *Ethics Dumping: Case studies from North–South Research Collaborations*.

In the post-apartheid era in South Africa, health research ethics is tightly regulated and this is unsurprising given our history as a nation and the history described very briefly above. Institutions started to establish RECs in the mid-1980s with the University of the Witwatersrand credited with the first one. The 1996 Constitutional Bill of Rights articulated rights specific to research including inherent dignity and the right to have this dignity respected, the right to security in and control over one's own body and the right not to be subjected to medical experiments without informed consent.

The National Health Act 61 of 2003 (NHA) provides framework legislation for health research and includes an entire chapter, Chapter 9, on health research. The NHA also established the National Health Research Ethics Council (NHREC) as a statutory body responsible for the oversight of health research in South Africa. Of note is that the NHA defines health research very broadly to include research involving both "psychological and social processes" in humans. This definition has caused great irritation amongst researchers in many disciplines who regard it as a case of regulatory overreach. However, the definition still stands in the NHA. There is wide acceptance however that the term "health research" should be interpreted as understood by a "reasonable person". The NHA requires that all health research is submitted to, and approved by, an REC that is registered with and audited by the NHREC. Hence having an accurate understanding of what may be reasonably understood as health research is important. Any research that targets

patient populations, or others by virtue of their relationship to a health matter, is health research. For example, research involving a factual exploration of participants' monthly spending habits would not count as health research in my view, but similar research that investigated how spending habits impact on stress and mental health would.

The NHREC has produced national ethics guidelines for health research. The current version, *Ethics in Health Research: Principles, Structures and Processes,* was published in 2015. This guideline is used by all NHREC-registered RECs and if you are conducting health research, it is important to familiarise yourself with it. Chapter 2 describes the key principles (the same as in the *Belmont Report* mentioned earlier), and other norms and standards that should be upheld. "Relevance and value" mean that health research should be relevant to the populations in which it is done and have some potential to contribute to new knowledge. "Scientific integrity" ensures that the design and methods used are valid and answer the research questions posed. "Role-player engagement" requires researchers to ensure that they engage with all relevant stakeholders and communities throughout the full duration of the research, including at the agenda-setting stage. "Favourable risk-benefit ratio" means that the anticipated benefits of the research to current participants and future populations should outweigh anticipated risks, costs, and harms. (Assessing ethical risk of health research is a large topic and cannot be covered here, but if you plan to become a health researcher, it requires further investigation and knowledge acquisition on your part.)

"Fair selection of participants" ensures that the choice of participants for a study is adequately motivated on the grounds that the research is directly relevant to them. Participants should not be selected because they are easily accessible or targeted because they belong to a specific racial, language, ethnic, or religious group – unless this is justified. On the flip side, similar groups should not be excluded from research arbitrarily. "Informed consent" means that research participants may only participate in research if they have provided valid informed consent after adequate disclosure and understanding of all relevant information, and under a condition of voluntariness. Exceptions to this norm must be approved by an NHREC-registered REC. "Ongoing respect for enrolled participants" includes allowing participants to withdraw their consent and data without argument. It also creates an obligation for researchers

to provide any additional information that arises during the study to participants if it is relevant to them and especially if it may influence their ongoing participation (a principle woefully neglected in the aforementioned Tuskegee study). The final principle relates to "researcher competence and expertise" and implies that researchers need to have the skills and expertise to conduct the study or be supervised adequately by those that do. Although these norms originate from a clinical health-research environment, they are indubitably appropriate for many types of health research, including those that use qualitative methodologies. Researchers can be well advised to use them as points of guidance when assessing the ethical merits of their own proposed research.

In concluding my discussion on health research ethics, I would like to discuss briefly the evolving relationship between human-health research ethics and public-health ethics.

Research ethics involving humans in a health context is based on principles, rules and individual rights. In a South African context, the emphasis is on protecting research participants and communities, who are often vulnerable and easily exploited. However, the field of public-health ethics has developed over the last two decades, and in some respects challenges the deontological underpinnings of research ethics. Public-health ethics articulates a somewhat different set of values. These include solidarity, stewardship, reciprocity, maximising utility, "common good" and "public interest".

Increasingly, health RECs are incorporating these values into their assessment of research, particularly when evaluating research proposals that may present minimal prospect for direct individual benefit but significant prospect for benefit of future populations. Genomic research is a good example of research that challenges traditional research ethics. Large, pooled data sets are often required for meaningful analyses, but genomic data is a bit like a fingerprint. It remains identifiable with the right tools. Hence the protection of individual rights and privacy may clash with the public-health values mentioned above. Another example involves research into clinical databases. The ability to contact and obtain consent from all the patients included in such a database, for example a clinical database of patients with breast cancer that spans several decades, may be very difficult if not impossible. However, the value of the information contained and the insights into the condition

for future patients that such research may bring could be huge. This leaves RECs performing difficult balancing acts and is why the process of ethical review (debate, and analyses that take place) is so important and should be valued.

A great deal of research involving humans is not health related. Researchers working in education, commerce, science, environmental and conservation studies and even engineering, to name just a few disciplines, often need to collect data from humans. Many universities in South Africa have accepted the NHREC ethics guidelines as a useful set of guidelines and use them as a standard for all human research, but some have not. Most institutions will require some form of ethics review and approval of your research prior to data collection. Proceeding with data collection without having ensured that you have all the required permissions and ethics approval in place could lead to an allegation of breach of research norms and standards. If you are completing research for degree purposes, this could even jeopardise your degree. Many social scientists protest what they see as the biomedicalisation of research ethics and there are some merits to the argument, especially if the person tasked with reviewing your proposal is unfamiliar with your proposed methodology. Also, social scientists point out, rightly so, that ethics review and approval is a very front-loaded process and that it is important that researchers learn to reflect on the ethical issues that can arise during their research and respond appropriately to them. The discussion earlier about virtue ethics and the need to cultivate a strong internal moral compass as a researcher applies equally to the less regulated domain of human research in the humanities and social sciences.

You should be able to assess the ethical risk or potential for harm of your own project. Harm in social research can include psychological harm and emotional distress, economic cost or harm, stigmatisation, legal risks and loss of privacy or confidentiality. If your project is low risk, then review via a devolved or expedited departmental process may be adequate. The higher the ethical risk of the project, the more care needs to be taken in ensuring that risks have been adequately identified and mitigated as far as possible, and it is important that you continue to reflect on evolving risk during the project. Low-risk projects involve no greater risk than that encountered by middle-income persons, living in a safe environment, during an average uneventful day. They

involve investigating topics that are not sensitive in populations that are not particularly vulnerable. Medium-risk research may include populations that are vulnerable or marginalised, or sensitive topics and personal information such as religious and political views, or sexual orientation. High-risk research can involve very sensitive topics and extremely vulnerable participants. It may have the potential for placing the researcher or the participant at real risk of harm or may stigmatise participants or communities from which they come. Some examples include research into gang activity or illegal drug use; research involving illegal immigrants, and child and domestic abuse.

RRP requires that the researcher conducts research ethically and thoughtfully and that sign-off by an ethics committee is not seen as a checkbox tick or a pass to continue your study without thinking about the ethical aspects of your research again. Ethical reflexivity is an essential value for the responsible researcher.

Animal research can be laboratory-based or involve domestic, agricultural, or wild animals. Researchers whose research involves animals will need to become familiar with animal research-ethics standards, as implemented in South Africa. If you are doing laboratory-based research or field research that includes procedures on animals, you will almost certainly be required to undergo a training course at your own institution that will include animal handling and procedures as well as animal ethics. All animal researchers must obtain authorisation from the South African Veterinary Council (SAVC) if they wish to use animals in research and conduct procedures themselves, including welfare monitoring. (See the discussion of compliance below.) Internationally the three overarching principles for animal research are known as the "3Rs". "Replace" an animal model with a less sentient or in-vitro model whenever possible; "reduce" the number of animals you use to the minimum number required statistically (animal ethics committees (AECs) should have a statistician as a member, and this aspect of projects is scrutinised rigorously); and "refine" your research procedures to ensure as little discomfort and harm as possible.

The NHREC also registers and audits all AECs that approve health research involving animals. AECs that only review animal research studies that are not health related do not currently fall under the jurisdiction of NHREC (or any oversight body). They are required to operate

according to the minimal standards for animal research which is laid out in the newly updated South African National Standards document SANS 10386:2021. Unfortunately, this document is very strictly copyrighted (it is illegal to share a copy) and expensive. This makes it very difficult for institutions to implement the standard (which they must, as it is the recognised South African legal standard for animal research) and for researchers to access it unless they ignore the copyright issues or purchase their own copy (which as a responsible animal researcher you will need to consider doing). In time hopefully the NHREC and the South African Council for Natural Scientific Professions (SACNASP) will collaborate and produce an ethics guideline for animal research that is open access.

If your research involves biohazards, animal or human pathogens, radiation, nano particles, noxious chemicals, genetically modified organisms of any kind, or other interventions that could affect the environment, then you will need to develop your research ethics roadmap for your own "research locality". It is likely that some of your research may need approval form your Institutional Biosafety Committee and that you may have to obtain government permits for certain aspects (discussed below).

We have now come to the innermost "Matryoshka doll" as per the analogy in the introduction, and the one most disliked. RC is a very large and complex topic, and many academics see "compliance" as a bit of a dirty word. I sympathise and hope you will be able to find assistance at your own institution, usually through your institutional research office or "due-diligence" and compliance office. Although the latter offices are still quite uncommon at South African universities, there are often one or two well-informed persons in a central research-support or development office, who, once identified, will be able to help you. Compliance requests come in many different forms and are usually specific to the field in which you are doing your research or related to funder requirements. The discussion below targets three main compliance areas of concern. The information provided is not comprehensive (this would require far more space and probably be out of date by the time it is published), but rather should serve as an alert to prompt you to investigate further as per your own research domain. There is no getting around compliance and avoiding or ignoring compliance requirements can get you into big

trouble at your own institution or jeopardise current and future research funding, so best to get it "done and dusted" as quickly as possible.

International funders almost always have many compliance requirements. At the contractual stage, these most often relate to providing an assurance that the institution with which you are affiliated has the necessary governance policies in place. In this case "governance" applies to both research policies and business-related policies and systems. The questions are often complex and wherever possible should be passed on to your research-contracts, finance, or general research office. Other compliance requirements may relate to financial and other annual project reporting or to the provision of institutional assurances. For example, if you have received funding from a USA federal research agency such as the National Institutes of Health (NIH), and your research involves human participants, you will need to provide proof that your institution has a Federal Wide Assurance (a legal agreement that states that your institution agrees to uphold certain minimum ethical and procedural standards) in place. The best advice I can provide for meeting funder compliance requirements is to read the "Notice of Grant Award" carefully, and then consult colleagues at your institution who are likely to be able to assist you in meeting all requirements.

The Protection of Personal Information Act 4 of 2013 (POPIA) came into full effect on 1 July 2021 and all researchers collecting, processing, and sharing human personal information as research data need to be POPIA compliant. In due course it is likely that a Code of Conduct for Research will be approved by the POPIA information regulator (the government office responsible for implementation and policing of POPIA). This code of conduct will not alter the requirements of POPIA but will interpret them for a research context. Such a code is currently being drafted by the Academy of Science of South Africa (ASSAf). Once the POPIA Code of Conduct for Research is approved it will be binding on all researchers and research-producing institutions in South Africa. It is up to you as a researcher gathering personal information from research participants (data subjects) to make sure that you understand the POPIA requirements for both data privacy and security.

The best way to achieve this is to attend at least one or more POPIA training courses, that should be offered by your own institution or, if not, by organisations like ASSAf or the Southern African Research and

Innovation Management Association (SARIMA). Every institution must also have POPIA-registered information officers that can provide guidance. The Act stipulates eight conditions that must be fulfilled for the initial and further processing of any personal information, including that gathered for research purposes. It also provides for instances where POPIA does not apply in part or in whole. The responsible researcher needs to recognise the compliance obligations POPIA brings and ensure that they can meet these obligations.

The third group of compliance issues involves legal compliance with government departments and is mostly relevant to researchers conducting research with animals, human or animal pathogens, genetically modified organisms, biohazards and indigenous plants or knowledge systems. Again, this paragraph provides an alert only and is not a comprehensive coverage of this topic. Various government departments or statutory bodies such as the SAVC have regulatory requirements that need to be met for certain types of research activities. For example, section 7 of the Animal Health Act 7 of 2002 contains a host of restrictions with regard to research involving animals. Permits are required from the Department of Health or the Department of Agriculture, Land Reform and Rural Development for the import or export of many biological substances, and often laboratories need to be registered and audited with these bodies. Researchers carrying out procedures on animals must be authorised to do so by the SAVC. These are just some of the compliance issues you may need to anticipate and fulfil depending on your research requirements.

RRP is achievable by all researchers who have a strong internal moral compass and who are prepared to do the work to ensure that they acquire the professional skills and knowledge needed to conduct ethical research with integrity, in their field or context. As indicated above, although this sounds somewhat daunting, when narrowed down to your research domain, the ethics, integrity, and compliance requirements will be limited and thus more manageable. Please do not be tempted to put research integrity and ethics into the "compliance box". They do not deserve to be there as they often involve moral dilemmas and choices that require careful reflection and deliberation. In my view a researcher that makes this a habit is in danger of becoming one that may engage more easily in questionable research practices or eschew responsible practices that are seen as cumbersome or time consuming. Seeing the

ethical aspects of any research project as both interesting and essential to address adequately, will set you on the road towards a socially responsive academic career and ensure that you avoid the pitfalls and potential career damage that can come from regarding RCR as something you can ignore or that someone else on your team will (hopefully) take care of.

7

Soft Money and the Early-Career Scholar

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As in many other countries, the academy in South Africa comprises at least two categories of academic staff. These are associated with different conditions of employment and career pathing. The first comprises academic staff who are paid by the university to carry out the core functions of teaching and research. Staff employed in this category, which historically formed the bedrock of the academy, can move all the way up the academic ladder through promotion to the level of full professor, and may be rewarded with a permanent appointment at their host institution.

In countries such as the United States, a second category of so-called "contingent faculty" has proliferated in recent years. Contingent faculty are employed to teach, their positions are mostly part-time and come with little, if any, long-term commitment from the host institution. A third category, and the one in which most growth is taking place in South Africa, comprises those academic staff whose salaries are dependent on "soft money" – funding which is non-recurrent and not provided for in the general operating budget of the institution. While academics in this category are *bona fide* employees of the university and thus, also eligible for promotion (on a designated "research track" at some institutions), they depend entirely on external sources of funding for salary support. This support can come in the form of a personal fellowship awarded

to the staff member or can be derived from grant income that the soft-funded scholar and/or others in their research entity are able to secure.

Either way, unlike their counterpart in the first category who has the benefit of job security, the soft-funded scholar has a more precarious existence with their job being under constant threat. In addition to raising their own salaries, some soft-funded scholars are also responsible for raising salary support for soft-funded academics and other staff who are part of their groups. This places an added burden on such staff to secure a steady flow of income from external sources to cover a large salary bill.

Given the financial constraints within the higher education sector globally, the demand for salaried academic positions far exceeds the supply of highly skilled young scholars wishing to pursue a career in academia. Thus, the only option that might be available to an early-career scholar is to become fully soft-funded. In many cases, the first step along this career path is to complete a postdoctoral fellowship, which can take up to five years in some fields. In others, however, postdoctoral training is not a prerequisite for securing one's first appointment on the research track at an entry level equivalent to a (junior) lecturer, for example, (junior) research fellow or research officer. The challenges of ongoing job insecurity notwithstanding, life as an early-career scholar reliant on soft money can be exciting and rewarding.

In this chapter, I provide some pointers for early-career scholars embarking on this career path. The thoughts presented here are based on my own experience in establishing and leading soft-funded research entities in the health sciences at two universities in South Africa. I have also drawn on the work of the Soft-Funded Academic Research Staff (SFARS) Steering Committee at the University of Cape Town (UCT), a sub-committee of the Academics Union Executive Committee which "seeks to represent, address and collectively motivate for the unique needs of UCT SFARS in order to promote equity of employment conditions, equity of career paths, security of positions and the integration into university structures at UCT".

I begin with some comments about conditions of employment. Many soft-funded scholars – in particular, those at an early-career stage – are employed on rolling, short-term contracts whose terms and conditions are determined by the duration of guaranteed salary support. These might limit the eligibility of soft-funded scholars for opportunities and

resources that are otherwise available to academic staff on permanent conditions of employment. More senior soft-funded scholars who have been working at the institution for some time may be placed on permanent conditions of employment, which provide additional benefits by relieving these restrictions. However, their situation vis-à-vis longer-term employment remains precarious.

The size of the soft-funded research enterprise varies considerably between fields and across institutions. Research-intensive universities have the largest complement of soft-funded staff with the health sciences, engineering and science faculties being home to the greatest number of academic staff in this category. The differences in the conditions of employment of staff paid by the university *versus* those responsible for raising their own salaries is a source of tension within the academy. Different institutions have developed their own mechanisms, policies, and structures for managing this tension. At my own university, the Academics Union serves and negotiates with the university leadership on behalf of the soft-funded academic collective on issues relating to job security, career path and integration into university structures. It is essential to familiarise oneself with the mechanisms and structures in place at the institution as soon as one is appointed as a soft-funded member of staff.

Next, I want to stress the importance of grant writing as a life skill for the soft-funded researcher. Given the need to raise one's salary from external sources, grant writing is an essential skill that must be nurtured and developed from the earliest stage of one's career. There is an art to laying out a clear and compelling research proposal and doing so effectively takes a lot of practice. Take every possible opportunity to learn the art, preferably from the best! Writing retreats or workshops can be very helpful. Key to developing a great proposal is to discuss the idea, early on, with an experienced colleague or mentor. This person can help to ascertain whether the idea is interesting; the approach is sound; the proposal is responsive to the funder's Request for Application (RFA) or Request for Proposal (RFP) – commonly referred to as the "call" – and the research plan has been realistically scoped and is feasible. Early-career scholars may be pleasantly surprised to know how many experienced colleagues are willing and able to share their knowledge and expertise in this domain. Most importantly, it is essential not to leave it to the last minute to have one's proposal critiqued. The best

grant applications are the most polished (and typo-free!) ones that have been through several iterative rounds of informal peer review.

The sooner you finalise your research plan, the more time you will have to take care of the administrative aspects of your application. These can be very onerous. Before starting to write your grant, familiarise yourself with your institution's pre-award systems and processes for obtaining the necessary financial, ethical, regulatory, and other pre-submission approvals, and make sure that you are aware of any specific requirements pertaining to your application. For example, fellowship applications may require your host institution to commit to providing the applicant with a position for a defined period beyond the end of the fellowship. In this case, you will need to engage with the head of your department and/or research entity to establish whether such a commitment can be made.

The key criteria used by all funding agencies to judge a grant application are the quality of the research plan and the quality of the applicant. Both the project and the applicant must be strong and form a good fit to the funding call. Other factors that come into play when a research proposal is reviewed include the environment in which the research will be done – that is, the facilities and resources available to the applicant. Another is the nature and extent of support that the host institution will provide, as outlined in a letter of support from a senior member of the applicant's department, faculty or university who is authorised to make such a commitment. Letters of support are extremely important – in my experience as a regular reviewer for many funding agencies, these are scrutinised very carefully for evidence that the institution will indeed provide the necessary direct and/or in-kind support to maximise the likelihood of success of the application. To be successful, your application must check all boxes: the research question must be clearly articulated and appropriately positioned in the context of the published literature; the approach must be feasible, and your track record of achievement should leave the reviewer with little doubt as to your ability to execute the project successfully. The balance between these criteria varies between funding agencies with the quality of the person tending to weigh more heavily in the case of a personal award, such as a fellowship. However, a strong record of past achievement can never compensate for a poorly articulated research question and/or a flawed approach to addressing it.

Now we come to building your curriculum vitae (CV) by maintaining a steady flow of outputs. The value placed on the quality of the applicant presents a particular challenge to early-career scholars whose track record of published work relevant to the topic of the application might be limited. Although career stage and breaks are taken into consideration (or should be) when a grant application is reviewed, it is very difficult to secure funding without having authored or co-authored some publications. This makes it imperative for aspiring young scholars to make every effort to publish the results of their doctoral and postdoctoral research, and to do so timeously. Publications on which you are the lead author carry most weight, but co-authorship of an article led by others is also helpful in terms of building your CV and attesting to your ability to work in a team – an attribute that is gaining increased recognition within the academy. In fact, many journals and funding agencies ask an applicant to explain their own specific contribution to publications listed in their CV, especially those that the applicant highlights as being their most significant. This allows the applicant to articulate their role in the conception and/or execution of the study. It is crucial to be honest and explicit when doing so.

In terms of standing in your field, the quality of your publications is more important than the quantity, so try to avoid the temptation of slicing your research findings into "least-publishable units" and rather focus on producing papers that report substantial bodies of work – ideally, complete stories. These are far more likely to attract the attention of colleagues within your field and they also carry more weight in the National Research Foundation (NRF) rating system. However, doing so is easier said than done in our environment, as the funding formula used by government to reward universities for research outputs is quantity-based (and disincentivises publications authored with colleagues from other institutions).

The fact that some universities further incentivise the "salami science" approach to publication by transferring funds accrued from publication subsidy directly into authors' pockets makes it even harder for researchers to "hold" the quality line. *Where* to publish your work is a hot, and highly contested, topic. While it is tempting to rely on journal-level metrics such as the journal impact factor (JIF) (see Chapters 3 and 14) when selecting where to submit your work, ultimately *what* you publish is more important than *where* it's published as publications that

influence and/or advance one's field *will* attract attention and be cited. The growing number of universities and funding agencies that support the principles of the San Francisco Declaration on Research Assessment (DORA) signals a global sea-change in the way in which the quality and impact of research outputs are assessed. In general, though, scholars most likely to secure funding that provides salary support have a solid track record of high-quality publications and also publish consistently.

A useful way to maintain a steady flow of publications is to write review articles or book chapters. Articles that provide a synthetic review of the literature around a particular topic and suggest future directions of research are not only valuable contributions to your field but can also inform your own research by illuminating knowledge gaps that you and your team might be ideally placed to tackle. Remember, however, that review articles are not a substitute for original research publications. The best advice that I was given at an early stage of my career was to publish one review article or book chapter for every two to three original research articles. One's time as a soft-funded academic, especially at an early stage of your career, is best spent on advancing your own research programme as effectively and productively as possible.

What about the core task of supervising postgraduate students? (See Chapter 20.) In South African universities, the research and postgraduate training enterprises are inextricably linked. It is therefore not surprising that one of the first things an early-career scholar is expected to do when taking up an academic appointment is to start supervising or co-supervising postgraduate students. The imperative for human capital development in South Africa makes this a particularly important part of one's job. In fact, most soft-funded early-career scholars would have cut their teeth on postgraduate training by taking on informal supervisory responsibilities when they, themselves, were doctoral students or postdoctoral fellows.

However, being soft funded can complicate engaging in this scholarly activity. First, before thinking of taking on supervisory responsibilities, you should consider whether the terms of your contract appointment will enable you to see your student(s) through to completion of their higher degree. If not, the supervisory responsibility should be shared with a colleague who holds a permanent appointment, taking care to properly define roles and responsibilities, and to ensure a fair attribution

of credit. Second, it is important to consider whether you have the resources needed to properly support your student(s). While these differ significantly across fields and disciplines, time is one resource common to all. However, working with one's postgraduate students and watching them learn and grow, is one of the most enjoyable and rewarding aspects of a career in academia. In experimental fields of research, having one's students working alongside you in the laboratory, the clinic or the field can be both gratifying and mutually beneficial.

I turn now to the importance of striking a balance between going at it alone and working in a team. One of the most important choices the soft-funded early-career scholar must make relates to striking a balance between investigator-led and team-based research. By default, those seeking a research fellowship must demonstrate an ability to conceive and execute a research project independently. While the project might involve collaborators at your own institution or beyond, claiming "independence" leaves no room for doubt about intellectual ownership of an idea and ability to lead in executing a plan to explore that idea. However, with the growing popularity of team-based research, and an increasing move towards inter- and trans-disciplinarity in the academy, many young scholars are drawn into teams in which it can be challenging to forge an independent identity.

The key, in this case, is to become a highly valued team member who can make a significant contribution and, in so doing, becomes a sought-after collaborator. In this way, salary support can be secured from multiple grants, in which the soft-funded scholar serves as co-investigator or as key personnel rather than having to be the principal investigator. Either way, it is essential to be "seen" by colleagues and collaborators, and by the system in which one is operating. From this will flow recognition within the academy and reward in the form of greater job security. However, some teams are easier to work in than others, and some colleagues are more generous than others in giving early-career scholars the space and opportunity to shine.

These issues underscore the importance of taking care when deciding whether to join a research team, or to link oneself academically to a senior colleague. If possible, take some time to talk to others to find out what the team dynamic is like; how the leadership operates; how team members communicate; how decisions are made, and by whom? Team

efforts can have a high transactional cost, especially if they operate across different continents and time zones. They can also be stressful if the team members do not have a history of having worked together previously.

Penultimately, I want to address the matter of the integration of the soft-funded researcher into university structures. An important question you must ask as a soft-funded scholar is how far you should integrate into your university's structures. Generally, the performance of academic staff at South African institutions is judged according to contributions in four areas: teaching and learning, research, service to the institution, and engagement with and/or service to external (non-academic) constituencies. To be promoted, one should be able to demonstrate contributions in all these areas, albeit weighted according to the specifics of one's appointment. Accordingly, achievements in research are rightly weighted most heavily for soft-funded scholars. Closely interlinked with research outputs are contributions to people development. In contrast, there should be no reasonable expectation for soft-funded scholars to participate in teaching courses without being financially compensated, or to contribute to the functioning of the university by serving on departmental, faculty or university-level committees. However, it is important to remember that excluding oneself from such activities in order to focus exclusively on research carries a significant opportunity cost for the soft-funded academic. By engaging in these activities, even in a limited way, you will gain greater visibility, respect, and recognition as a well-rounded "academic citizen" in your department, while simultaneously acquiring valuable experience and new skills. This could improve your chance of being considered for (funded) academic positions at your institution (or elsewhere), as and when they become available.

Furthermore, any remuneration that you receive for teaching coursework could either be used to supplement your soft-funded salary (should you be earning below the institution's standard salary package for your level of appointment) or saved in a "rainy day" fund to help tide you over during periods of funding scarcity. It is essential to familiarise oneself with the institution's policies in this regard. However, while the benefits are considerable, the downside is that engaging in university structures takes time away from working on the project(s) that the soft-funded

researcher is funded to deliver on (see Chapter 11). Ultimately, the soft-funded scholar will need to strike a balance that works best for them and their career aspirations.

As an aside, it is worth noting that integration into university structures provides context by helping soft-funded scholars, particularly those at an early career stage, better understand what bringing in research funds means for their host institution. While the institution benefits significantly from the prestige and research subsidies that come with external research funds, hosting soft-funded scholars comes with a cost to the institution in the form of increased expenditure on research infrastructure and support services. The inherent unpredictability and non-recurrent nature of external research funding presents a real conundrum for universities that are, or aspire to be, research-intensive. It is tempting to invest in new infrastructure during "boom" times but sustaining this during "lean" times is very challenging. It is important for all staff – not only soft-funded academics – to appreciate the tightrope that university administrators are required to walk to support the soft-funded research enterprise while simultaneously ensuring the financial sustainability of the institution.

Finally, a note on the importance of honest self-assessment. Periodic self-assessment is a routine part of life for academic staff at the career transitions that are marked by events such as one's application for *ad hominem* promotion or NRF rating. However, self-assessment assumes special significance for the soft-funded scholar who must ask themself some tough questions that are less important for their counterpart in a salaried post. Am I on track towards sustaining my own soft-funded research programme in the long-term? Do I fully understand what this entails? In other words, do I have what it takes to support my own salary and that of others in my group in the medium to longer term? If not, what are my other options? Would I be content to play a more supportive role in a team led by others or is there a role that could be crafted somewhere in between? Each option comes with benefits and risks, but key to sound decision-making at one's career transitions is honest self-appraisal.

Section III
Becoming a University Teacher

"Scholarly teaching should represent an intellectual engagement with students rather than the giving of 'notes'."

8

What Does Scholarly Teaching Look Like?

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Most academics who teach in universities have not been formally trained in the art and science of teaching. Many teach as they were taught whether at school or university, the apprenticeship of observation, some might call it. For many academic teachers, their sense of teaching is little more than instruction in the subject matter or delivery of prescribed content.

The regnant model of teaching in the minds of academics is often that of an expert disseminating essential content in preparation for examinations to determine whether key competences have been met. As simple as that. The only academics who had any degree of conceptual and practical training in the study of teaching are often those in faculties of education though mostly limited to school teaching experiences.

There is a reason those who study teaching at universities started to talk about something called *the scholarship of teaching*. It was meant to convey a sense of teaching as being more than the delivery of instruction; after all, a recording machine delivering content to large groups of students could do the same thing. What could this important concept mean for new and even established academics who teach in universities? Put differently, what makes teaching scholarly?

In the first place, and to perhaps state the obvious, scholarly teaching draws broadly and deeply on *disciplinary knowledge*; listening

to a university teacher, the sense that "she knows her subject" or "has a command of the subject matter" are among the things students will sense coming through in an episode of teaching. This means the academic teacher must be an expert in the knowledge of their discipline be that organic chemistry or the visual arts. In my view, university teachers should hold doctoral degrees in the discipline (or inter-discipline) for that implies a high-level mastery of knowledge. It is also one of the reasons that I have encouraged professors to teach first-year classes and not only those in senior under- or postgraduate study to impress on incoming students what to expect of a university teacher.

It follows that scholarly teaching means the ability to make complex material accessible to a small or large group of students; that is to say, the university teacher understands the subject in ways that bridge the gap between text and learner in meaningful ways. This is difficult for many academic teachers. Knowing the subject is one thing; being able to communicate knowledge of the subject effectively is a completely different matter. In education, this is called pedagogical content knowledge; that is, knowledge of how to teach expert content efficaciously.

Such knowledge clearly requires a different kind of preparation than what was achieved through, for example, formal degree training in physics or anthropology. Many universities now recommend and some even require academics regardless of status or seniority to attend seminars or workshops on how to teach in higher education. Whether or not your institution offers such training, do it anyway and not only to familiarise yourself with new technologies for hybrid teaching – which everyone has been doing since the pandemic lockdowns – but to learn both basic and advanced concepts and methods of teaching, learning, curriculum design, and assessment.

In this respect, and by way of example, scholarly teaching requires the ability to stimulate rich intellectual dialogue between the academic teacher and the university student. This is not easy even for those trained to become teachers for a simple reason: our most powerful memories of teachers and models of teaching are those who stand in front of a class and speak authoritatively on one or other topic from the subject or discipline.

While there is clearly a place in teaching for a rich, expository lecture, one-way speaking on the part of academic teachers is the norm in most university lecture halls. There is enough literature in educational

research to suggest that students learn more and are more motivated to learn when a teacher draws on their knowledge as learners to advance the lesson by explicating a concept, illustrating a principle, or testing an idea.

But this is not easy to do especially for new academics. It is nerve-wracking for a novice academic without the depth of knowledge of the subject or the length of experience in university teaching to be faced with a class of 220 Psychology I students. Under such circumstances, it is completely normal for inexperienced academics to try and maintain control and authority by doing all the speaking rather than allowing smart students to ask difficult questions that could unsettle them. Such a pedagogical posture is understandable but not very productive for purposes of *learning*.

That skill too can be acquired. Take time to listen to the memorable online lectures of Harvard's Michael Sandel on moral philosophy (a must-watch for any beginning academic teacher).[1]

In this lecture Sandel illustrates several important lessons for powerful university teaching. One, that a complex subject (moral philosophy) could be made accessible through carefully prepared stories. Two, that student engagement can be enhanced through the skillful art of Socratic questioning, that disciplined *(sic)* form of dialogue with the students. And three, that it is perfectly possible to teach and sustain the attention of students in large classes through interactive teaching. Mandel demonstrates what scholarly teaching looks like in practice – with the student in mind.

Scholarly teaching is therefore singularly focused on learning. It is not teaching for teaching's sake, in other words. The lecturer who "delivers" the lecture with the attitude that s/he has done her job and that it is now "up to them" to pass a set examination is clearly not being reflective about the relationship between teaching and learning.

An academic engaged in scholarly teaching will continuously pose and reflect on critical questions such as the following. Why despite my teaching are the student results in the subject so poor? Are there better ways of teaching those elements of the curriculum that students appear to struggle with? Is there anything in the literature about teaching

1 https://www.youtube.com/watch?v=kBdfcR-8hEY

differential equations or postmodern theory that might inform and benefit my teaching? Can the ordering and sequencing of knowledge in the curriculum be better organised to facilitate student learning? What about the pacing of the teaching plan – should I move slower or faster in particular sections of the course? Would talking to other academic teachers in my university or other universities perhaps help me to find ways of improving my teaching or on a particularly difficult topic of shared interest?

Fortunately, these days there are professional journals concerned with teaching and learning in almost every academic discipline. A few examples are the *Journal of Chemistry Education, Journal of Architectural Education, International Journal of Engineering Education,* and *Medical Teacher: An International Journal of Education in the Health Sciences,* among many others. Such journals cover a range of topics such as effective feedback mechanisms, the uses of student evaluations, the role of emotions in teaching, problem-based learning and the like. Every academic teacher in the disciplines should subscribe to at least one professional journal in their respective fields as a way of staying current with new ideas, trends and technologies in education.

Scholarly teaching of a high level represents an *intellectual engagement* with students rather than simply giving "notes" or the "coverage of essential material." When students are prepared for an examination by giving them "the scope" of the question paper, this represents the lowest form of teaching, perhaps better called instruction. Teaching focused simply on passing (or failing) students does not offer an education worth the name.

To be sure, there are pressures on academics in the managerial university to improve what the government subsidy formula calls "teaching outputs". Some university leaders unashamedly demand from deans and heads of departments a minimum pass rate so that the institution is not penalised in the government subsidy income for low throughput and pass rates. During the pandemic this tendency also played out at some universities with the empathetic logic that one cannot penalise students for a once-in-a-century disruption.

All of this makes sense, at one level, but it comes at the cost of preparing graduates of quality for the workplace and for life. A scholarly teacher is concerned principally with the worthiness of a qualification. Put differently, does my teaching contribute to the education of the

student so that the graduate is competent in the discipline but also confident in the workplace? Which of course raises another question fundamental to scholarly teaching: what is my teaching for?

Reflecting on the purposes of your teaching is perhaps a good starting point for any new academic. Why do you teach? There are several possibilities. Some might see the goal of their teaching as seeking to produce experts in the subject matter; here the goal is to introduce students to powerful ideas in the discipline and to ensure that they become competent in the concepts and methods of that area of study. Such an orientation to teaching is perhaps more commonly found in fields like accounting or engineering where there are clearly defined competences that their respective accreditation councils might specify. In such cases, academic teachers feel bound to deliver on those external obligations.

Others might include a commitment to opening the minds of university students to things like critical thinking, independent judgement, and self-directed learning. Yet another group of academics might go further and see their role as producing activists, students armed with the requisite knowledge to act on the world in order to change the lives of the marginalised.

Clearly these kinds of goal commitments could overlap, but fundamentally each academic teacher has a basic operating purpose that guides their teaching even if this is not always clearly articulated or expressed in words. A reflective teacher would ponder the purposes of teaching and try to make explicit what guides their own commitment to teaching in the context of their country or institution or department.

The purposes and direction of teaching are mostly left to the individual academic teacher. On rare occasions, a department might decide to provide an overarching framework for teaching such as the department of philosophy at the University of Pretoria during the decolonisation moment of the mid-2000s. There, as detailed in our book, *The Decolonisation of Knowledge* (Cambridge University Press, 2022), the head of department (HoD) wanted all his academic teachers to realign their curriculum and their teaching with ideas around decoloniality. Sometimes a particular approach to teaching might emerge from a particular discipline or a particular institution such as the case-study method developed by Harvard Business School about 100 years ago.

And then, at an institutional level, a university might define a set of *graduate attributes* that all its students should attain regardless of

department or discipline by the time they leave. Here the expectation is that academic teachers will direct their teaching towards the attainment of those institution-wide attributes and give them specific meaning in the subjects they teach. Graduate attributes at the institution level are powerful signaling messages to the outside (parents, employers, the general public) about what is expected from students graduating from University X. But even with carefully designed plans, it is very difficult to hold individual academic teachers across large institutions to account for teaching the preferred attributes of the senior managers of a university.

Regardless, any *systematic* reflection on teaching offers the opportunity to publish from that experience in professional journals such as those mentioned. In other words, here the age-old debate between teaching versus research resolves itself; you can do both when there are powerful research questions, appropriate methods, relevant theory applied to reflection on teaching that could yield useful findings for those in the professional learning community.

All of this implies that scholarly teaching requires advanced and intense planning of the content and delivery of the curriculum. Academic teachers who use the same yellowed "notes" year-in and year-out are clearly not engaged in scholarly teaching. This kind of intellectual laziness reflects poorly on university teaching and can only present a negative image of the academic profession among students. A scholarly teacher is constantly reflecting on how to teach in ways that ignite powerful learning and that takes a considerable amount of planning time.

Nowhere is this duty more pressing than in the South African context. With the massification of education and the democratisation of former privileged universities, more and more of those enrolled in higher education entered as first-generation students with many coming from disadvantaged schools. Therefore, to teach in the 2000s as you did in the 1980s without any consciousness of the social, economic and indeed political diversities in the university classroom is to court disaster. Academic teachers committed to scholarly teaching would at the very least be curious about how to teach in such richly diverse classrooms where, for example, a minority of BSc students would have had exposure to science experiments in their school years, while a majority would be seeing a microscope for the first time. How does one teach such a mix

of students in one place? There are many different approaches that a scholarly teacher would definitely want to explore before heading for a South African classroom. This is because how one teaches in such contexts could make or break students.

At this point an important caveat is due. It is tempting to think of students as black/disadvantaged and white/advantaged in a simplistic sense. That kind of division only applies to the incoming resources that white students bring to the university classroom such as the material advantages of privileged schooling. It does not apply to the intellectual abilities and indeed capacities of a diverse classroom.

White students, I found, regardless of material privilege, also struggle in my lectures for a simple reason: with few exceptions, which also apply to black students, they come from authority-driven schools and classrooms fixated on preparing young people for optimal marks in the National Senior Certificate (NSC) examinations. They were not generally trained to think deeply, let alone critically, about and beyond the subject matter. I have found that when my assignments and tests require critical engagement with complex readings or independent thinking about a challenging case study, the playing fields have instantly been levelled. In fact, black students generally had a much keener sense of the ideological and political elements of education policy or curriculum theory because of their own socialisation.

That said, if you did not have a regular, let alone qualified, teacher in the FET phase of your high school career, then you may struggle for a lack of conceptual knowledge and practical experience especially in the sciences and engineering. Conscious of such disadvantage, many universities employ tutors as an approach that used to be called "academic development" to bridge the gap. However, much of that effort could be lessened through the kind of scholarly teaching that works consciously within the university classroom to facilitate learning for *all* students through the conscious design of smart teaching plans.

This is a good time to ponder the sticky question of "how much does scholarly teaching count" in the academic career of a new scholar? The truth is, not enough when it comes to academic promotion within a typical research-intensive university and not at all when it comes to rating by the National Research Foundation (NRF). Of course, many universities will require evidence of good teaching when it comes to *ad hominem* promotions. This could include student feedback on courses

you taught or portfolios of evidence of good teaching that you have prepared; such a portfolio could include curriculum plans, assessment protocols, external evaluations of your course materials, or feedback from examiners on your students' theses or dissertations.

In the course of being considered for academic promotion, universities will look for evidence of good teaching, contribution to administration, community service and research. Some universities even have a teaching excellence award as a way of valuing that essential component of an academic's work. But at the heart of academic promotion lies the question of your research performance. Did you produce a consistent stream of high-quality publications in top journals and/or produce a scholarly book of note in the discipline? In the NRF, there is in fact no reference at all to anything but your research track record and achievements.

That is a concern because the almost exclusive focus on research performance actually undermines the development of a scholarship of teaching in South African universities. Still, a commitment to teaching that is scholarly should not be limited to its value or lack of value for promotion and rating prospects. There are other reasons to teach well.

At the heart of scholarly teaching should be a devotion to enabling student learning; such a commitment to teaching is its own reward. To be able to witness over the course of a teaching career that hundreds, even thousands of students are able to develop deep learning in the discipline and broad learning in society offers powerful motivation for those committed to a scholarship of teaching. And then, as indicated, publishing from systematic reflections on teaching can in fact contribute to an academic's overall research performance.

There are universities that further recognise the value of teaching in the academy and reorganise the promotion system to give access to the professorship via an alternative route that recognises teaching over research. A senior lecturer with a documented and outstanding portfolio of teaching could be promoted to professor with fewer publications or books than those advanced along the normal route; finer formulations in academic promotions policies would spell out the detail, but the main point is that teaching excellence "counts" for much more than research even though some minimum threshold of research publication would still be expected.

Then there is the case of special forms of "teaching" that apply in particular disciplines. For example, medical scientists in the academy

who have achieved excellence in clinical supervision or surgical work could on the basis of rigorous evaluation by peers also gain promotion to a professorship without the weight of publications an institution would normally consider for other academics.

Similarly, a senior academic in the field of drama or dance could be evaluated for promotion based on performance in these disciplines. The concept of teaching is obviously extended, in such cases, to include other forms of educating young people outside of the traditional lecture format. In these latter cases, universities might opt for terminology like adjunct professor in place of the usual terms such as associate professor and full professor that apply to those who advance through mainstream teaching and research outputs.

Whatever the path to advancement, scholarly teaching demands from the academic teacher a *scholarly disposition*. Surrounded and watched by scores of students, sometimes one hundred or more, there can be no greater opportunity to model teaching (and learning) than the example of the scholarly teacher. What does this mean? It implies a scholar who in the process of teaching projects curiosity about complex problems, conveys passion about the subject being taught, poses questions more than giving answers, and acknowledges not knowing when faced with a puzzle.

There is powerful learning conveyed in this kind of scholarly posture. It teaches values such as humility, integrity, and a spirit of inquiry. Stated differently, it is a posture or disposition that speaks against dogmatism, arrogance and the dangers of yes/no answers in a knotty world. What this means therefore is that a good teacher not only teaches the subject matter but by virtue of that person's character or disposition also teaches the higher qualities of teaching and learning in very powerful ways.

By contrast, nothing can be as destructive on the dark side of teaching than threatening students. The stories are now commonplace of the South African lecturer who on day one tells a class of students something like this: "Welcome to Mathematics 134. By the end of the first semester half of you will be gone." This is not teaching, this is bullying, and the effects can be devastating on especially first-year students already insecure because of this intimidating new place called a university and because of fears of failure, particularly for those coming from disadvantaged schools. A scholar encourages, builds confidence and looks for ways of motivating students. Teaching can be a very powerful instrument in the hands of a teacher, for good or for bad.

This means that assessment will play a vital role in the life of a teacher scholar since this indispensable element of the university classroom can have enormous consequences for the future of students. A scholarly teacher would pay particular attention to both the formative and summative aspects of assessment. On the formative side, assessment can be harnessed as a diagnostic tool to improve teaching; on the summative side, assessment can be used to determine teaching effectiveness. Whatever the purpose, assessment can and should be deployed to improve learning and teaching.

A scholarly teacher would be attentive to forms of assessment that are both effective and equitable. The unreflective and sole use of multiple-choice questions (MCQs) because of the facility it offers in managing large classes makes good management sense, but not much pedagogical sense. We know that not all students perform equally well on the same kinds of assessment tasks. It therefore enhances scholarly teaching to use different forms of assessment to obtain a fuller picture of student understanding of the subject matter.

Thoughtful assessment means that students would be deeply engaged with the substance and depth of their knowledge over a course of teaching. Done well, the close connection between scholarly teaching and deliberative assessment means that no student should be able to pass on "notes" alone. This is important because of the growing trend around the world of using professional note-takers to attend classes on behalf of students who then pay for the notes. Good teaching makes passing on notes alone near impossible, for the interactive, knowledge-generating nature of the class requires presence. And the connectedness of good assessment to good teaching reinforces the value of presence.

To illustrate, consider a simple example from an education management class. Poor teaching will insist on five management techniques in a disruptive classroom. Poor assessment then follows with "name the five management techniques for dealing with a disruptive class". Notes will do. But imagine an incidence of scholarly teaching that explores with students the competing ideologies of classroom management, their historical roots and contemporary expression. Then follow that up with an assessment task that asks students to reflect on their own classroom management ideologies and what they believe the limits and potential of their own approaches to managing disruptive classrooms might be. The latter teaching and assessment example requires presence because

a good teacher would have worked through those understandings of how to approach management with a critical sense and perhaps given an in-classroom demonstration of how to analyse personal management ideologies. Notes will not help very much.

In sum, scholarly teaching is rich, deep, engaging, transparent, interactive and committed. It references acts of teaching against what is known in the literature, on the one hand, and what can be observed from best practice, on the other hand. It is intellectually intensive in the planning and teaching phases of preparation, but it is also personal and engaging with the students who are present. Scholarly teaching, moreover, is demonstrative; that is, it makes its work publicly visible through journal publication or conference presentation so that it can be adjudged by peers and engaged by partners. And it is self-reflective throughout, always looking for ways to enhance teaching and enable learning on the part of the student – and the scholarly teacher.

Section IV
Becoming Academically Connected

"The most important piece in building your network is your actual work."

9

Research Networks

Daya Reddy
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As a scholar one is by definition a member of one or more – often multiple – communities, which have been likened to "mutual-aid societies of life-long learners". We may think of these as sets of constituencies, with each being embedded in one of broader range and scope. So we may start with the community of colleagues in a department or discipline, or perhaps fellow specialists, which is in turn a subset of disciplinary communities at local, regional, national, and eventually international levels. There are also connections of varying degrees to communities of cognate disciplines, and it is in fact these particular intersections that provide fertile ground for multidisciplinary work.

The individual researcher may identify the nature of their membership of each of these communities of scholars through reference to participation in various joint activities – again, at the departmental level, via professional societies, and other such activities at the national, regional and international levels.

What does it mean to be a part of these communities? Well, we communicate, share knowledge, gossip, attend conferences and colloquia, engage in scholarly citizenship (see Chapter 11), for example, by serving on committees or reviewing manuscripts or dissertations; and significantly, we engage in collaboration. We seek and provide support and enjoy the company, camaraderie and intellectual friendship and criticism that comes with being a part of these communities.

Some specialisations or research problems lend themselves to solitary pursuit, but there are many cases to be made for engaging in research on a collaborative basis. Indeed, collaboration is the life-blood of intellectual progress, the means of interaction through which ideas and hunches take shape and grow from their embryonic origins, through the give-and-take of the creative process, eventually to become worthy additions to the store of knowledge.

Let us use, as a working definition of collaboration in the context of research, the process by which two or more scholars pursue a problem or question by working together. The motivation for doing so may be multifaceted and would include factors such as a common interest in a research question; and a recognition that a joint attack would be more effective than separate, parallel endeavours, carried out independently and without cross-fertilisation. Indeed, it is the power that derives from bringing together colleagues with complementary insights and skills, in pursuit of a common objective, that is often the driving force behind successful collaborative efforts. Such a communal approach is highly conducive to generating multiple ideas and testing them, invariably making for a much richer outcome.

A further pertinent consideration applies to those of us who work in geographically and academically isolated locations, without a critical mass of resources to hand, and perhaps with tenuous connections to the broader community in our area of work. A collaborative approach would provide the opportunities for networking and for integration in the broader community, resulting in an environment of natural and easy flow of communication, and of the cut and thrust debates that are vital to the creative process – in contrast to the somewhat sterile solitude that would be the case otherwise. For the young scholar these considerations are especially important, given the opportunities presented by collaborative engagement to strengthen one's armory by drawing on the considerable intellectual and other resources of the community. As time goes by, the one-time emerging researcher becomes more and more able not only to receive but also to give back.

Much creative work, as well as scholarly activity that is directed towards the solution of immediate problems confronting society, takes place at the intersection of a number of disciplines and requires a multi-disciplinary approach. In such circumstances collaboration is essential. There are special challenges in getting the recipe right for successful

cooperation among researchers who come from distinct disciplinary backgrounds and cultures. Defining the problem and determining what is important and interesting is the first big step. Transdisciplinary work takes us a step further, with groups comprising researchers from within and outside of the conventional terrain of formal research and higher education. In either case there are special challenges in pulling a group together, getting to communicate across different disciplinary cultures and languages, defining the problem, setting the agenda, promoting a harmonious and productive dynamic, and being clear about the work plan and overall objectives. Needless to say, the success of a transdisciplinary endeavour will largely depend on the extent to which leadership is inclusive in nature, and the *modus operandi* characterised by seamless channels of communication and a cohesive environment.

So, how does one get the ball rolling, once the PhD is out of the way, and possibly following a period as a postdoctoral researcher?

I was fortunate to be drawn into collaboration at an early stage by my head of department (HoD), an outstanding researcher in whose area I had come to specialise. With me very much as the junior partner, I became actively engaged in learning how to move on from my PhD studies, to identify problems worth pursuing – in short, those that were both interesting and important – and then, literally sitting together, at the chalkboard or with paper and pencil (still the best way to explore mathematical issues!), to explore, step by step. He also roped me in as co-author on an undergraduate text. In this sense I was immensely privileged to have been exposed to this extremely important mode of scholarly activity early in my career, and to have encountered such generosity. There is a lesson here for more senior researchers about the significant and career-shaping impact such forms of mentorship can have.

My experience was perhaps atypical, and the question remains: how does one initiate a collaboration, and identify and approach potential co-workers?

It is a good idea to start the search in your own backyard: there may be a colleague in your department or institution who is a "natural" potential collaborator, and with whom it might be straightforward to have a relaxed conversation about working together.

Either way – whether the potential collaborator is in the office down the corridor or an expert known from the literature – it is of fundamental importance to have a good idea of what it is that you would like to

work on. Going around seeking a collaborator with at best a hazy notion of working together, with no indication of what turns you on and what kinds of problems you are wrestling with, is unlikely to bear fruit.

Second, once you have an idea for a project – perhaps you have been working on this already – you might approach someone whose work you have come across, or perhaps whom you have heard speak at a conference, who has worked on similar problems, and who seems to have the kinds of complementary approaches and skills that would make the two of you a good team. In such a case the appropriate approach would be to introduce yourself, share copies of your published work if such exists, or alternatively share some possibly preliminary ideas you have on tackling the problem. You should also give an indication of why you wish to collaborate, what you have to offer by way of your background and particular skills, and what you would bring to the table, in this way highlighting the complementary nature of your potential collaborator's skills and therefore providing further motivation for the two of you to work together.

Conferences offer abundant opportunities to meet fellow researchers working in your area. Informal settings such as coffee breaks allow one to seek out scholars with common interests, whether simply to introduce yourself and extend your linkages in the community, to renew acquaintances, or indeed to put out feelers about the possibility of collaboration. A positive tone would then lead to an arrangement to communicate in more detail, once everybody has returned home. For these reasons, I often make the point that informal communications at conferences are at least as important as attendance at formal presentations.

Yet another approach to initiating a collaboration is to make use of that wonderful privilege of a sabbatical period, or as it is known more formally, study and research leave. Such leave periods, in which one is granted a year for such purposes after labouring for six (or six months after three years), if properly used are an ideal opportunity to locate oneself in the group or department of a dynamic leader in one's field, and, in so doing, to kick-start a collaborative programme of research with one's host or other colleagues. I made use of such sabbatical periods at the earliest opportunity after three years and following a second three-year period, in both cases choosing to spend time with, and to learn from, scholars who were leaders in areas that I was moving into and were new to me. In this sense I was seeking a combination of

collaborator and mentor. In this way I was able to learn a great deal whilst in the middle of these hothouses of activity, and, some way into my sabbatical periods, to develop pleasant and successful collaborations, sometimes with the bigshots but more often with bright and energetic and often more junior colleagues in their groups. Later, these collaborations were nurtured through subsequent sabbaticals and shorter visits in both directions.

Herein lies a lesson, to be heeded when thinking about potential collaborators: be realistic in your expectations. The extremely busy and in-demand trailblazer may be willing to impart advice on a one-off basis, and even keep in touch, but may well not wish or be able to fit you into their overall programme of activity. This should not be cause for disheartenment: you will have made yourself known, and will perhaps have been directed to a colleague as a potential collaborator. In due course you will have opportunities to justify your inclusion as a new member of this network by both sharing the products of your subsequent research, commenting on the work of others, and generally doing what members of a community of scholars do.

We often talk about the need for the chemistry between collaborators to be "right", and there is some substance to this notion. It has to do not so much with the technical assets of the individuals, but rather with the extent to which personalities, modes of working and ways of thinking, are mutually compatible. If this sounds like pop psychology, it reflects my difficulty in conveying what I have experienced during my career: that there are individuals with whom I hit it off at the personal level, our ways of thinking gelling, so that this compatibility, when combined with our complementary skills and enthusiasm, made for successful and very pleasant collaborations. The obverse is also true: it may be that a colleague has all the technical attributes that would make for a good working collaboration, but somehow your personalities do not quite fit. It is unlikely that such a collaboration will endure.

As I have mentioned before, the idea behind a collaborative venture is to bring together two or more scholars whose expertise, strengths, and approaches are complementary. This, rather than a group of clones, makes for a healthy and refreshing exchange of perspectives, a crucible for generating ideas and unexpected ways of looking at the problem, and with a greater prospect of progress. So, for example, some of my collaborators have been colleagues with considerable technical strengths

and computational expertise, while I have brought to the table perspectives and insights that bridge the mathematical and engineering worlds, using physical insights to guide appropriate mathematical lines of attack.

The foundation of a strong collaboration is trust: an acceptance by both collaborators that each will be open and honest in their communications, will feel free to share ideas, no matter how crazy, not be scared to make mistakes, and will use each other as sounding boards. A trustworthy collaboration is also one of selfless and generous engagement: a selfish desire to keep track of who contributed what, and to stake one's claim as the originator of a particular part of the work will doom the partnership to bouts of awkwardness and ultimately acrimony.

The idea then is to foster an atmosphere in which one member of the team sparks off the other(s), catalysing exchanges of ideas and building upon these. Thus a synergistic atmosphere develops, as a result of which the whole is greater than the sum of the parts, and very different, and superior in creativity, to an agglomeration of individual attempts.

There needs to be clarity at the outset about the objectives of your joint work: its questions, and its goals. In addition, you will share preliminary ideas on strategies, and agree on some and jettison others. The same will apply to your strategy as the work proceeds: research by definition entails going into uncharted territory, so that unless the problem is straightforward and not particularly challenging – in which case one has to question the wisdom of spending any time on it – there may well be the realisation that the approach adopted is not necessarily the best, necessitating a change in tack, or bringing a different set of tools or techniques to bear on the problem.

How will you and your partner work together? It is important to have multiple conversations about who will do what, and when, so that the expectations are clear. Flexibility is key, though, and the partnership will benefit from a good understanding of the constraints – work and personal – on either side, whether routine or unanticipated. In the same way, you or your collaborator may prefer a structured approach to communication, for example, by email or chatting online at specified times. There is a great deal to be said though for a more flexible approach that allows for ad hoc communication, for example when one of you has had a bright idea – this carries with it a greater prospect of steady progress. I hasten to add though that this approach may not suit the temperaments and working style of one or other of the collaborators.

Either way, it is good to have clarity on this particular aspect of the collaboration.

In any event, it may well be the case that the extent of your involvement will fluctuate with your other demands, such as teaching, administration, and other research activities. I am a strong believer in the importance of maintaining some level of continued momentum in research activity, however low, even during very busy periods, so that one does not have to contend with a cold restart once lectures are over. I do appreciate though that this can be extremely difficult, depending on personal circumstances. I know that there are researchers whose preference is to set aside a day, say, in the week during which to devote to work on a particular project. Yet others will defer chunks of their research work to periods outside of the teaching term. Field work, for those for whose discipline this is relevant, will necessarily dictate the scheduling of research activity. To mull over a problem more or less continuously, sometimes with it relegated to the deeper recesses of my brain, is what suits me, but not everyone, I am sure.

Research activity can take the form of one or more once-off, stand-alone projects, to be pursued over a fixed period of time; or it can assume the more structured approach of a research programme. That is, a connected set of activities, with an overall umbrella organisation within which multiple projects are situated with corresponding milestones and start and end dates, but with a common theme, a strong degree of coherence across the set of questions addressed, and probably funded through a large multi-year grant. Whichever structure your research takes, it is important to give some thought to the place of collaborative work in your suite of activities. Do you prefer a collaborative approach, without exceptions? Or are you inclined to pursue one or more projects on a solo basis, in parallel with collaborative activities and graduate supervision? There is no right or wrong answer, and you may well be able to hit on the right balance only after you have tested the various modes of research.

Whatever approach you are taking to your research, either alone or with a partner or partners, there will be the usual frustrations such as red herrings, dead ends, delays in acquiring equipment, battles with recalcitrant (in your opinion!) editors, the frustrations of endlessly looking for bugs in a computer code, and more. (There is much truth in Thomas Edison's dictum, that success is 10 per cent inspiration and 90

per cent perspiration.) But these frustrations are ultimately outweighed by the thrill of discovery, when it happens; the pleasure of grappling with exciting problems, alone or with members of one's community; and the sheer enjoyment of research activity.

Research collaborations may vary in size, from those involving two scholars, perhaps three, to larger groupings in which the senior collaborators are joined in the group by their postdoctoral fellows and postgraduate students. One finds this situation in many of the "lab" disciplines where, rather than one crisp question being pursued, the overall structure is often that of a programme comprising a number of interlinked projects.

Once you have a collaboration going, do be open to bringing others on board if this makes sense. Bringing in a new partner may result from a conversation with your existing collaborator along the lines of "J really knows about this stuff which is giving us such a headache – let's see if she'd like to join us." I have been on both sides of this kind of development, as a recruiter and a recruitee.

The longevity or otherwise of collaborative partnerships will depend on a number of factors. In one scenario, you initiate or are approached to engage in collaboration on a particular topic. This goes well: you hit it off, make good progress, publish the results – and then, given that it has gone well, seek to continue by extending the earlier work or moving on to a new question that has been suggested by the earlier investigation. This kind of collaboration might endure for some time, possibly with inactive periods in between.

A second scenario is one that starts off more or less in the same way but is treated, or turns out, to be a one-off affair: a one-night stand as opposed to going steady! I count among my many collaborations examples of both of these cases.

Probably the most famous collaboration in mathematics was that between GH Hardy and JE Littlewood, two Cambridge mathematicians who worked together harmoniously for 35 years! The nature of their collaboration and friendship itself makes for fascinating reading, but it is worth sharing one anecdote. Concerned about their planned collaboration encroaching on their independence and personal freedom, they devised four axioms for working together. First, it was completely indifferent whether what they wrote (and they communicated mostly in writing, though based at the same institution) was right or wrong.

Second, there was no obligation to respond immediately to a communication received from the other. Third, they should preferably not work on the same detail. And fourth, it was indifferent if one of them had not contributed at all to the contents of a paper under their common name, as any such publication would have been a snapshot in a continuing collaborative relationship.

Sometimes collaborations do not work out: they stall at some point, the problem is intractable, things do not gel, or there is lack of agreement on how to proceed. In such instances it is best to be open and honest in assessing the situation and, rather than feeling an obligation to pursue a frustrating and probably unsuccessful collaboration, to suspend working together – perhaps for a period, or to shelve things permanently.

COVID-19 has forced us to learn about virtual communication, which, through the course of lockdowns and other serious disruptive circumstances, has developed in most instances into a highly effective, if not perfect, alternative, to conventional forms of engagement. As we emerge, somewhat tentatively, from the restrictions imposed during the pandemic, there is much stock-taking of the nature, benefits, and drawbacks of this new form of communication: how do the different forms of engagement, such as in-person meetings, phone calls, email exchanges, and videoconferencing, stack up against each other?

What is emerging is the widely held recognition of the benefits of hybrid approaches, which include some, or all of, these alternatives. For example, many departmental seminar series now routinely host the speaker in person and have a physical audience, while at the same time provision is made also for virtual attendance, thus widening access quite dramatically.

So, what started as an innovation born of necessity, even desperation, has become a fully adopted technology, to wide benefit.

It is worth bearing in mind, however, that certain activities are ideally pursued in-person. To return to our main topic, a key aspect of collaborative research is the process of ideation performance: that is, generation of ideas – preferably many – through interaction among team members. This is important because the best routes to creative problem-solving will depend, in the first instance, on there being a healthy number of ideas. A recent study has found that ideation performance benefits strongly from in-person interactions, though the quality

of the ideas selected is indifferent to the mode of communication. The results of this study provide invaluable insights into and guidance on structuring collaborative activity, and choosing the mode of communication, assuming that there are choices that can be made.

I have written mostly about formal modes of cooperation, in which there is an agreement among two or more researchers to engage in collaborative activity with a set goal in mind. However, forms of what one might refer to as informal cooperation do exist. This kind of cooperation often manifests as non-onerous activities, such as reading and critiquing a colleague's draft, offering advice, assisting with a proof, or suggesting alternative approaches. These activities fall under the broad heading of academic citizenship or academic duty.

Rather than a partnership fitting neatly into a particular box, there is a spectrum of forms of engagement with ad hoc, informal communication or cooperation at one end, and full-blown collaboration at the other. You will no doubt be able to identify forms of informal cooperation among your set of activities. Sometimes this evolves organically into a proper collaboration. This is a good thing, and a further example of how collaborations might be initiated. In any event, one sometimes may have to make a judgement call on the boundary between collaboration and support. And there are ancillary questions that may arise: for example, is co-authorship warranted, or will an acknowledgement in any published work suffice?

Eventually, assuming that all has gone well, the time will come to write up the results of the research for submission to a journal. There are various questions related to publication that team members should address early on in the collaboration: who will be included in the list of authors and in what order? Who will be responsible for which parts of the write-up? What journals do team members have in mind for submission of the manuscript? The last question may yield multiple suggestions, and the process of refinement and eventual homing in on a preferred journal is one that can proceed in parallel with the research, on and off. It may be that the final decision would have to await the later stages of the work, when there is a clear sense of the nature of the results and their anticipated impact.

The approaches or traditions for ordering authors varies from one discipline to the next. For example, in many of the natural sciences the first author would be the researcher whose major work it has been – for

example a PhD student or postdoc – while the status of "senior author" would be accorded to the leader of the group, who often will have secured the funding and directed much of the research, and who would be the last-named author in the list.

Many journals these days require that each author state his or her contribution to the work, and the writing – this is a welcome development which discourages the dubious practice of "courtesy authorships".

In the mathematical sciences, it is generally the tradition to follow strict alphabetical order in listing the authors, the presumption being that co-authorship is accorded to those who have made significant contributions to the work. Whatever the approach followed, it is important that partners in a collaboration agree early on about authorship and the ordering of the names of authors.

In addition to the obstacles to progress that inevitably rear their heads in the course of a research investigation, the existence of other barriers to progress, unrelated to the technicalities of the project, is a reality. Discrimination, whether conscious or through implicit bias, has always been around. To take a particular example, efforts to understand and combat gender bias have gained considerable momentum in recent years, with the data being quite clear on the difficulties experienced by women, who in many situations will constitute a small minority in research teams, and who may struggle to have their voices heard and opinions respected. Similar considerations apply in relation to race, socio-economic status, and background.

There is the further challenge pertaining to partnerships involving researchers from the Global South and Global North. What has been referred to as "helicopter research" occurs when researchers from the developed world or from well-established science systems engage in research in less-developed regions, with partners from those regions and with the former dictating the design, conduct and ultimately publication of the work. These considerations are relevant to the process of initiating collaborations between researchers who find themselves on either side of this divide. They will certainly be relevant in a country such as South Africa, in which most disciplines do not have the privilege of sustained funding and access to state-of-the-art infrastructure, and a critical mass of expertise, at least on the scale of those enjoyed in most developed countries.

In such situations there is an obligation on the part of all those involved in planning the collaboration to ensure that this is done inclusively, from the setting of the agenda through to the expected contributions to the research and writing from each partner. Senior scientists, whether from the Global South or North, have a particular responsibility to ensure that conditions are conducive to a truly inclusive collaboration. Furthermore, in addition to collaboration they have a duty as mentors to guide young researchers as they navigate these choppy waters: overcoming ingrained biases, ensuring that their voices are heard, and that their contributions are respected and acknowledged.

As scholars, in academia and elsewhere, we enjoy the great privilege of earning a living by engaging in activities that we are passionate about, trying to forge progress in directions that to a great extent we have the freedom to choose, and which bring great pleasure. The collaborative pursuit of research, a joint commitment in a context in which relationships develop, sometimes into decades-long friendships, is a further pleasure and privilege of the world of scholarship.

10

Knowledge Networks

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By way of introduction, I want to explore what a network is and why it matters. "Networking" has become one of the buzzwords of our time, but what does it mean for an academic career? A network is of course who you know, but more than that it is who you know *and* who can answer your questions, support your career, and invite you to participate in events that will advance you in terms of publication, promotion and navigating departmental politics. It is also, of course, the people who *you* support in these same ways. I lived and worked in Angola for many years, and I have published about what they call there "the traffic of influence". I like the term, because it captures the reality of what is sometimes called "connections" or "social capital" by English speakers. To "traffic" has a negative connotation, but I do not think it should be seen in a negative light: human beings have historically used social networks for survival and thriving, and the academic context is no exception. Networking is simply one skill amongst many that you will need in order to flourish.

A network is essentially active relationships that are mutually supporting. "Networking" is a verb, because it requires action and attention in terms of relationship building. It is a lot easier if you have a bit of confidence in yourself: trust your degrees and the fact of your appointment in the university. Many of us grapple with imposter syndrome, especially if we have had to overcome structural barriers to get where we are today, but you are in your job *because you have something*

to offer. This chapter is about how to build on collective power to have more impact and to do so in a way that is supportive for you as a multi-dimensional human being.

In brief, it is important to develop relationships with a wide variety of people who can give you insight and critical advice as well as alert you to blind spots as you navigate your academic career. The more diverse your network is, the more effective it will be. This is particularly important in South Africa, where all of us have to navigate our own positionality in terms of race, class, gender, geography, religion, family responsibilities and a host of other factors. For example, as someone raised as a middle-class white South African from a mixed-faith household, there are many things I just do not know from personal experience that are of relevance to my students and colleagues. The majority of my students identify as black and Christian, and many of them grew up with constraints that I have no personal experience of. How do I manage that gap authentically?

An important starting point is to have trusting relationships with colleagues and friends whom I feel comfortable approaching for advice so that when something comes up that my own positionality cannot address, there are people I can turn to and ask. These people are in my network, and they are usually people with whom I feel comfortable sharing things that might make me vulnerable in revealing my own ignorance. Equally, I consider whether someone in my network would be comfortable with me giving them advice in a particular situation. For example, one of my students did not want to get vaccinated because her pastor told her the vaccine was the mark of the devil. I found the logic of her decision difficult to follow, and I knew hearing anything against it from me would be inauthentic because we both knew that in this case I just did not understand her worldview. Luckily, I was able to call on a Christian friend who was willing to speak with her, and help her bridge the faith/science divide, which in this case was really challenging. In the same way, I am often called on to speak with students who identify as neuro-diverse (like me), to explain or mediate particular responses to stimuli.

Most of us experience known knowns (e.g., I know what the capital of Botswana is), known unknowns (e.g., I know I don't know what the capital of Kyrgyzstan is, though I can google it), and unknown unknowns (I don't even know how to ask the question), and the last category is the one where a network is critically important. In a good network,

colleagues will proactively reach out when you approach an unknown area, and fill you in. Perhaps you have management potential. Perhaps your scholarship is incredibly interesting to a global readership and you could easily publish in higher impact journals. Perhaps you are doing something that you do not even know makes other people around you uncomfortable.

In the rest of this chapter I lay out some of the domains of networking that may be useful to a young academic. This is not conclusive, but just a starting point to think with. I hope to offer some insight into the people whom you invite to do things with you, who invite you to sit at interesting tables, who champion you at editorial meetings, and whose work you will one day publish yourself as you take on different roles over your own career. It is about managing reputation, navigating gossip, and curating your online presence.

* * *

I want to begin by introducing the "elevator pitch" as a point of departure. Imagine you are in a lift – which the US calls an elevator and I use here because if you google it you won't find much on "lift pitches". You enter the lift on the ground floor and maybe you stay in it to go up to floor ("story") seven. Imagine that in the lift with you is the most influential person in your field who you really, really want to work with. You have thirty seconds of their undivided attention because, even if they want to run away, they can't! What do you say about your work that will make them hire you, or at least remember you enough to reach out when there is an opening at their organisation?

Academic research is complicated, and many of us spend years in the weeds of that complexity. If you are reading this, you are almost certainly a specialist in a very narrow area that you know extremely well, and typically you discuss it with a small group of people who know it too. But not everyone is a specialist, and many of the gatekeepers who will hire you, evaluate you, and promote you, are not well-versed in your specific area. With that in mind, it is critical to be able to *explain your work and why it matters* in thirty seconds, three minutes, five minutes, and ten minutes, and be able to do that without panicking or over-thinking. This "elevator pitch" is a skill that takes planning and practice, but it is incredibly useful and often "makes" careers through success at critical

moments of possibility. Bear in mind that in any academic engagement the first minute of a talk is critical – whether you are teaching students or presenting at a conference – and engages or loses the audience.

My recommendation is when sowing the seeds and nurturing the seedlings of your network, that you practice the elevator pitch as much as possible. Explain to your friends and to the oldest person in your family what you do, and why it matters. Summarise any academic talk you are about to give over the dinner table, and see if your family can explain back to you what exactly you *do* all day and what particular piece of it you are sharing at a given event. If they can speak it back to you with some excitement, you are probably in a good place to go out and network.

Next, I want to explore with you the notion of "intellectual ancestry and scholarly families" as a concept through which to understand the academic network. The anthropologist Kath Weston describes "chosen families" as a way of understanding relationships of care and commitment beyond blood kinship. In many ways, the idea of chosen academic families is helpful for networking, because we typically make networks from and with people we *choose* to think with. Such networks, however, are not neutral, but layer on what I like to think of as "intellectual ancestries" – meaning the flow of ideas between different generations and cohorts of peers. When I look at my PhD supervisor, I can trace the evolution of many of my ideas through his, and through his other students, and if I look carefully I can see clear links with the work of *his* supervisor (and her other students), and also my own students going forward.

It is helpful to be clear on who taught whom, and the complexities of the personal relationships that drive the academic system. Academia is rife with patronage, and again, that is difficult to avoid in any human structure, but it is also not an excuse to compromise your own ethics and values. However, not acknowledging or understanding the extent to which kinship (both blood *and* intellectual) shape university systems leaves many young scholars out of the proverbial loops of power and decision-making, which has arguably been one of the biggest challenges in the transformation of South African academia. But these systems matter, so in your own context, map them, understand them, and work with the system whilst also making sure you maintain your integrity. At the end of the day, your integrity is the most important thing you have, and it is what your reputation rests on. Ask yourself, who are the gatekeepers?

Where does loyalty lie, and why? How are you read, and how will your own postgraduate students be incorporated into the kinship structure over time? Who is literally married to or descended from whom? Does the current system make space for the people you think need to be in it, and if not, can you use your own position to open doorways for others?

The operational structure of departments in terms of networking are a little bit like a family (and just as with a biological family, they contain within them some people who are great and some people that you would not have chosen if you had been given the opportunity). To extend the analogy, it is important to understand small-scale dynamics and manage close relationships, but the wider clan is also critical. Who are the gatekeepers in your discipline and where do they sit? Often these are the editors of journals, the heads of other departments, the emeritus professors who pretend to be retired but still whisper in the ears of their former students. There are regional, national, African and global structures of which you need to take account. Ask yourself, at each level, who are the people who can introduce you to others, and with whom you can work closely? Who do you want to know, and who do you *need* to know? Ideally, find the people you both need and want to know, and the senior scholars whom you would be happy to become. Academia is a series of apprenticeships, so identifying who will help you become the kind of senior you yourself admire is vitally important.

Your network within your discipline is the people who invite you to talk at seminars, and whom you can call on in turn to share their work. They will also review your work for publication, and when you yourself are editing journals, they are the people who you will ask to be reviewers. For example, when I took a new job at a South African university I had never even visited because of COVID-19 lockdowns, I was tasked with managing a seminar series in the department. It took about two hours of emailing for me to secure 12 speakers that lasted over the whole semester. Speakers did not say yes because they were particularly invested in the institution (though in some cases that was also the case), but because they knew me, trusted me, and were willing to support my students. They gained valuable feedback on their research, but they also gained insight into some of the emerging movers-and-shakers in the field, and exposure to people with whom they might not otherwise interact. Mostly though, they accepted because they knew that if they asked the same of me later, I would likely accept as well.

Academia relies on a constant trading of favours, which is why it is also important to be conscious of your own reputation and to keep in mind that reciprocation and paying-favours-forward are essential oils for the wheels of academia. (Why this is so, and the question of exploitative labour, may well deserve a separate chapter!) It is worth reiterating that your reputation matters *a lot* in academia: people talk, and they ask each other questions all the time – make sure you sow only what you actually want to reap.

We now come to the twin issues of managing your own institution and building a wider web. All institutions have dynamics and here too, who you know can become quite important – not just in your department but up and down the hierarchies, across faculties, and between scholarly cohorts. Many decisions are made informally and then ratified through formal processes, and many opportunities are shared that way too – such as participating in high-profile research programmes or being interviewed by the media. Acknowledging this reality will save a lot of heart ache and allow you to invest your time where it matters, without taking personally rejections or exclusions that possibly never included you to begin with.

The most important piece in building a network is your actual work and this point needs to be emphasised. Research, teaching and service done well will draw attention and, in most cases, except perhaps where there are toxic managers, you are likely to be rewarded for doing them well. In terms of promotion, responsibility, and leadership, if you *do not* do good work it is unlikely that your career will progress, regardless of how good your networking skills are. (Some people do, of course, get rewarded despite not doing good work, but most institutions have checks and balances to hold blatant nepotism or academic dishonesty at bay.)

There is an important distinction worth noting between a "job" and a "career". The former is something one does with relatively little change – perhaps teaching the same course year after year without much reflection. Most academics are committed to a career, however, which has different seasons of learning, contributing, teaching and responsibility – and relies to a large extent on an ever-expanding network of interesting thinkers. Typically, young academics begin by establishing their research career, and teaching all levels of undergraduate and postgraduate offerings. With some experience, many then know with what they most resonate, and

might develop expertise in management, pedagogy, particular research specialisations, or cross-disciplinary roles.

If you think you might be interested in becoming a head of department (HoD), for example, it is good to build relationships with other heads of department, especially those outside of your own unit. (Remember, ambition is important, but it can sometimes backfire if it comes across in a way that makes the current power-holders feel threatened.) Find people who can explain the role to you – especially the hidden labour that is always present but rarely part of the job-description. Think strategically about where you want to get to from a five-year, ten-year or end-of-career perspective. Where do you want to be when you retire? Who will write the reference letters you need to get there? On what grounds will these people know you?

An important question to consider is whether your current institution is the place you want to spend your life. This is particularly significant if you have done all of your degrees at the place you are now teaching. It is hard to know where you might be happiest if you do not have a sense of the options, but you have every right to prioritise your own well-being. This becomes critical when you imagine raising a family of your own – your work is only one aspect of who you are and staying in a place in which you cannot live holistically could be detrimental to your long-term health – and therefore also to your work. In academia there are limited positions in every discipline and you cannot make demands of where and how you will work in all cases. Nonetheless, you *can* be strategic and build relationships with people in the departments you might want to join, because it is rare that anyone is ever hired without some prior knowledge of them or their work, and when openings do become realities most departments will actively recruit particular candidates. Make yourself known and available to your colleagues in other spaces: be willing to examine PhD and MA theses or do peer evaluations of other curricula, show up at local conferences, ask curious questions that demonstrate your willingness to think in fresh ways and across institutional contexts.

Remember you are in your position because you have chosen to accept the job. If it is no longer tenable for you, you have every right to leave, and there are probably many other things you could do that would be valuable to society. The idea of a change is a lot more frightening if you do not have "connections" in other institutions and perhaps in other

fields though – so try to build them by listening to people who share your passions and being open to unexpected changes in your career. Personally, I could never have predicted that I would land up teaching in a business school: in my 20s I saw myself as a committed socialist and there is no way to paint my current employer other than as profoundly supportive of capitalism. But life is complicated, and as we grow our views often shift. The things that become most important often exist more in the spaces of ideological gray. Give yourself permission to change through the course of your career, and to build new networks and sometimes let go of old ones as you slowly hone in on the contexts that allow you to flourish at different life stages.

Finding mentors within both your institution and outside of it is critical. Often such people explain the "hidden curricula" of career progression, and alert you to things you might not otherwise consider. How do you get a mentor? Often you just ask. At a conference I recently attended, a PhD student with whom I had shared some laughter and a few raised eyebrows in response to outrageous comments from the floor, flopped down beside me with a big smile. "Jess," he said, "I like you enough to ask you to be my mentor. Will you?" With such sincerity, how could I possibly say no? Not all relationships are as explicit of course – I have frequently been aware of receiving mentorship when it was not explicitly stated to be such, but suddenly it was clear I was getting the information I needed to know. Jonathan Jansen (one of the editors of this book) has played such a role in my life. Over many years he has shared information about institutional structures and processes that has been invaluable. Over time, I have grown comfortable enough to also reach out when I am in a situation I do not have the tools to deal with. I have called him to discuss a difficult manager, a serious ethical dilemma I faced with regards to the finance department of a university at which I worked in another country, whether I was ready to go up for promotion, and much more besides.

The wider context of your field is also extremely important. Almost everybody teaches in some way and thinking and writing about pedagogy through collaborations with centres for teaching and learning can be extremely interesting. In South Africa, we have some of the most diverse student bodies in the world, and many global audiences would love your insights. Writing – with permission – about what you are already doing and showcasing your own innovation in this space

can make teaching even more rewarding. If you bring the students in as collaborators, it also gives them early exposure to the joys and satisfactions of academic work and might encourage many to do further study. You build your future network through your teaching, so investing in your students is a win-win strategy for everybody.

Attending conferences matters, but arguably much less for the papers (which you can usually read online anyway) than for the social moments and bonding experiences with people who are not your direct colleagues. This, of course, is networking at its core. Debates around the papers, lunch conversations, coffees and social encounters all provide rich opportunities to talk about one's work in ways that are not possible during the course of normal writing and teaching. Many scholars are poor conference presenters, which in my view is unfortunate as it prevents the audience from engaging their work. A conference presentation should be imagined as much like a TED Talk. Watch some videos on how to give a TED Talk and use these to prepare your conference presentations. I think you will be surprised by the results, and your future audiences will appreciate you and invite you back. *Practising* your talk beforehand is critical and many scholars do not do it. I think that is sad, because they often then run over time and the audience forgets what they are speaking about as they start fidgeting in their seats and thinking about lunch. Prepare for what you are setting out to do by thinking carefully about the main take-aways of your presentation and making sure your message comes across.

Most people also enjoy the experience of new places to explore and being away from ordinary responsibilities. There are many levels of friendship and collegiality of course, and I acknowledge that there is a nocturnal dimension to conferences that is sometimes difficult to manage. Whatever you choose to do, just remember that the people you are with may well prove to be your dean or fellow board member in a few years' time, so just make sure you are okay with the potential long-lasting echoes of your actions. It is also important to follow up after conferences – write a short email a few days later to ensure the person you spoke with has your details and can get hold of you. Remind them of your conversation, thank them for any input, and express a desire to work together in future. You never know where this might lead.

I recently reached out to someone I had met at a conference when we were both PhD students, and asked him to write a chapter for an edited

book. It was exciting to see where he had landed up working and how his career had progressed. He was delighted to hear from me, and after both of us laughing at how strange it was to now be called "professor", he agreed to participate. He attended our workshop and we picked up the conversation we had had in Paris in 2011 completely seamlessly in Cape Town in 2022. I imagine we will meet again in our mid-forties, with the beginnings of wrinkles and a whole new set of concerns, but for now we exchanged notes and insights and were able to provide each other with support and reassurance completely outside of our day-to-day work environment. It was nourishing and supportive and also just wonderful fun.

Working with publication is another important space in which academic networks are developed and maintained. I say "working with", not just publishing, because, in addition to getting your own publications out there, a lot of networking is done around journal publishing processes. Soon after finishing your PhD you will likely be invited to review other's articles. Peer review is labour intensive and can feel unrewarding – be careful not to do too much of it as you need to protect your time – but it is also valuable. Your disciplinary mentors can advise you on a wise amount to accept, but overall it is a useful way to gain exposure to the inner workings of journals, the many stages of academic publication, and new work being done in your discipline.

In addition to peer review, you might be asked to join either editorial advisory boards or editorial boards of journals. The nomenclature differs across disciplines and your duties in either of these positions may vary between being not very hands-on (mostly reviewing and occasionally giving input with regard to editorial policies or decisions) to having a lot more to do (involving regular reviewing of manuscripts and assisting the editor in making difficult decisions). My advice is that you should look carefully at what the position on a board entails and, at least until you are partially established, to avoid the latter, as editing requires doing the nitty-gritty of review and feedback and can be very time-consuming. Being an editor also requires that you have an excellent network yourself, because you need to know who to approach to review papers as they come in. As suggested earlier, reviewers are much likely to accept if they already know you.

In all journal work, though, one meets and interacts with those whose work is somehow linked to your own, and this can be extremely useful. Many publications happen through invitations to participate in

special issues, or through being asked to write, for example, an encyclopaedia entry. Establishing yourself as an "expert" in your field with the gatekeepers is helpful. Often the gates should probably be taken down in the first place, and again that is a longer conversation. Part of your networking should be with those who share your vision, as these relationships will sustain you and hold you accountable to your values and personal vision of learning.

Where you choose to publish and to edit depends a great deal on what kind of impact you want your work to have, and with whom. Where do you want to shift the conversation? Are you writing for scholars, policymakers, artists, students, or perhaps a cross-section of these? What do you want a reader to *do* with your work, and why? What journals do you yourself love reading, and which editors would you like a reason to interact with at a personal level? Often what begins as an email exchange over a paper leads to long-term collaboration and sometimes friendship. Knowing the answer to these questions will help you determine whether to approach local, regional or international journals, and how to pitch your work. Most of us publish in a combination of all of them, depending on what is at stake in a given article or book. Pitching is about using appropriate language, references, and conventions for the audience you are writing for, and showing why it matters to them. To illustrate this, you do not need to explain the term "coloured" if your reader is almost certainly familiar with South Africa – but to an American reviewer who does not know apartheid history, using the term without explanation could be experienced as extremely offensive.

If you yourself are immersed in South Africa and you want your work to speak to a global conversation, you will need to do the work of explaining the relevant context. By the same token, if you are writing locally you might know the reviewers personally, so you will have to take their perspectives into account. Many young scholars make agreements with groups of friends or area-researchers to amplify one another's work, and this can be helpful as long as it is not exclusionary. (Exclusions have a tendency to backfire because those excluded are often doing the peer review; and such practices can tarnish your reputation if not conducted very thoughtfully.) There are many interesting ways to make sure your work circulates. In the next section I explore how to work with the media to build your research impact and expand your reach beyond the walls of academic spaces.

It is crucial that you take on board the importance of managing your scholarly profile in both the traditional and social media. Over the last decade, academic publishing has changed significantly. It will continue to change and so cultivating an attitude of curiosity and flexibility is a helpful first step in managing your profile. What worked for your PhD supervisor almost certainly will not work for you, so rather than trying to use old tools, I recommend you do some research on effective communication and make your own toolkit. Whether trying to find an expert or understand a problem, most of us now use either Google or a related search engine. If you want your work to travel, it is critical you curate your image at least partially towards visibility for algorithms. Many scholars see this as a terrible thing, but I think rather than judge it, it is easier to be pragmatic and at least work the system.

Previously, what was usually needed to be considered an expert was a name-plaque on a university door and a publication record. Now, in addition to those (and sometimes instead of them), it is usually essential to have and to use profiles on scientific platforms such as ORCID and Google Scholar – in many cases it is even required. Beyond those, profiles on ResearchGate and Academia are helpful for sharing your work, as are platforms such as Mendeley. LinkedIn increasingly plays a role in academic life (I got my most recent job through it), and traditional social media such as Facebook and Twitter can be useful for sharing your scholarship. Most academics maintain personal websites and many have YouTube channels. It is a lot of extra work, but it is also increasingly a critical part of what we do. Elsewhere I have called this part of the "pedagogy of hyperlinkages" – we live in an increasingly interlinked world, and our own work makes small contributions that need to be highlighted.

The internet is one place to engage, but media of course exists far beyond it. Learning to speak on radio and television remains useful, and can often take your work to much wider audiences. If you think your project has relevance beyond academia itself (perhaps for policy, or for business), it probably does. You yourself have to be able to articulate why and how it is relevant (the "elevator pitch" again) and then build relationships with media personnel and journalists to help get your messages out to the people who need to hear them. For myself, when a journal article I have put out gets ten citations I feel quite pleased, but I know whenever I am speaking to radio at a national level I talk to some 200,000 listeners! What has more impact? I think both are needed.

The Conversation – an online platform that takes academic research into the public domain – is excellent for translating academic findings to a wider audience, and often leads to speaking invitations and other opportunities to share your findings. I recommend, whether or not you publish with them, you subscribe to their newsletters, as each day you will then receive showcases of academic work translated into the popular domain. Writing "opinion editorials" in the local press can also be powerful: typically these are less than a 1,000 words in simple language that address challenges and tell simple but valuable stories with the goal of shaping public opinion. If done successfully, these editorials can take your work into the national spotlight more effectively than most journal articles ever do. The best case is when you have a journal article come out and can *also* write a popular summary for the public. *The Conversation* does this routinely, but there are many other places where you could publish.

Platforms such as *The Conversation* are typically read much more widely than academic journals, so from that work you might receive requests for all kinds of input. As a result of writing for *The Conversation* I have done talks and interviews on radio and TV, academic keynotes, school talks, and further academic publications. There is also a helpful feature for tracking readership on *The Conversation*'s author dashboard which is useful for making your case for promotion or awards. To be able to accurately say "I have engaged 500,000 radio listeners and 250,000 members of the general public" might show aspects of your work's impact that citation indexes take years to reflect.

As ever, make sure you are well-prepared for anything you agree to. With radio and TV you can usually ask for the questions ahead of time so you are not caught off guard, but also just try to relax and enjoy the process of building media skills. Most universities offer some form of media training, and building relationships with the media office of your institution is another helpful practice. These are people whose job is to make the university look good: if you are doing great work, that is excellent for them and they will gladly promote it. At the same time, it can be difficult to know whether there are constraints in what you should or should not say in the media, and especially at the beginning of your career it is wise to seek advice. Vaccination mandates at universities were particularly controversial and I had several invitations to discuss them on national radio. I was not sure if it was a good idea to do as an

everyday staff-member with no particular input on the internal policy process, so I wrote to the head of my institution's media office for help. He strongly suggested I not go on air to discuss it, because of course there were nuances I did not know, and it would have been compromising on many levels if I were perceived to be speaking for the institution. Sometimes it is important to know when to turn invitations down.

If you are looking to share your work, another option is to write to journalists directly by email. There is a show I like called "The Jetset Breakfast with Michelle Constant" on SAfm (radio). When I put out a book on kindness and everyday heroism in the COVID-19 pandemic I wrote to Michelle, and she was interested in what I was doing and landed up on her show six times. Journalists are always on the lookout for interesting things to share with their audiences, and it is not arrogant or pushy for you to suggest you have something to share. In fact, I would say the opposite: academics are civil servants whose salaries are paid partly by taxes. If *we* cannot explain complicated realities, who can? Surely engaging the public is part of our job. Once you do, try to get hyperlinks, podcasts, photographs, etc. that document your engagement. Indeed, remember to keep records of *everything* you are doing. Much academic "labour" can be invisible if you cannot list it, and at the end of the year you need to be able to show exactly what you have done, and where.

Finally, I want to talk about making the conversation that you want to have. Sometimes our disciplinary homes can be very satisfying, and sometimes they constrain our thinking. Often, it is a combination of both. One of the critical tools to be able to master is that which allows you to shape the conversation that you want to have, by being the person who brings others into dialogue and who directs what is discussed, and how. I remember being part of a reading group as an honours student that read books I did not fully understand but that challenged my thinking. In one discussion I had a particular question that nobody could answer, and one of the staff members suggested I email the author to ask. I was terrified, but did as she suggested. The response was warm and thoughtful, and over time it allowed me to build a relationship with the person concerned. Academics love knowing their work is having an impact, and most respond well to a sincere question. Sometimes they will miss the email because of being overloaded, but usually if you open a door, people are happy to go through it.

Residencies abroad are very important ways to build your academic network and scholarly profile. Most universities will support you if you desire to spend some time abroad, and there are many opportunities available for emerging African researchers. You can research these online, or you can also write to individuals you hope to collaborate with and explore directly whether there are possibilities to spend time with them. I recommend the Iso Lomso Fellowship at the Stellenbosch Institute of Advanced Study, as this provides a carefully structured opportunity for emerging researchers to build their academic careers, including with a three-month residency abroad. In South Africa we are skewed towards the Global North because funding is usually easier to come by there, but often the most interesting conversations are happening elsewhere in Africa, or in South America or Asia. Increasingly there are ways to motivate "South–South collaboration" which I strongly recommend you explore. These networks are often very powerful because they are with people who operate under similar constraints, and who are usually more open to genuine collaborations with more even power dynamics.

All universities have conference and research funding available, though, and staff-development plans. Spend some time researching what is possible, and then *apply*, follow up, and hustle however you need to in order to be put in a place where your work is part of a conversation beyond South Africa. In such contexts you will be able to experience first-hand the impact of your work, and also build critical relationships with the people you meet along the way. Many of these people might later write your reviews for an NRF rating, for example, or perhaps collaborate or co-author papers. Approach them with humility and enthusiasm, and see where that takes you. Also be willing to do the work that is asked for you in turn: write letters of support for your colleagues and mentors, complete reviews of other's scholarship on time. Academia is unusual in that it is a place where everybody can thrive and someone else's success will not come at the expense of your own. Support others proactively, and you will find it amazing how others then also support you.

In conclusion: a word about knowing yourself. As you are building networks, it is important to remember that you need to know yourself, your values, the things you stand for, and why you have chosen an academic career. Many of us have family responsibilities, spiritual commitments, and life outside of the academic space that must also be nurtured. Before beginning my PhD, a wise friend said to me, "Jess,

remember, universities are factories of insecurity, so don't worry too much – the system is designed to make you anxious, but you are probably doing fine." I have been so grateful for that advice throughout my career, as sometimes it feels like we are all on an academic hamster-wheel of constantly shifting outputs and churns of students. But remember, we are human beings in these systems, and at least part of our task is to keep our institutions human too. Being known as a person with integrity is better (in my opinion) than being known as a person who plays the game. Whilst we all do play – and I think it is helpful to see it lightly – do not compromise on the values and ethics that make you who you are, and do not neglect the things that truly sustain you. Relationships are about more than extraction, and a good network relies on you being true to yourself, and also on paying forward. As much as you can, make your university the university you want to teach in through your scholarships, your friendships, your global networks that yield insight and fresh perspectives, and of course the students you are teaching who might one day sit in your own chair.

11

Academic Duty

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In any given week, an active scholar could receive several calls to duty from across the country and around the world. Examine a dissertation. Speak at a conference. Evaluate a candidate for a research rating. Write a chapter for a book. Assess a book manuscript. Review a journal article. Evaluate an academic's application for promotion. Join a senate subcommittee investigating predatory journals in the university. Represent the faculty on the student disciplinary committee. Serve on an accreditation committee of one of the statutory authorities. And more.

Let us label this conglomeration of mainly external activities as *academic duty*; that is, the work you perform as an academic that is not the core of contracted commitments made with your department, school, faculty or university. For purposes of distinction, those contracted commitments can be described as your *core work*, the things you are expected to do by virtue of your academic appointment, such as teaching and research.

To underline the point being made, no academic is appointed in a department with the instruction to review manuscripts for an international journal or rate academics from other universities. Those activities are not in your contract. They might be regarded as a good thing to do for the overall welfare of the academy (*military service,* some call it), but it is not the primary reason for your appointment which, in most universities, is to teach.

Academic duty can be overwhelming because of the time exacted by your core duties – the kinds of things that matter in building an academic career and positioning oneself for promotion. Those core duties, especially teaching and research, weigh heavily in the performance-management stakes of many universities. And despite what your seniors might say, research is the most important element in institutional promotion or National Research Foundation (NRF) rating.

Initially, these multiple requests to review an article for a journal or write a chapter in a book can be experienced as flattering. You are being recognised by your peers. Your opinion matters. It feels good. Over time, however, you begin to experience the incessant demands on your time as a distraction from your core duties. Such distraction carries heavy costs, such as delays in getting your own work published, because you are reviewing other people's work. How then to make sense of this tension between duty towards the broader academy and the progress on your own research and publication?

But first, what is the case for academic duty? To begin with, the academy would not function without academics helping each other on the extended duties outlined above. There are complementarities involved. Just as you need external examiners for your students' Master's or doctoral theses, so too do other academics in the system. Very few universities pay external examiners for this work and if they do, it is a very measly sum. Most journals do not offer compensation though some might recognise reviewers by publishing their names in the journal or the publishing house might offer discounts on books that it publishes. But by and large, academic duty does not pay – at least not in hard currency.

There are many advantages to fulfilling your academic duty. One of them is that as a young lecturer, you learn the range of skills required of a fully-fledged academic. Reviewing a journal article or a book manuscript is a learned competence that comes with time – and even these two tasks (the article versus the book review) require very different skillsets. You want to have mastered these different competences by the time you come up for promotion to senior lecturer or associate professor.

Then there is the advantage of becoming known in your discipline by virtue of excellence in the conduct of these duties. It might be the first time you are really noticed by a leading scholar or scientist in your field. That review might be of such a high quality that you are invited to

a prestigious conference or to visit a famous laboratory that works in your intellectual area of interest. Needless to say, if you do ordinary or substandard reviews, as an example, it has the opposite effect: people ignore you.

Another advantage is that participating in tasks we describe as academic duty helps you to prepare to participate as a candidate for rating or the submission of a book manuscript for peer review. In other words, the process teaches you about the criteria that apply, the weighting of the issues that matter, and even the language of presentation when, for example, competing for research grants. An alert young scholar starting off an academic career would look to learn from the process of reviewing or evaluating rather than simply delivering on the task assigned.

But there are the inevitable pitfalls that result from not carefully managing the demands that come with academic duty. The one already mentioned is distraction from your core academic functions in a university. Most academics require uninterrupted time in writing an article or a book, or preparing a paper for a research conference. A diversion into evaluating a candidate for a research rating or promotion means that momentum is lost, and it is sometimes hard to pick up where you left off.

Another pitfall is that what you are asked to work on for purposes of duty might have little to do with the line of research or thinking that preoccupies you in your daily academic work. This is a problem because the external task not only absorbs time, it redirects your thinking into an area of work that might not be of primary interest to you. In a perfect world, evaluating a grant proposal in industrial psychology while your work is in cognitive psychology might offer opportunities to learn from an allied field. But in a busy academic environment, your train of thought has been distracted.

An obvious pitfall is that academic duty does not count in the promotion stakes. Nobody asks how many journal articles you reviewed or how many grant proposals you evaluated. It is simply irrelevant in your academic advancement. As much as there is learning to be gained and competences to be mastered, overcommitting to these external tasks can be debilitating for the young and ambitious academic – especially if you are good at it.

The sad reality is that the more efficient you are at delivering on the tasks that come with academic duty, the more likely you are to be asked

again and again. Most journal editors struggle to find reliable reviewers for an abundance of manuscripts. National ratings bodies, such as the NRF in South Africa, find it very difficult to find reviewers in general and excellent reviewers in particular. Late reports are common so that the authorities spend an inordinate amount of time chasing up busy reviewers or referees. Under pressure, they turn to those reviewers who provide quality reports within the given deadlines. This can be a major problem for a reliable reviewer.

A serious pitfall is that this work can become an all-encompassing duty. There are scholars who genuinely enjoy doing academic duty and can be found in committees on- and off-campus making an outsized contribution to the maintenance of the academy. This kind of devotion is always rightly appreciated, but how appropriate it is, depends on the individual's stage of career. For established scholars, who in the latter stages of their careers devote a lifetime of experience to academic duty, such levels of commitment make sense. For younger scholars still trying to build a career, any kind of overcommitment to academic duty can be a career-ending move.

Now there are new or young academics who do not intend to become leading scholars in their fields. They see themselves primarily as teachers and not equally as researchers who are intent on building stellar reputations in human genetics or social anthropology or econometrics. For academics with this approach, academic administration is more attractive than high-level research and might be a career pathway into senior university management. That is a legitimate choice, but this chapter, and indeed this book, is not for this small minority of academic administrators whose career plans might start in academic departments but are not focused on producing high-level science or scholarship.

It is appropriate now to talk about one of the most important pitfalls in building an academic career and that is the pressure to do academic duty as a head of department (HoD) or even a dean. The story is all too familiar. A young academic is in the throes of building her research career. She has been quite successful up to this point and has already reached the rank of senior lecturer. The problem is that the long-standing HoD is finally retiring. All eyes turn to the young, energetic, up-and-coming academic star in the department. The pressure builds. The department would like to appoint the first black HoD in decades. The first black woman head would take enormous pressure off the

department and the dean, given the drive for transformation from the senior leadership of the university. The problem of course is that this pressure to do academic duty as HoD comes at exactly the point where a promising research career is starting to take off.

Let us be honest: there are many advantages to taking on the role of HoD. You achieve status and standing among your colleagues and your peers. You now have opportunities to learn about, and exercise, leadership. You have authority over departmental budgets that you can direct or redirect to those things you consider important. You can bring in innovation and change, which, as an ordinary member of department you could only advocate for or complain about but with little effect. And there is a jump in your salary which always comes in handy for a young academic starting a family. All of these things are important and therefore the decision should not be taken lightly.

However, more often than not, those who take on such leadership roles begin to lose out in their academic careers. There is little time for research as administrative and management tasks overwhelm the new head. After two terms, a productive scholarly career comes to a screeching halt even though a published or co-published paper might have been squeezed in here or there. On balance, was the detour into academic leadership worthwhile? Not if the goal was to become a leading professor in sociology or architecture or urban planning.

What could make matters worse is if, as an enticement to take over the headship of the department, the outgoing head negotiates with the dean to offer you an associate professorship. Your head spins even though you know in your heart of hearts that you are not ready for such elevation. After all, your academic journal articles are still slim by comparison to accomplished scholars at the associate-professor level and your book manuscript is only half-done. It is a tough decision, of course.

How then does one navigate this thicket of pitfalls and promises that comes with academic duty? Here are ten suggestions.

One, *know yourself*. A small percentage of academics can do many things at once. Run a department, teach a course, manage a laboratory, and edit a journal all at the same time. Those persons do exist. They have enormous powers of concentration, and they work fast and accurately at the same time. However, most academics are not like that, especially at the start of a scholarly career. Academic lives, like all human endeavours, are complex and involve much more than an on-campus career.

Academics raise families, serve in religious communities, volunteer in non-governmental organisations (NGOs), join running clubs, and do much more. That kind of balance is in fact vital for a fulfilling academic career.

The point is simply that you have to make an honest assessment of who you are and what you can do within the demands of the job. Again, if you are part of that minority who thrive on heavy academic schedules, enjoy the many demands and dimensions of academic duty, do forge ahead. If you are like most of us, beware of overcommitment and take things in your stride, especially at the start of your career.

Two, *learn to say no.* You actually do have a choice in the academic profession to decide on what you do with respect to academic duty. Your degrees of freedom are a lot less when it comes to core academic work because an HoD can steer their colleagues towards a plan for teaching that requires a fair distribution of courses across the members of staff. Even in this case, though, an academic can negotiate with the head about what and when to teach.

With academic duty, on the other hand, you can say no. But be careful in how you say no. You do not, for example, want to cut off your chances of working on the editorial board of a prestigious journal by constantly making yourself unavailable for duty. Editors develop an attitude towards those academics who are routinely unavailable but understand when there is an occasional "no" from an otherwise active-duty scholar.

Being able to say "no, not right now" is a respectful and artful way of dealing with a request especially in a month or semester when you are very busy, for example, with writing a multi-million rand grant proposal. Your peers will understand that.

In short, do not say "no" to everything but do say "no" to most things when such external demands begin to distract you from your own research agenda and your core academic work. There are no firm rules here. Who you are and what you can manage at any point in the academic calendar will differ from one person to the next. You are best positioned to be the judge of your workload and availability for academic duty.

Three, *choose what to take on*. Of course, you will not say "no" all the time but when you do participate in academic duty, it is important to use your discretion. Only take on those tasks that directly benefit your own scholarly advancement. If a manuscript presents research on a topic that you are working on, take on the assignment because there might be

insights you had not thought about or references you were not aware of. In other words, you get something out of the task. Academic duty works best when both parties gain from the engagement. In other words, choose tasks in which you have direct experience and relevant expertise. When you take on assignments one or more steps removed from your expertise, it takes longer and it is more difficult to perform. There will of course not always be a perfect fit between the task and the expert being approached, but, as far as possible, try to find a fit between what you know well and what is being asked of you to do. In this way you not only can say something authoritatively, but you invariably learn in the process as well.

In this regard, always be on the lookout for academic tasks that stretch you intellectually and geographically. If all your assignments are local, then there is little benefit to you. Seek invitations to review manuscripts from highly rated overseas journals or serious academic publishers. It is completely acceptable to make yourself known to editors and publishers through, for example, being recommended by accomplished scientists or scholars working in your field. One of the most important roles of a supervisor and mentor is to do precisely that. Once again, you are choosing and, in this case, actively so.

Four, *negotiate*. "No" is only one option in the response to pressing academic duty. You can choose when and how to participate as well. Internally, when the HoD asks you to take on service duties like chairing a departmental committee on promotions or leading the preparation for an accreditation audit from an outside agency, you can put forward terms. For example, you could say that you will take on these demanding duties (that everyone else is avoiding) but require the following semester to be free of teaching duties so that you can catch up on your research.

Or the journal editor once again asks you to review a manuscript, the fourth of the year with the possibility of more coming. It is a prestigious journal with a high impact factor and so declining without reason is not in your interests as a new or even established academic. One way of negotiating is to state the terms up front: that you would be honoured to continue being a reviewer, but can this be limited to two manuscripts per annum? Any editor would have that kind of commitment as opposed to complete withdrawal. That keeps you connected to a top journal, but on your own terms.

What academic negotiation does is put you in charge of that invaluable commodity called *time* and steers you away from feeling overwhelmed

and out of control of your academic work. You can negotiate terms throughout your career. As a dean and later vice-chancellor, I never signed a contract without an agreement that I would work my 18 hours a day for four years, but thereafter required a year off to ensure that my research and rating did not suffer from being consumed by the tasks of administration, management, and leadership.

In this regard, a home truth: you are in a much better position to negotiate when your academic record is exceptional and your academic duty beyond question. In other words, the academic credibility of the negotiator is key to a successful agreement with the person you report to. The converse is unfortunately also true: you cannot negotiate on the basis of a mediocre curriculum vitae and a reputation for laziness.

Of course, the real world is not always as rational and straightforward as in the examples given. Sometimes a short-sighted or immature HoD might simply refuse any negotiation and play the authority card. That sometimes happens, unfortunately, and academic careers are destroyed in the process by a leader who simply is not interested in the bigger picture, but consumed only with the here-and-now. There are two options available in such contexts.

One is to appeal to the next level of leadership (the dean, in the example) and the other is to set the terms at the very start of your appointment to an academic position. Going above the HoD of course carries risk. A bully can make your life miserable in an institution that does not share your commitments. There is only one other response to this matter: if you can, choose your university and your department carefully to ensure that you work in a respectful environment that invests in its academic (and administrative) staff as a matter of course.

Five, build a *support system* around you. The only reason I could lead a faculty and later a university and still maintain a good research rating is simply because I made plans to have research assistants and support staff in my team. So much of research is basic-level work that others can do once you have decided on the research questions, designed the research plan, and participated in the data collection, analysis and writing-up of the work.

When I edited a journal, the key was to have a super-efficient team of administrators so that I and the academic team could focus on the quality of the submissions and the editorial commentaries. The coding of data, once you have completed the first ten or twenty interview transcripts,

can be done by your postdocs. Your honours students do the running around to collect and organise the hard and online bibliographic sources that you require. All of this support frees you up to do things like academic duty whether on- or off-campus.

This obviously means that you either have to negotiate for budgetary support internally to finance such a support system or make such support a line-item in every one of your grant proposals. You work for the support money, in other words. But when you are tied up in doing the most basic tasks in research, your time for doing academic duty will be severely constrained. This takes long-term planning, given the national environment in which research budgets have been drastically reduced both within most universities and on the part of research funding agencies.

Six, *take regular breaks*. Your ability to do academic duty depends on your physical, spiritual, and emotional health. The university will not come to your funeral. Everyone of course has their own academic biorhythms, so the nature and frequency of the breaks you take cannot be prescribed. What is important to know for all academics is the importance of stepping back from time to time in order to recharge body, heart and mind. Academic duty is a lofty commitment; but it matters little if you lose your health in the process.

It helps in this regard to set timelines for different academic duty commitments. A wise academic will, for example, offer three years of active-duty time to serve on an editorial board or a two-year stint as a member of the research-rating panel for the discipline. This management of non-core duty time will have positive health consequences if done well. All of which is to say that academic duty is an independent variable completely under your control as a new scholar in the academy.

Seven, *choose something you enjoy and can become really good at*. While it is important to be knowledgeable and skilled in the range of tasks that comprise academic duty, it is also wise to become an expert in one of them. There are senior academics who are highly skilled in their understanding of the qualifications authority and the rules that govern the approval or new qualifications or the intricacies of RPL (the recognition of prior learning). There are others, like the academic engineer, who decided to become an expert on the accreditation process followed by the Engineering Council of South Africa, so that he could advise his colleagues in his own faculty and at other universities. That kind

of expertise in one aspect of academic duty enhances the standing of that person among her colleagues in the discipline and also allows for possible consulting work outside of the university or a job at the council itself if such a shift was desirable after years in the academy. At the same time, that academic plays a vital role in maintaining, and indeed enhancing, the standards for the engineering profession.

The trick is to choose one such domain of academic duty in which to become really good. More than that would probably become onerous given the core duties of the department. So, the academic now has a broad view of all the disciplines of academic duty and an in-depth knowledge of one of them.

Eight, *look for professional advancement opportunities in the course of performing academic duty*. It is not unusual for an academic accountant or professor of medicine to develop expertise in an element of academic duty (previous point) in such a way that the reflection on that task itself becomes a publishing opportunity in a professional journal. Accountants in South Africa are accredited by the South African Institute of Chartered Accountants (SAICA) and medical doctors by the Health Professions Council of South Africa (HPCSA). Both of these professions have professional journals less concerned with mainstream academic research but with advancing professional knowledge in allied disciplines. This kind of writing and publication is also an opportunity for professional enhancement outside of traditional journal outlets. Some of these professional journals are accredited for subsidy purposes, others not. It is important, therefore, to establish the journal's status as a young scholar, but over the course of time, you might find such a publication outlet an important vehicle for communicating with colleagues regardless of the potential for subsidy income.

Nine, *stretch yourself* in seeking out opportunities for academic duty. Make sure that in your early to mid-career you have served on at least one international conference planning committee in your field. The same is true for an international journal. Those networks of connection are invaluable for growth, even if the distance adds to the work and time commitments, for example, different time zones. An 80:20 split would be regarded as a good way of distributing local: international duty.

Academic duty is, once again, a platform for connection but also recognition for an academic in the Global South. It enables other things to happen in the advancement of your career and once those networks

open up, the opportunities are endless. Just like academic duty at home gives the young scholar access to national icons and opportunities, so too does academic duty abroad allow for rich interactions and new learnings that would not be possible otherwise.

Ten, academic duty is a profound way in which *to strengthen the South African (or whichever country you work in) academy*. By applying demanding standards in the elevation of colleagues to the professoriate, your report communicates a powerful message to the institution about what is acceptable and what is not. Sloppy reports whether for an academic rating agency or a national journal do little to elevate the university system. In fact, they simply contribute to the mediocrity that threatens the academy.

This perspective seeks to convey that you should see academic duty not simply as boxing-ticking mundane criteria for meeting minimum standards but as a strategic intervention in the higher education system. That system is under pressure because of a combination of declining state funding in real terms and increasing subsidy returns for performance outputs. The increase in the value of outputs for doctoral graduates and journal publications have led to all kinds of academic fraud, such as publishing in predatory journals. It is in this context that academic duty becomes critical to the overall health of the academy.

In conclusion, the argument made in this chapter is that academic duty can be harnessed to contribute to, and even elevate, the scholarly pursuits of a new entrant into university life. There are certainly pitfalls that should be avoided, and most important among those is the threat of distraction and the demands of time. What has been demonstrated are specific ways of thinking about academic duty and tactics that could be deployed to ensure the thriving of a new scholar even as they perform their non-core work.

Section V
Becoming an Editor

"Editing a journal can provide a great opportunity to grow your network, and become established in your field."

12

Editing a Scholarly Journal

Michael Cherry
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Editing a scholarly journal can be a lot of fun and can help your career in many ways. But it is not something to be undertaken lightly and has the potential to be a nightmare if you do not plan it properly. If you do it well, it can only enhance your reputation, but if you make a hash of it, it will expose your faults.

An obvious advantage of editing a journal is that it can provide a great opportunity to grow your network, and help you become established in your field. It can be very interesting work, as it should give you exposure to the publishing industry; a wide coverage of scientific literature, including the latest findings and techniques; and an understanding of the vagaries of the review process. All of these should help you in getting your own work published.

The main disadvantage will be the time that it will most certainly consume if you do the job properly. I would not advise doing it too early in your career – not until you have had quite of bit of experience in reviewing manuscripts. And probably do not apply to become an editor-in-chief until you have had some experience handling manuscripts as an associate editor.

If you are joining a journal as an editor, talk to the other editors, or members of the board, and ask them whether they enjoy working for the journal – just as you might do before joining a research group. Then

try to figure out whether you would enjoy working for the journal, and with them.

If you are appointed as an editor-in-chief, you will most likely have some say in the appointment of associate editors, either immediately – if their terms of office run concurrently with your own – or during the course of your own term (if they do not). In the first instance, it would be unwise to replace the entire team of associate editors at once, as they will have institutional knowledge of the journal and experience that may very well be useful. In selecting new associate editors, it is important to choose people who are reliable, who can meet deadlines, and whose judgement you trust. You will have to work with them for a long period of time, unlike a reviewer, who you can simply not approach again if they do not rise to the job. You will also need to take into account the need for different fields of expertise, as well as gender, racial, and geographic representation. After all that, you will find that different people are just better at different tasks, so you will need to think about which skills you are able to access, and which you will need to source. This remains a moving target as people move on.

Journal metrics, such as impact factors, are another factor you will have to consider – many people are obsessed with them. Make sure you know how they are calculated, and which ones your journal owner considers important. If they have any specific expectations in this regard, make sure you know what they are. And do not take on the job unless those expectations are realistic.

As editor-in-chief, make sure that the remit of your journal is clearly defined – does it have what in ecological terms would be described as a "niche"? This is particularly true if you are the founding editor of a new journal. Who is going to read your journal and submit manuscripts to it? Researchers across fields or researchers in a particular discipline? If the latter, how narrowly are you going to define the discipline? Is your niche a global one, or confined to research conducted on a particular continent or in the southern or northern hemisphere?

Depending on what this niche is, should the journal be open access or accessible only to subscribers, or a hybrid journal? Open access is in my view generally desirable, but it may be much more important in some fields than in others. For example, if yours is a conservation journal in a developing country, open access could be very important as many of

your potential readers may work for non-governmental organisations (NGOs) and thus not have access to an academic library; this is less likely to be the case if you are a journal in theoretical physics.

If you are going to be open access (or at least be a hybrid journal with some open-access articles), then you will have to charge authors for publication costs, unless your journal is run by an academy or other body which subsidises these costs. Then the issue arises – can your potential authors afford these publication costs? Again, this may depend on the remit of the journal and where most of the potential authors are likely to be based. In many Western countries, for example, publication costs can be written onto a research grant (and some funding agencies even require this to be the case as they insist on open access), but this is not the case in developing countries. In South Africa, the National Research Foundation (NRF), for example, does not consider publication costs included in grant applications. Paradoxically, it is often in developing countries, where open access is most urgently required, that it is difficult to fund. This can lead to under-exposure of work done in poorer countries. But the positive thing about open access is that it allows research done in wealthier countries to be freely available to poorer ones.

Usually an editor-in-chief screens all manuscripts submitted to a journal and allocates each of them to an associate editor to handle, that is, to select reviewers and make a decision about. Often either the editor-in-chief or the relevant associate editor (if this task has been so delegated), or the two together, can decide that a manuscript will be rejected without sending it out for review. This is usually for one of two reasons, either because the manuscript does not fall within the journal's remit; or because the editors do not believe that its findings are sufficiently noteworthy. The latter reason is more commonly given by interdisciplinary journals like *Nature* or *Science*, where a very high percentage of manuscripts is rejected without review – not on the grounds that they are technically unsound, but because their reported findings are not considered to be of such high significance that they deserve to be read by the broad scientific community.

Remember this can be very disappointing for authors. Imagine that you have spent years doing some research of which you are particularly proud, and then months preparing a manuscript on this work for a top journal. You finally submit it, and the same day – or week – you get a letter from an associate editor rejecting it without review. This is what

happens to about 90 per cent of manuscripts submitted to *Nature*, for example. But if you think about it, that editor will read a large number of manuscripts each month in your field, and should be in a very good position to judge the significance of your work.

If a manuscript is sent out for review, your next job as an associate editor will be to identify reviewers for it, and keep on inviting them until the requisite number of reviewers (this depends on the journal's policy) agree to undertake the task. Once the reviews are in, you need to make a recommendation to the editor-in-chief as to whether to accept the manuscript, or send it back to the authors for revision, and a possible further round of review – depending on how substantial the required revisions are.

Reviewers should comment on all aspects of a manuscript – the significance of the work, the quality of the writing, the figures and tables and any other illustrations, the analysis of the data, and whether the results and conclusions are appropriately inferred from the data. They also make a recommendation on the acceptance or rejection of the manuscript, with or without revision. Some journals use a standard form for reviewers to cover these; others simply ask for reports to cover the same – usually divided into comments which can be seen by the authors, and comments reserved only for the editors. Standard forms, in my view, make the task of the editors easier.

The editor-in-chief is ultimately responsible for what is published in the journal, and their decision is final. But it would be unusual for a decision to be made which ran counter to that of the responsible associate editor, without discussing it with them first.

Authors may question a decision, either formally, if the journal has an appeals process, or informally, by writing to the editor. You would be wise to listen to their arguments and reconsider your decision, as it is quite possible that you, an associate editor, or a reviewer, may have made a mistake (or may even have been prejudiced in making the assessment). But do not allow yourself to be bullied – if you feel, after re-assessing the evidence, that your decision is correct, then stand by it. Well-known scientists often protest loudly when their work is rejected – and often the better-known they are, the louder the protest can be. It can be daunting for a younger and less experienced editor to face up to this, so make sure you get your ducks in a row. Similarly, a situation may arise where an article published in your journal may be a source

of contention. Do not rush into making any public statements about the controversy until you have carefully considered all the evidence about the article and the controversy that it has created. It is your prerogative alone to make any statement (or not) as you, as editor-in-chief, are ultimately responsible for the contents of your journal, and no-one else. When I was editing the *South African Journal of Science*, some elements in the Afrikaans press got very agitated about an article we had published. The article touched on the positive social effects, post-war, of the British government having (belatedly) sent out health inspectors to the concentration camps in the South African War, in an effort to address the appalling conditions which had existed in these camps, which had caused the deaths of many women and children. Our publisher, who was responsible only for production aspects of the journal, went ahead and issued an apology, without consulting me, which was completely inappropriate. I spoke to the author about it, and she pointed out that her grandfather had not only fought on the Boer side in the war, but had been a "*bittereinder*" – someone who refused to surrender towards the end of the war and continued to fight a guerrilla war. The article had been meticulously researched and was pointing out that tragic circumstances can sometimes have unexpected benefits.

When I was acting as editor for book reviews at *Nature*, I edited a review which had been commissioned by my predecessor, the late Horace Freeland Judson, a very eminent writer and historian of science. The review commissioned was of a memoir, entitled *Girls, Genes and Gamow*, by the Nobel laureate Jim Watson. The reviewer, who had written a well-known and meticulously researched book on the history of molecular biology (*The Eighth Day of Creation*), questioned the author's interpretation of events as recorded in the memoir. Luckily, I had taken the advice of my (very wise and experienced) sub-editor, who had suggested that we refer the review to a libel lawyer before publication. The lawyer had cleared the review as not libellous, but the author was deeply unhappy about it and protested to the editor-in-chief, who, after interviewing me about what had transpired, decided to apologise in the journal to Watson. Being a British journal, this led to his featuring in the "Street of Shame" column in the satirical magazine *Private Eye*.

Another task of the editor-in-chief can be to oversee the front (sometimes called the "magazine") section of the journal. This could include news articles, book reviews, commentaries, obituaries and

correspondence. These articles do not report original research, and do not have to be reviewed, although they can be referred to third parties for an expert opinion. If the journal has a large front section, sometimes different categories of articles are the responsibility of different editors. As editor-in-chief you are always responsible for the content of leader articles, which express the journal's views on any current issue. The writing of leader articles can be farmed out to other editors, but the editor-in-chief is responsible for approving their content. A good front section can add a lot to the journal – if readers are attracted to the journal because they find it interesting, they are already on its homepage (or have picked up a copy in printed format) and may well browse all its contents.

But be warned – often it is the front section of a journal (if it has one) that attracts controversy, as in the above example. In terms of ownership, journals usually fall into one of three categories. They are either owned by publishers, professional societies, or national academies. Controversy can bring you as editor into conflict with your proprietor or an editorial board which may have been set up by it to oversee the journal. If your journal is owned by an academy, academies can be very cautious in seeking to not alienate the governments that fund them. If it is a commercial enterprise, then the owners may be cautious about alienating potential advertisers. Journals owned by professional societies may be hesitant to alienate their membership. I am not suggesting that you as an editor should pander to these interests – far from it. But you should be aware of these constituencies and their likely reactions.

But I would strongly advise that any article – however short – which reports original research, should be sent for peer review. The *South African Journal of Science* was the subject of a major controversy recently arising from the publication of an article by Nicoli Nattrass, reporting the results of a questionnaire-based investigation among students at the University of Cape Town (UCT), titled "Why are black South African students less likely to consider studying biological sciences?". Universities require studies which involve human subjects – either in a clinical or non-clinical context – as well as vertebrate animals, to be screened by ethics committees before they are conducted. The university had granted ethical clearance and thereby accorded the study legitimacy, at least in terms of its execution. The article was accepted by the journal as a commentary, despite it reporting original results (for which it required ethical clearance), and this, in my view, was a mistake.

The second lesson from this episode is once again that editors should refuse to be bullied. On publication, UCT's Black Academic Caucus wrote to the university's executive demanding its retraction. Correctly, this request was declined by the editor-in-chief, as retraction is the prerogative of the author, unless the results have been shown to have been falsified. But the journal responded – appropriately, in my view, by devoting the best part of a subsequent issue to contributions relating to the controversy stirred up by the article.

If a journal is not commercially owned, in which case production is usually done in-house, it is often contracted to, and managed by, commercial publishers in terms of publishing agreements. This can include management of a website through which manuscripts are submitted, and managed, often through either generic or customised software. Find out which management system the journal uses, and whether or not it works well. If you take on the job, you will need to invest some time in getting familiar with it. Sometimes this service can include sub-editing, the process in which the final article is checked for grammar and style. You need to be very careful, if this service is contracted in, that someone competent is doing it. In some systems it is done using artificial intelligence, which is not as reliable as a good sub-editor. The alternative is to employ a sub-editor on your own staff to do this job. The next step is for the article, together with any graphs, figures and illustrations, to be laid out, and proofread before it is published on the journal's website. Again, proofreading requires someone competent to do it, so be sure that either your publisher can do this properly or that someone on your own team (it could be the relevant associate editor or the sub-editor) does it.

Finally, if your journal is printed as a hard copy, the publisher usually organises this with the printers, where it is printed and bound before being distributed. Not all journals produce hard copies these days. My own feeling is that with specialist journals this is unnecessary, as most readers will download articles that they require by using a search engine on the web. With multi-or interdisciplinary journals, by contrast, I like to browse a hard copy of a journal as almost invariably something interesting I was not looking for crops up. The corollary is that hard copies use paper and are expensive to produce and distribute. Members of professional societies, in particular, may like to read hard copies of their journals, so do not abolish these without consulting the membership first.

Professional societies tend to own specialist journals and national academies tend to own more broad-based or multi- and inter-disciplinary journals. For example, the journal *African Zoology* is owned by the Zoological Society of South Africa; and the *South African Journal of Science* is owned by the Academy of Science of South Africa (ASSAf). The councils of these bodies, respectively, are responsible for appointing the editor-in-chief of each journal. In the case of commercial publishing companies, management will appoint an editor-in-chief and in consultation with that person, the associate editors.

It is axiomatic that if you were to apply to be an editor-in-chief, then you should be competent in assessing manuscripts in the field which the journal covers. But particularly in the case of a multidisciplinary journal, you would expect to have an editorial team with diverse experience to assist you in this task. Likewise, in the case of a specialist journal, the editor-in-chief will usually make sure that the team includes editors competent in handling manuscripts on all aspects of the journal's remit.

In the case of a journal such as *Nature*, which is published by the large commercial company Springer-Nature, all of the editorial jobs are full-time. So deciding whether to accept an editorial position in such a case would involve a career change from academia. But most editorial jobs at journals are part-time, so taking one up will place demands on your ability to manage your time. In my experience, time management is not as easy as it sounds. I also do not claim to have got it right and offer the advice which follows in that spirit.

Editing a journal takes time, so you need to weigh up the benefits of the job as related to how much time you will lose for teaching, research, and administrative and outreach work that you undertake as an academic. As an associate editor, your workload should not be too onerous, but this is a real consideration if you are offered a job as an editor-in-chief, which might take 20 to 40 per cent of your working week.

Most universities will have some guidelines about how much time academic staff are allowed to spend on work outside the university. Usually this is a maximum of 20 per cent, or one day per working week. You need to make sure that the time required by your editorial job, together with any other outside work you may be doing, falls within this. If, for example, you are doing some consulting or freelance writing, you may need to give this up if your editorial position takes a full day of work each week. Your academic duties will not be reduced

on account of you taking on editorial work. You may or may not receive some remuneration for your editorial post, depending on the journal. If you are spending a considerable amount of time working on the journal, either as an editor-in-chief or as an associate editor, then make sure you receive an honorarium commensurate with the effort you are putting in. This would not apply if you were handling only a few manuscripts each year.

If the editorial job requires more than a day a week, then you may need to negotiate either a buy-out of some of your time from the university, or a reduction of your own academic post to less than a full-time job. Say for example, the journal which employs you requires 40 per cent of your time, they could pay your university 40 per cent of the costs of your package, and in turn your teaching load could be reduced by 40 per cent. In that case, you need to negotiate with your university to ensure that some of these funds (they will need to retain some for your pension and other benefits), flow through to your department to provide teaching relief. Your colleagues will certainly get fed up with you if they have to do it on your behalf. Under these circumstances, you should expect that your research productivity will also drop, and make necessary arrangements for your performance assessment to be adjusted accordingly.

Whatever the case, if you become an editor you will need to take care that it does not become all-consuming. It is likely that you will need to manage your time better to ensure that you have enough time for your academic duties. I think that the variety of work involved (teaching, doing research, providing mentorship, carrying out administrative duties, sitting on selection committees, and engaging in outreach activities) is both the blessing (all of these tasks can be interesting) and the curse (because you have to juggle them) of academic life. Editorial work adds another element to this mix.

One strategy is to pick a time slot in the day that does not clash with the activities and allocate it to your editorial responsibilities. Choose a time when you are not optimally productive doing something else, as a lot of editorial work is fairly routine. So, if, for example, you are most productive in terms of doing your own writing in the morning, allocate a set time after lunch each day to do your editorial work. Depending on your temperament, you may elect rather to spend an entire day each week doing editorial work, or to do it on days when you work at home and do not need to be in your office.

The media – and social media in particular – can play an important role in promoting your journal. If you as the editor-in-chief either do not want to, or lack the skills to fulfil this role, appoint someone else to do it – either a media officer or create a specialised role for an associate editor.

Finally, a word with regard to leave – remember, there is no time of the year when manuscripts cease to be submitted to a journal. So, if you plan to take an extended holiday, go on a long field trip, or take sabbatical leave, you will need to find time to deal with your manuscripts. Everyone now wants to see their work in print (at least on a screen) as soon as possible. There is a tremendous emphasis on the turnaround time between submission and a decision being made about a manuscript, and authors do not expect their manuscripts to sit on the desk of an editor awaiting a decision for any extended period of time.

Acknowledgement: I would like to thank Kate Buchanan, editor-in-chief of *Emu*, for her characteristically insightful comments and suggestions on a draft of this chapter.

13

Editing a Scholarly Book

Jonathan Jansen
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At first glance, this sounds like a very easy task. Get a dozen or more academics to contribute a chapter to a book. You edit the book with relatively little effort from your side. You write a short front section introducing and summarising the individual chapters. Send it to the publisher and your name appears on the cover. To be sure, there are academics who do this simple kind of compilation of other people's work. But this is not a scholarly book by any stretch of the imagination.

To begin with, it is not a good idea to start your academic career with an edited book. It is, as you will see, an exceptionally difficult scholarly task. What you want to do first is to produce your own academic book, whether it is a good dissertation turned into a monograph or something more advanced that proves you can do this on your own. Purely as a practical matter, an edited book while still building a career really does not add much value to your own, independent status as an emerging scholar. Best leave edited books to seasoned scholars who have both the convening power to call together the best thinkers in the topic or field of interest and the skill levels to do much more than paste together chapters between two covers.

I contradict my own publishing trajectory in saying this. I had finished my PhD in less than the four funded years and so decided to put together a book called *Knowledge and Power in South Africa: Critical Perspectives across the Disciplines*. It was both a brave and a premature

move, since I had produced only journal articles up to that point. But I was so fired up by activism at that point, and had good training from top social scientists at my then university, that I wanted to show how race, class and gender thread through disciplines such as sociology and psychology on the one hand, but also dentistry and urban planning on the other hand. It was, in my mind, an anti-apartheid project drawing on critical scholars from South Africa dispersed around the world. I am glad I did it, but the book lacked the kind of depth and finesse that a more mature scholarship would have offered to an edited collection.

It should be noted at this point that edited books are much more common in the humanities, social sciences and education than in the natural, biomedical and engineering sciences. In the latter group of disciplines, the closest form of publication to a book is edited conference proceedings which enjoy the same status and value in subsidy funding. This chapter is therefore written with the first group of disciplines in mind.

Note however that conference proceedings have similar but sometimes different criteria for funding purposes. For example, in South Africa the papers from a conference require peer review; must contain original research; should be drawn from multiple institutions; and must have an ISBN or ISSN number (drawn from a University of Cape Town [UCT] website link titled *Conference proceedings criteria for submission*).

What are the ten essential things you need to know about editing a highly valued scholarly book? I will use examples from my own recent experiences in this regard.

First, you need *a compelling question* around which to organise the edited volume. An edited book for the sake of an edited book clearly has little academic value. At the height of the #RhodesMustFall moment on university campuses, I noticed there was quite a significant debate among scholars and that contentious arguments were often marked by more heat than light. I therefore thought it would be a great idea to bring together scholars on all sides of that debate to give intellectual and indeed political direction to an important moment. South Africa had never framed its own knowledge struggles around decolonisation and so I thought this was an opportunity to bring the best minds to deliberate on the meanings, methods, motivations and indeed the prospects of decolonisation in this part of the world. In other words, a compelling problem.

Second, you need *an intellectual framework* for the edited monograph. For me that framework would be *the politics of knowledge* since this broad and yet specific focus had animated my scholarship for a long time. In other words, as editor I had to frame the book within an area of personal expertise that had been honed over decades. You cannot and should not edit a book outside an intellectual frame in which you have deep and intimate knowledge otherwise your capacity for scholarly (as opposed to administrative) editing will quickly be laid bare in the book. The intellectual framework obviously directs you towards certain authors and not others, those who have already written and can write within the frame that you describe for the book.

Third, you need an *organising framework* for the book. That is, how will the book be organised to achieve optimal coverage of the topic. The intellectual frame is about the conceptual or theoretical idea that informs the collection; the organisational frame is about the ways you "put together" the different contributions so that there is internal coherence to the volume as a whole. For example, decolonisation is a broad subject and can cover any number of potential topics. So, you want a frame around which to invite only those chapters that would "fit" within that organising schema.

Once clear in your mind, that framework selects and deselects potential contributions. Going back to my example, I knew that I wanted historical perspectives on the origins and evolution of the term itself, decolonisation. Where did this idea come from and how did it change over time? I also knew I wanted comparative cases, in part to deal with our tendency towards exceptionalism, namely that what happens here is somehow unique to the South African experience. I had a critical view of the rhetorical excesses of decolonisation and so I wanted to make sure that this work was not simply a conceptual or political exercise unthinkingly aligned with the student-protest moment. At the same time, I also wanted to have positive cases of decolonisation-in-practice that made the case for the transformation of knowledge real. Again, as an expert in the field you would know which authors to approach for which category of contributions that sit within your organisational frame (see Chapter 4).

Fourth, you need to find *a potential publisher*. This is hard work. You begin by researching publishers who might be attracted by your particular book focus. For example, an academic title featuring the word "decolonisation" would more typically be taken up by academic

publishers like Wits University Press or Duke University Press. You would not find much interest from general book publishers like Jonathan Ball or Tafelberg because they lean more towards non-academic titles, with one exception: when the author is a superstar in the academic galaxy and can write about a dry and distant event in history in an exciting and accessible way. Think of the work of the social historian Charles van Onselen. For example, his book *The Night Trains* about the drama of transporting Mozambican mineworkers back and forth from their homelands to the mines of the Vaal reads like a thriller.

In any event, an edited volume is out of the question for general book publishers and increasingly also for conventional academic publishers. Edited books do not sell well and they are often poorly put together in the first place (hence this guide). A single story by a single author on a compelling topic suits publishers across the board. Still, for every book, edited or otherwise, there is a matching publisher even if you have to adjust your expectations somewhat. What does this mean?

Of course, it would be wonderful to publish your edited book with a high-end academic publisher like Cambridge University Press or the University of Chicago Press. But with your first book, you may want to start more modestly with a national publisher like UCT Press or a more accessible international publisher like Routledge. Naturally, other considerations also come into play such as whether the subject of your book is more likely to resonate with local rather than international audiences, in which case you choose a national publisher.

How does one find a publishing partner? You begin with an internet search. Go to the publisher's website. Read carefully about their requirements and what is required in the book proposal (more in a moment). Check their recent and forthcoming titles, since this gives more than a hint of current publishing interests. Then, ask around. Experienced authors and editors would know where to go for what kind of edited book. Crucially, such informed persons will also have a contact at a particular publisher that you could be introduced to. This is crucial if you are not yet an established or well-known author/editor for these warm-bodied introductions are much better than only uploading a proposal to a website. The personal introduction with the uploaded proposal works best.

Fifth, you now need to *write an edited-book proposal*. The required information is more or less the same across publishers. Purpose of the book. Audience. Length (total word count, approximately). What

niche it fills in the field of inquiry. Competitor titles. Editor and individual author credentials. What each author/chapter will cover in brief. Potential marketing opportunities. And sample chapters, if not the full manuscript.

Then you wait for the decision which depends on two or more experts weighing in on the proposal. Sometimes, the editor at the publishing house might say no before even sending it out for review for reasons that include the assessment "that this book does not fall within the scope of our current work".

Take your time with the book proposal, especially in the case of an edited collection. Send out the draft proposal to top scholars in the relevant field for their comments and suggestions. Make sure the chapter summaries of the individual authors contain quality content that coheres with the intellectual frame of the book and with the other chapters in the collection. The book proposal is also an opportunity for the publisher to check out whether you can do this high-level work of editing a special collection. Whatever you do, do not rush the process of completing the book proposal.

Sixth, you need to *communicate as often as possible with your authors*. This is where most editors fall short. Communication serves two purposes in this regard. On the one hand, it keeps authors informed at each stage of the process from conception of the book idea all the way through to the delivery of their personal copies. On the other hand, frequent communication keeps the authors tightly bound to the deadlines and deliverables of the book project. Authors of this caliber are busy people with competing writing assignments. A good editor is aware of this and ensures that their book is always top of mind. At least once a month, think of something to say such as "the chapters are coming in" or "we have good news on a potential publisher" or "here is a sample chapter for your consideration".

Seventh, the idea of *a sample chapter written by the editor(s)*, sent early on to the different authors, is a powerful way of setting the standard to which the other contributions should aspire as well as providing the intellectual frame within which they should be written. In other words, the intellectual framing chapter should ideally be the sample work sent out early on.

That chapter would also constitute the opening chapter to the edited book, a vital element often missing in edited collections. It is very important to take this task seriously. If your opening chapter as editor(s)

simply summarises the chapters to come, then you are not producing a scholarly book of high quality; you are simply an administrative editor. This is where you lay out the intellectual arguments for the theme (e.g., the politics of knowledge in decolonisation), survey what is already known from the literatures on the subject and indicate what the new knowledge contributions are that appear in the chapters to come. Now you are a scholarly editor of a grand new book. What this also means is that you are fully immersed in the chapters of your book.

I would also recommend that as editor you write a substantive chapter in the book itself, quite apart from the framing chapter at the beginning and the synthesis chapter at the end. This means that you have something to say about the subject of the book – why else would you have brought together great minds for this purpose? Such a chapter also allows your colleagues to weigh in on your own writing and to see how you manage critical feedback in the process. It is also good for you in terms of intellectual and financial recognition to produce a solid empirical or conceptual work of your own.

Eighth, the *level of intellectual engagement with the individual chapters* is what often separates a scholarly editor from an administrative editor. You have to read each chapter often and thoroughly. You have to ask questions of each author about claims and assumptions, theory and methodology, evidence and argument. You are unlikely to have the experience and expertise to conduct this high-level engagement if you are a beginning scholar, as suggested earlier. Obviously, this kind of engagement requires considerable tact and skill, especially with younger authors who may lack confidence and more experienced authors who might not.

One of the most valuable things I learnt early on was to find the resources to bring all the authors together in one place at the start and if the funds are available, towards the end of the book project. This kind of gathering creates social and intellectual synergies among the group of authors. They come to understand the intellectual and organisational frames of the book. They share resources and ideas. They become more conscious of areas of potential overlap in the chapters. They are able to give vital feedback on the emerging and later draft chapters. Most of all, there is a community of scholars that often develops among those who might not have known of their colleagues working in the same area of interest. These kinds of synergies cannot be achieved in the same way through online connections in the authorship group.

Ninth, *the editors' role in the peer-review process* now becomes a critical function as the manuscript moves towards completion. You will soon find that author personalities differ considerably and it is important to temper the feedback from external reviewers so that it can be absorbed by the more sensitive members of the collaborative. It might even be necessary to prepare the authors for the nature and meaning of feedback and not always give that feedback in its original form where a reviewer might be unnecessarily harsh. At the same time, being able to deal with criticism from peers is one of those inescapable learnings that all scholars will be exposed to. Sometimes even more accomplished scholars find criticism difficult to deal with. In short, a competent editor would mediate and moderate feedback to the authors.

Now for a very difficult matter that any editor will face. What happens when the draft chapter for an edited book is not good enough? That is, when all the reviewers recommend against publication? It is the responsibility of the editor to communicate that decision as sensitively as possible to the authors concerned. Where the chapter can be salvaged and resubmitted for peer review, it should be done. But where the state of the paper is such that it cannot be redone, especially with looming deadlines, it is best to let the author go. There is, however, one way to prevent a late decision of this kind: identify the weaker contribution much earlier in the process to prevent many hours of subsequent work only to then release the author from the project.

Tenth, now that all the chapters are in, the editors face the single most important challenge of all – *writing the final synthesis chapter at the end of the book*. Most edited books do not have such a synthetic, close-out chapter so that the book ends bluntly with one of the author contributions. The final chapter, in my view, is what separates a world-class edited book from just another compilation of other people's research ideas.

Whereas the first chapter frames the book (this is what it's about), the last chapter launches the book (this is what it contributes). At this point the editors would have read the chapters closely and distilled from each one of them the key ideas that emerge from the separate contributions. The task now is to bring these chapters into conversation with each other in order to see what new knowledge they generate as a collection to what we already know about the subject. To use our example, what does a politics-of-knowledge perspective (the framing) allow us to see

or grasp, on the basis of the chapters delivered, beyond what each individual chapter contributes?

I call this a generative synthesis. It is obviously more than a summative account of the chapters. It looks for new knowledge that comes about as a result of the collection of chapters. That new knowledge can be conceptual or empirical, but it means that the collective advanced our knowledge beyond what is already available in the literature. Needless to say, the editors would need to know not only the contributing chapters inside out, but also the extant literature on the subject under investigation.

Here is an example drawn from our recent book on decolonisation. Much of the writing on the subject of the decolonisation of knowledge divides the world into a powerful West and a dependent Africa. Or in the language of the day, the Global North and the Global South. Knowledge is produced in the North for consumption in the South. The South provides raw data, the North generates polished research papers. Those in the Global North are the famous research professors while those in the Global South are the research assistants, the second or third authors in publication.

What the collection of chapters in our book demonstrated was how anachronistic these intellectual dependency theories appeared in the second decade of the 21st century. South African scientists were leaders among their peers in the world, something since borne out by the power of resident technologies for doing genomic sequencing and the discovery of the omicron variant. Our scientists and laboratories are also spaces now frequented by students and researchers from other parts of the world, given the sometimes unique research questions and contexts that South Africa provides. *That* was a new insight comprehensively made in the decolonisation book and offered a much less deterministic way of understanding knowledge production between the North and the South of the world science system. An edited book enables such new insights to emerge more clearly.

With those ten vital lessons covered, what else can you expect as an editor of your first scholarly collection? Expect to work much, much harder than when writing a single or even co-authored monograph. Keeping all your authors on-task will not be easy, as already pointed out. Inevitably, some of your authors will be stragglers and others might simply not deliver despite the early promise of participation.

Walk that fine line carefully between encouraging delivery and being an overbearing nuisance; it can tick authors off when you seem to be nagging them. A regular dose of humor in your communications could help as well as an expression of broader interest in the contributing author beyond "where is your paper".

This reminds me that once you have everyone on board, set written dates and deadlines for each stage of the development of the chapters. A typical sequence is indication of participation; abstract of paper; first draft of paper; editorial feedback; revised paper; external reviewer feedback; revised paper; final draft; final feedback; final paper. A week before every deadline, send a gentle reminder, a nudge.

I find it useful in this regard to indicate the papers already received; it has the wonderful effect of reminding the stragglers that they are behind the curve, possibly delaying progress without actually saying as much. Some authors actually appreciate that kind of push from editors both as reminder and encouragement to "get on with it". I certainly do when my role is that of contributing author.

One other role that a good editor plays is that of a resource to the contributing authors. Such an editor will send a link to a new article or book that speaks in some way to the intellectual frame of the study or to a particular chapter interest. "Have you seen this article in the *Journal of X*?" or "You will find this new book interesting for your own chapter; here's the link." Once again, such an editor would be well-versed in the literature on the theme for the book but also a resourceful kind of person always on the lookout for new ideas or publications that might help the team of authors.

In all of this the editor is also a motivator. Always give your authors encouraging comments on their developing manuscripts rather than simply diving in with otherwise necessary criticism. Do not underestimate the value of such motivation in keeping new as well as experienced authors on track. A good editor will know where more or less motivation is required given a group of authors.

An edited book also allows for one of those other imperatives in a country like South Africa – the opportunity to learn and develop as a young scholar or even co-editor. That balance between newer scholars and more experienced, accomplished ones is something every editor should always be thinking about in putting together any book.

Most of my books are edited with a highly talented but less experienced co-editor, often postdocs who are not yet or only recently became professors. I tend to leave the bulk of the administrative co-ordination and technology-related duties to my co-editor while also teaching her the skills of editing a real book in the making. I cannot think of a better way to learn one of the critical components of becoming a scholar than in working alongside a more senior editor.

Once the book is published, the editor has a final, additional role and that is to market the book. Normally a publisher has a dedicated person with a team who organises the publicity for the book. It is the editor's role to decide who joins a book panel in which town or region so that every contributor to a multi-authored book gets a chance to shine. A simple way of allocating tasks is by region so that the Johannesburg authors, for example, participate in a book launch there, while the Cape Town authors show up for their hub. This is an exciting time and working with the publisher's marketing team, it can be so fulfilling to take your edited book on the road.

Section VI
Becoming Good at Gauging Your Performance

"If you find that your university's guidelines for promotion are not particularly rigorous, you should be worried."

14

How to Manage and Monitor Your Performance Metrics

Lucia Schoombee
Elsevier

It is common to ignore the gobbledygook of citations, h-index and impact factor in the starting phase of your academic life. These abstract arithmetical concepts which surface in library and researcher workshops seem far removed from real academic life at first. There will be a hundred other things of greater importance on your mind, not least of which will be where to find time for research and to publish.

Ironically, the elusive arithmetic concepts will penetrate your reality before long to reveal your measure of success in precisely addressing those "things of greater importance". Have you published? How often? Where did you publish? With whom? Were you cited? By whom? How many times? The gobbledygook is performance metrics. They will be used to quantify your proficiency as an academic.

The first thing you will realise is that performance metrics are a deciding factor in various activities related to career advancement. For instance, you may need to comply with an expected metric threshold to qualify for a position or promotion, secure funding grants, or meet the criteria for a scholarly prize. The measures may be publication count, number of citations, publication in an influential journal, or co-authorship with a well-known academic. A prominent example of where metrics come into play is the National Research Foundation

(NRF) rating system for academics. The process entails an evaluation of applicants guided by metrics alongside peer evaluation, the outcome of which affords status and funding that will contribute to your career advancement.

When not applied as a deciding factor in awards, metrics may be used diagnostically, for example, to determine whether you are performing above or below the norm compared to peers. Depending on your study field, you may be expected to produce a set number of articles, conference papers and chapters per year and receive a decent number of citations in subsequent years based on metrics achieved by peers.

The second thing you will become aware of is that metrics are often used to gauge your performance from afar. As with all types of authors, your publication record is public (unless you are engaged in confidential research, in which case research results are not published or published under provisional access). Being conscious of what metrics are considered, by whom, how they are calculated and what they mean gives you control over your reputation even when your performance is unknowingly evaluated.

Finally, metrics do not only matter in a passive sense. There is also an active side. The passive sense is when you are subjected to quantitative evaluation by an external party. An active application is when you apply the metrics to demonstrate your capabilities and achievements. It may be done in a curriculum vitae, grant application, employment application, or to contend for a prize. In this sense, metrics are worthy of your attention because they allow you to succinctly tell the story of your career.

While the significance of metrics may now be obvious, you should know upfront that the realm of performance measurement is not a rose garden. In fact, applying performance metrics in scholarship is a highly contentious topic that undeniably reflects important issues that should be considered in measuring performance.

The first conundrum is that academic performance evaluation relies remarkably more on research than teaching. Indeed, many universities perceive research as the only activity relevant for academic advancement (see Chapter 8). Additionally, there is the snag that publication trumps all other scholarly activities, including teaching, as the most indicative measure of scholarship in all fields of science. With publication comes the slant towards article publication as the de facto

currency for academic progress, even in fields or disciplines where book publishing is more prevalent.

Another critical perspective is that performance assessment cannot capture the complexity of the impact of research on the social world, since it is not amenable to the control and measurement of discrete variables, and output is not necessarily in publication format. The arguments against performance evaluation, especially where metrics are applied, proceeds from the standpoint that it conflicts with the academic endeavour, impedes academic freedom and quashes scientific creativity.

Knowing about these flaws of scholarly evaluation may be disheartening but ignoring performance metrics is not recommended. At all times, the shortfalls of performance metrics must be accounted for in the application and interpretation of performance measurement. But, from a pragmatic perspective, it is equally important to realise that metrics will play an essential role in your daily academic life. In doing so, you can integrate them into your academic repertoire. Also, if you understand the fundamentals of evaluating performance, you can plan ahead and manage your activities accordingly.

Embracing performance metrics may turn out to be more than a helpful obligation. Metrics offer the distinct advantage of allowing concise articulation of your scholarly career, a means to bolster your research identity, and a framework to plan for success. Therefore, despite controversy and resistance, using metrics often turns out to be a convenient way to describe performance in a concise and impactful manner.

So, what are performance metrics in academia? At the most basic level, performance metrics are quantitative indicators of your scholarly productivity and impact based on publication and citation counts. The centrality of publication in science is clearly at the heart of this definition. This is due to the universal recognition that it is through publications that new knowledge is disseminated and science is advanced. Another justification is that publication inherently already reflects assessment. That is, before research is published, it must be appraised by experts through the peer-review system. The practice of peer review dates back more than three hundred years and is considered one of the foundational elements of scholarly publishing. There is harmony in the notion that expert assessment as a keystone in science is inherently reflected in performance metrics.

How metrics are applied is diverse. There is no universal standard or agreed method by which academics are assessed. How performance is measured will differ depending on factors relating to the institution, the objective of the evaluation, subject-related expectations, and your level of experience. While the method may vary, the basic metrics are universal and constant.

The nitty-gritty of scholarly metrics is publications and citations. The first noteworthy metric is, therefore, unsurprisingly, *publication count*. This metric reflects the volume of your published output, such as journal articles, books, and conference proceedings, as a signal of academic productivity. Generally, each author receives full credit for a publication irrespective of the number of authors on the publication. Although, in some cases, fractionalisation could be applied, which means that if a publication has more than one author, each author is awarded an equal fraction. The premise of this metric is that a high number of publications reflects a high level of research production.

Citation count is the next most prevalent metric used to measure the impact of your scholarly output. Citations accumulate when your work is referenced by other scholars. The rationale is that because scientific knowledge tends to build incrementally, citations signify the development of the scientific field. Being cited is considered a recognition of the value you add to science and represents a form of endorsement of your intellectual input. A high citation count will signify that a high level of attention is paid to your work, implying that you significantly impact science.

An important caveat to publication-based metrics is that they are influenced by universal publication trends. Subject area, among others, is one of the determining factors of publication culture. For instance, academics in the theoretical sciences tend to publish at a lower rate than academics in experimental sciences. When it comes to the interpretation of publication counts, discipline again plays an important role. For instance, while all academic domains value international peer-reviewed articles, in the humanities and social sciences, books are highly valued in addition to peer-reviewed articles. Conversely, in business and economics, information technology, engineering and computer science, conference papers are valued in addition to peer-reviewed articles.

In parallel, citations are affected by publication culture too. In fact, in the case of citations, subject area, publication type as well as the

observation period play an important role. A higher citation rate is associated with disciplines related to life sciences, biomedical sciences, and neurosciences. On the other hand, citation counts tend to be lower in arts and humanities, mathematics, and computer science. The type of publication you select for disseminating research results also affects citation counts. For instance, review articles are inclined to receive more citations than research articles.

Yet another significant variable is the observation period. Older publications have more time to accrue citations than newer publications. This is referred to as the citation window. There is no consensus about the ideal citation window, but generally, three to four years is regarded as an optimal period for an article to be cited. Finally, the source from which citations are extracted matters as well. Most citation indexes vary in the geographies, subject areas and languages they cover and are inadequate for citations for books and book chapters. Therefore, citation count is always bound to the citation source they are extracted from and should be attributed as such.

Citations are also subject to idiosyncrasies that can skew citation counts. An obvious example is deliberate self-citation or reciprocal citations by "friends". Another is the tendency of sensational or controversial research results to attract excessive citations, in which case the citation count does not equate to the quality of research. It is crucial to consider these factors when citation counts are used for performance evaluation.

Several techniques help you overcome the potential falsehoods that publication metrics convey. The first is to always use more than one metric to assess performance. Because any single metric tells only part of a story, it is best to combine multiple metrics to capture different qualities. For example, *citations per publication* can be applied as an indicator of consistency in addition to *publication count* as a signal of productivity and citation count vis-à-vis impact. A second technique is to avoid over-reliance on output and citation counts only, and the third is to always combine metrics with expert evaluation.

A fourth option is to apply more sophisticated indicators that counter some of the biases that result from cultural factors. Research-performance tools such as SciVal (Elsevier) and InCites (Clarivate) provide additional metrics that provide more nuanced insight into academic performance. In them, normalised metrics are available that correct for the subject area, publication type and date of publication.

Most universities subscribe to one of these analytical tools. For example, you will find several sophisticated metrics in SciVal to convey performance. Examples include the citations per paper (the number of citations divided by the number of papers), top citation percentiles (percentage of publications among the most cited), and field-weighted citation impact (citations are normalised for publication year, subject and type of publication).

Until relatively recently, there was a great desire for one metric that would capture both the productivity and impact of academics. The matter was resolved in 2005 when Professor Jorge Hirsch proposed the h-index to quantify an individual's scientific research output in *Proceedings of the National Academy of Sciences (PNAS)*. His proposal was a composite indicator based on publication and citation counts whereby an equal number threshold represents an appraisal of the researcher. The h-index became extraordinarily popular because of its efficiency in capturing productivity (i.e. output) and impact (i.e., citations) in a singular number.

The h-index is automatically calculated and made available in Scopus and Web of Science databases. However, as it is based on a simple methodology, you should be able to calculate it yourself if you can track down your citations. The calculation entails numbering your papers (n) and then ranking them by citations (c); your h-index is where n=c. So, for instance, you will have an h-index of 5 if 5 papers were cited at least 5 times. At default, the h-index reflects the entirety of an academic's career, but databases allow for calculations by year.

Over time, however, the h-index was found to have several deficiencies. It does not account for subject differences and ignores time range. This means there is no provision for publication trends between disciplines nor seniority (i.e., where academics differ in how long they have been publishing). Yet, despite these known deficits, the h-index remains popular. So, when your h-index is applied for decision-making, it should be done relative to peers of a similar level and in the same subject area.

Several adaptations of the h-index have been developed to counter its deficiencies. Some examples are the m-index (h-index per year since first publication); g-index (gives credit for the most highly cited papers); hc-index (higher weighting for newly published work); and i10-index (number of articles with ten citations or more). However, these metrics are not yet widely used.

Next, is the question of where to find scholarly metrics? The answer is not conclusive. Scholarly metrics can be extracted from almost any publication database, but the most authoritative sources are the large-scale multidisciplinary citation indexes Scopus and Web of Science. Both indexes were designed to capture scholarly output and citations across an extensive collection of carefully selected, peer-reviewed journals. Each database also provides tools to easily find and analyse your metrics. However, since Scopus and Web of Science differ slightly in how they select publications, there is a high probability that you will not find all your publications in them, and the metrics they provide will differ. This is a universally known deviance that is overcome by indicating the source of the metrics.

Most academic institutions provide access to either Scopus or Web of Science and, in many cases, to both. Access is usually provided through the library website. In addition, librarians, and sometimes research administrators, provide support on where to find and how to use citation databases through workshops and library research guides (known as libguides).

Over time Google Scholar has become a popular source for metrics too. However, as a mega search engine, it has the caveat of being less discriminate than Scopus and Web of Science. Google Scholar does not quality-check the journals it covers. Instead, the search engine harvests any scholarly-looking material from the web. The result is that Google Scholar has immense coverage, but it includes publications which are not scholarly in the sense of being peer reviewed. Accuracy may also be a problem because Google Scholar includes duplications which result from different versions of the same publication. Nonetheless, it is a valuable source for tracking publication and citation counts in research areas that are not well covered in the primary sources.

When it comes to sources of publication and citation metrics, the social sciences and humanities deserve special attention. Knowledge dissemination in the social sciences and humanities is different from the natural sciences in that it exhibits a greater focus on national languages, favours publication in the form of books, and publishes at a slower pace and with a low degree of collaboration. Citation indexes, however, focus predominantly on internationally orientated scientific journals and may therefore not provide an exhaustive representation of social sciences and humanities research output. As such, publication

metrics for social sciences and humanities must be handled with care and caution and sourced from additional sources such as Google Scholar, subject-specific databases and repositories if needed.

Your career advancement will also depend on the status of the journals in which you publish. Quality journals are characterised by consistently publishing papers that command broad interest from academics and yield many citations. Funding agencies and university committees routinely use this as a measure of your success as a researcher in your field. As an aid to uncovering the quality of journals, several metrics have been developed since the 1970s.

The oldest and most well-known journal metric is the journal impact factor (JIF), which was first introduced in 1976. It is calculated annually by dividing the number of the current year's citations by the articles published in that journal during the previous two years. A five-year version of the JIF compensates for subject areas with a longer citation cycle, such as arts and humanities, mathematics, and computer science. Only journals covered in the Web of Science are considered in calculating the standard (two-year) JIF which is published exclusively in the Journal Citation Reports (Clarivate).

CiteScore is a comparable metric published annually by Elsevier to grade serial publications covered by Scopus. In its case, a four-year publication and citation window is used. In other words, citations to articles in the previous four years are divided by the number of articles published in the journal in the same four-year period. CiteScore is published exclusively by Scopus, but it is also freely available in Scopus Source Title List, an Excel list you can find on the internet.

Both CiteScore and JIF are simple metrics which merely reflect a citation average per article. They are not weighted to account for differences between subjects or publication dates. As a result, you can only use it to differentiate between journals within a specific subject area. As an illustration of the subject's significance on journal metrics, note that the top epidemiology journal has a CiteScore of 47.5 (2021). In contrast, the leading journal in education has a CiteScore of 20.3 (2021).

In cases where it is necessary to assess journal quality across different subject areas, normalised journal metrics are used. SciMago Journal Rank (SJR) and Source-Normalised Impact per Paper (SNIP) are examples of normalised journal metrics found in Scopus. In the case of SJR, citations are weighted for the prestige of the journals from which they

originate. In the case of SNIP, contextual citation impact is derived by weighting citations based on the total number of citations in a subject field. Journal Citation Reports additionally provides Eigenfactor, a citation-based metric that accounts for differences in prestige among citing journals. Finally, the Article Influence Score calculates a journal score relative to all journals in the Journal Citation Reports.

The popularity of the JIF triggered a trend whereby the metric was transposed from journals to authors. Naturally, this practice is nonsensical because the metric is calculated at the journal level and does not reflect the quality of the specific article that the author contributed. This misapplication tainted journal metrics and has complicated its application.

Despite the contamination, journal metrics continue offering a valuable criterion for distinguishing quality journals. It remains one of the essential benchmarks when selecting a journal in which to publish. Therefore, instead of submitting your manuscript to any old journal that matches on aims and scope, make sure you check the JIF or CiteScore. A high score signals prestige and can potentially expand your reach and expose you to a new readership.

At some institutions, academics are advised to publish in prescribed journals. An example of a target list is the List of Accredited Journals published annually by the Department of Higher Education and Training (DHET). The list combines seven journal sources, namely Scopus (Elsevier), Web of Science (Clarivate), Norwegian list (CRISTIN), Directory of Open Access Journals (DOAJ), SciELO SA, Approved list of South African Journals (DHET) and the International Bibliography of the Social Sciences (IBSS) (ProQuest). When authors publish in accredited journals, the affiliated university receives a subsidy from the government. Accredited lists are published annually on the DHET website and are usually posted on university websites.

Additionally, universities may expect you to publish in journals of a certain quality. In this case, the target may be a journal quartile. Quartiles are defined by ranking journals on their metric score (CiteScore, JIF, SNIP, SJR, etc.) and dividing the list into four equal parts. Quartile 1-journals will fall into the top 25 per cent, and Quartile 2-journals will fall into the top 50 per cent of journals after Quartile 1.

The metrics mentioned so far represent a traditional approach to performance assessment. These metrics are usually applied on the

author level, relating to career span or a specified period. Journal metrics are exceptions because they apply to an entire journal. Intrinsically traditional metrics are based on how academics acknowledge other academics through citations. Also referred to as academic-impact metrics, they are the mainstay for measuring impact.

Appraisal committees are increasingly applying alternative metrics in addition to traditional metrics. Alternative metrics include the number of views, downloads, mentions in blogs, social media posts (Facebook and Twitter) and shares (Mendeley and CiteULike). They reflect attention to individual publications and signal whether your publications have visibility in broader society, that is, in the mainstream or social media. Alternative metrics help measure the visibility of research beyond academia, but they are not a suitable measure of research quality. The primary providers of alternative metrics are Altmetrics.com and Plum Analytics. Plum Analytics is also integrated into Scopus.

In a similar vein, you may encounter openness indicators. In this case, you may be required to indicate the number of publications you published under an open-access licence. The premise is that free access to your research has greater reach and potential effect. To publish under an open-access (OA) licence usually requires an article processing fee, implying the author carries the publication cost so that readers do not have to pay to read it. The advantage of this regime is that your publication will be accessible to other academics free of charge and immediately. Although open-access publications reach a larger potential audience, they do not necessarily result in a higher number of citations.

Openness has become a prevalent theme in academia and is highly valued in many institutions. Many institutions make funding available for the article processing charge (APC) required for open-access publishing. Where feasible, the same applies to making your research data available. Many universities recommend open-access publishing and data sharing and track metrics in this regard.

In the interest of completeness, it is essential to emphasise that your performance will ultimately, over time, be assessed beyond publications. While publishing your research in the best possible journal and receiving plentiful citations is considered an outstanding achievement, other metrics will eventually emerge on your performance dashboard. For instance, superiors may want to assess how many funding grants you have been awarded, whether you have successfully registered

patents, and what the extent of your co-author network is. While delving into these metrics is beyond the scope of this book, it will be prudent to keep them in mind.

Similarly, it is helpful to keep in mind that the future increasingly points towards measuring performance beyond metrics. In fact, there are instances where academics are already asked to show how society benefitted from their research. In these cases, academics mostly resort to describing achievements in narrative format and provide policies, products, processes, spin-off companies, legislation, and training materials as evidence. However, for social sciences and humanities academics, demonstrating impact may be less straightforward. Due to the organisational and epistemic characteristics of the social sciences and humanities and the type of outcomes that differentiate them from the natural sciences, their impact is less tangible. Instead, social science and humanities academics are directed more towards creating cultural meaning, influencing and orienting society.

Today, where performance metrics are widely applied for performance evaluation, a few golden rules should be followed to ensure metrics are applied responsibly. Among these are: to always use more than one metric because no single indicator adequately captures a researcher's performance; to always use metrics in combination with peer review; to be transparent about metric sources and calculations; to allow verification of metrics by the evaluated, and to consider the disciplinary context of metrics.

Take note of at least two frameworks that guide the responsible use of metrics. The most prominent is the Declaration on Research Assessment (DORA) which advocates that journal-based metrics, such as the JIF, should not be used as a proxy measure for an individual's performance. It also calls for including a broader range of outputs and impact measures than publications. Another is the Leiden Manifesto which proposes ten principles for measuring research performance.

A final thing you can do to manage your performance metrics is to take charge of your scholarly profile. In fact, taking ownership of your online profile is essential. For example, assessment bodies will not necessarily reach out and ask for your curriculum vitae when they review funding proposals or assess candidates for a prize. Instead, they will turn to Scopus and Web of Science as authoritative sources to assess your profile.

In Scopus, an author profile is created automatically using an algorithm that captures publication activity, citation counts, target journals, co-authors' names, article types, and subject areas. In addition, the profile includes an h-index and provides article-level metrics for individual publications, including alternative metrics, topics and contributions to sustainable development goals.

Web of Science facilitates the creation of a profile called the "ResearcherID". Similarly, several other researcher identity services exist which will automatically collate your scholarly profile once they are set up. Examples include Google Scholar Citations (Google), Pubmed, Academia.edu and ResearchGate. Additionally, the latter facilitate discussion and sharing of publications and provide metrics.

Owing to erroneous naming conventions and processing errors, it is vital to regularly check that publications in the profiles appear correctly. In Scopus, a wizard is available to request corrections to your profile, and you can set up an alert to be notified when publications and citations are added to your profile.

Registering for a unique author identifier is the next crucial step toward curating your online scholarly identity. Open Researcher and Contributor Identifier (ORCID) provides unique numerical identifiers free of charge to overcome the incorrect matching of publications to authors due to name similarity. In addition, ORCID provides a profiling service that you can fill manually or populate the profile by transferring your information from Scopus, CrossRef and ResearcherID.

In conclusion, the message is that it will be to your advantage to embrace performance metrics rather than ignore or resist them. Take time to familiarise yourself with the basic metrics, how to find metrics sources and use them responsibly as described here. Despite the challenge of defining and justifying performance in academia and the shortfalls of quantitative measures, performance metrics provide a valuable framework to plan ahead, control your academic profile and provide a valuable way to tell your research story.

15

When and How to Submit Your First NRF Rating Application

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The NRF rating system is an integral part of the South African academic system. This system was originally established by the Foundation for Research Development (FRD). The FRD emerged from the CSIR (Council for Scientific and Industrial Research) in the mid-1980s and the role that the former organisation played in funding research was then incorporated into the National Research Foundation (NRF) in 1998. The NRF is a government mandated research and science development agency that seeks to promote knowledge production across all disciplinary fields.

Kit Vaughn's book *On the Shoulders of Oldenburg: A Biography of the Academic Rating System in South Africa* illustrates many of the important ideas behind the establishment, including the fact that it was largely speaking the "brainchild" of Jack de Wet. His view was that "[e]valuation by experts, who are able to take into account all facets of research production and quality, is the only proper way to assess research" (translated from Afrikaans) and this serves to explain the rating system in a nutshell.

The South African research rating system was developed almost 40 years ago. While the principles of this system are essentially the same today, there has been a considerable evolution with regards to how it is

administered. For example, during the period when the FRD was still in place, the rating was reserved only for those in the natural sciences. In more recent times it was expanded to encompass research across all aspects of the sciences including the social sciences and humanities.

Over the years, since the establishment of the NRF ratings, there have been many debates regarding the pros and cons of the system. For example, the NRF ratings were initially strongly linked to funding where the most highly rated researchers were most strongly funded. This followed the notion that the strongest researchers would benefit most from substantial funding with, for example, "B-rated" scientists receiving what was considered "comprehensive funding". Broadly, the ratings evaluated and supported people rather than projects. This is no longer true, and funding has been linked more closely to projects and includes efforts to fund those that would otherwise not have benefitted based on their rating.

There is no question that the system has improved both the quality and quantity of good research done in the country. Most South African universities find the system very useful, as most often they have no need to evaluate the research of their staff independently. It is also no secret that the NRF is now undertaking a trial to extend the system to other countries in Africa, supporting the suggestion that the rating system is likely to be a part of the academic landscape for many years to come.

The first thing to consider is when to submit an application for rating. There is little question that the earlier a researcher begins to consider an NRF rating the better. For those postgraduate students considering an academic career, this should ideally begin during the years of PhD study. Thus, where a researcher has recently been appointed to an academic or research position, this is the best time to find out what a rating application entails. Here, I strongly suggest that one has a strategic approach with regards to planning a rating application. I typically advise researchers to start a rating application a few years before they are likely to actually submit an application. In this way, it is possible to determine where there are gaps in one's research profile and to consider questions such as whether one has a coherent body of publications/research outputs, the strength of one's research network locally and globally, and what can be done to strengthen one's research profile over, say, the following one to three years.

The next issue is understanding the rating categories. The ratings that are awarded by the NRF fall within the following five categories:

1. A – Leading international researchers
2. B – Internationally acclaimed researchers
3. C – Established researchers
4. P – Prestigious awards
5. Y – Promising young researchers

The first three apply to established researchers and the last two categories apply only to young and emerging researchers. During my research career, I have been rated in four of these five categories. When I eventually received an A rating, I was inspired to write a commentary entitled "The ABCs of an NRF rating" for the *South African Journal of Science* on the topic. Having been awarded almost all of the rating categories means that I not only deeply understand the rating system, but also what these labels mean within the academic system.

Shortly after I completed my PhD, I successfully applied for my first rating. I had published eight peer-reviewed publications at the time, most in the top journals in my field. I had also been able to find various opportunities to visit researchers in the USA. I was under the age of 40, and so I received a Y1-rating.

A few years later (in the early days of the rating system we had to apply for rating every four years), this time with an additional ten publications added to my CV, a couple of conference attendances and my first sabbatical completed, I was awarded my second rating, this time a C1. Four years later I received my first B-rating and I maintained this rating for the next 16 years. During this time, I graduated 35 MSc students, 40 PhD students and published 280 peer-reviewed publications. I undertook three sabbaticals during that period and attended many different congresses, both internationally and locally. It should be clear that it took me a long period of time and a huge amount of effort to be recognised in the A category. I have recently been awarded an A rating for the second time. My publications number close to 450 and I have graduated more than 100 graduate students.

I realise that my research trajectory and experience with the NRF rating system might be different to that of others, but I do believe that it illustrates the more typical route to a gradually improved NRF rating.

It is also important to know how the specialist NRF rating assessment panels work. While managed by the NRF staff, the NRF rating system involves experts from research institutions across the country. Each NRF rating assessment panel meeting involves the specialist committee, an assessor and a chairperson. The specialist committee is tasked with choosing the reviewers for each rating application. The NRF has many different assessment panels and each of these has a set of guidelines as to what Considerable International Recognition (CIR) means with subsections for the different panels. These guidelines are updated regularly and provide a useful guide for the specialist committee assessment panel members. These guidelines can be used to verify the validity of the reports received from reviewers. For example, if a reviewer states that an applicant has significant international recognition but has no publications (or very few), the panel would consult the guidelines as to whether it is reasonable that a person with such high international standing would have very few publications. The usefulness and accuracy of reviewers' reports are assessed by the panel members. Overinflated reports contain very little or no information of relevance. Likewise, if they are considered unfairly critical, they are rejected and not used in the rating. Reports that contain some information are considered partially useful and while they will be considered, cannot be used to support a borderline case.

Here is an example of CIR guidelines, namely the *CIR: Basic and Applied Microbiology*.

> A microbiologist/plant pathologist should be rated as having CIR if they have:
>
> - an ISI Web of Science core collection h-factor of at least 15,
> - a majority of their publications as senior author in high impact international journals,
> - been invited to give presentations at international meetings,
> - regularly reviewed manuscripts for international journals,
> - regularly reviewed grant proposals from local and international funding bodies,
> - have editorship or associate editorship of international journals, and
> - organised or been on the scientific advisory committee of international conferences.

Before the panel meeting the specialist committee is asked to provide a consensus of their ranking of the reports. This consensus and the ranking of the chairperson and assessor is provided to the entire assessment panel when they meet. Each applicant, the rankings and reports are considered individually. The chairperson and assessor often do not have specialist knowledge of the research field and their rankings of the reports are thus not biased by knowledge of the applicants or any other aspects of the field.

The role of the assessor is specifically to ensure that the same standards are met across all the assessment panels. The assessors are senior researchers in their own disciplines and are members of many different committees. I have not been an assessor, but I have been a member of an NRF specialist committee and have chaired a number of assessment panel meetings. I have found that it is easier to chair meetings and assess reports where I have no connection with the discipline, as all I can consider in my rankings is the content of the reports.

All A and P ratings as nominated by the assessment panels are additionally considered by the Executive Evaluation Committee (EEC). This is the reason why these ratings take a bit longer to be communicated to applicants. The chairpersons of the assessment panels present the rating results of the applicants considered in the meetings that they have chaired. All chairpersons read the reports for all the nominated applicants. In some cases, assessment panels fail to reach a consensus on the rating that an applicant should receive; such applications are also considered by the EEC. In addition, the EEC validates decisions on all applicants who were previously in the A category and who are nominated for placement in another category by the assessment panels. The EEC also considers other substantive issues regarding the rating system.

Now we come to an important question: what do the different rating categories actually mean?

First things first. Academics considering NRF evaluation that are over the age of 40 do not qualify for the Y category. Alternatively, those older than 35 years do not qualify for the P category. Additionally, even if candidates are younger than the age categories for these ratings but graduated with a PhD more than five years previously, they also do not qualify for the emerging researcher category. And importantly, those without a PhD degree also do not qualify for either of the emerging categories. Thus, the first thing that one must do when considering applying

for an NRF rating is to establish which of the categories are applicable. Candidates that qualify for the emerging researcher category will be considered based on their potential to become established researchers. In the case of a P-rating category, they would need to show clear potential to become a leading international leader in their field.

Those seeking NRF rating that do not qualify for the young researcher category will have their applications considered based on research output. Importantly, this is not just based on the number of publications or research outputs produced but on the answers to questions posed to peers who are asked to review an application and what their opinions are of the candidate, their candidate's research and the impact of the research that has been conducted. Overall, the NRF rating system is based strongly on peer review and thus the different categories A, B and C reflect how the research community in the candidate's field understands his/her research and impact. I believe that it is also important to emphasise that an NRF rating mostly concerns one's research and not the numbers of students supervised (although postgraduate students do often contribute to one's research stature) nor how many awards the candidate has received, and certainly not about recognition in areas other than research.

An Established Researcher. The vast majority of research-active academics in South Africa are likely to be rated in the C category. The hurdle to achieve this level is not trivial. This is defined as "established researchers with a sustained recent record of productivity in the field who are recognised by their peers as having either produced a body of quality work, the core of which has coherence and attests to ongoing engagement with the field OR demonstrated the ability to conceptualise problems and apply research methods to investigating them".

The most important issue that is considered in this category is whether there is evidence of a sustained recent record of research outputs. This is perhaps easier to substantiate in some disciplines than in others. In my own case, coming from the natural sciences, peer-reviewed publications are the best form of evidence of research productivity. Importantly however, a key consideration is not specifically the numbers of publications but that these should reflect a coherent and focused body of research. One's contribution to a publication is also important. In my field, this can be reflected in whether one was the major driver of the research and in this case, evidence is based on the first-author position.

Alternatively, when one's name is in the last or senior-author position, this typically reflects one's place as the team leader or at least orchestrator of the research. Being a middle author or one of many authors of a publication reflects a contribution which, while important, would be considered as smaller than those of the lead or senior author. In the case of multiple-author publications, it can be difficult to determine the relative contributions to the work and differences between intellectual or, for example, technical contributions. In this regard, the NRF rating system provides an opportunity for those being considered, to explain their contributions to a publication. I know for example that in some fields, the author line is presented alphabetically, and this must then be explained. In the description of one's contribution to a publication I strongly advise that the explanation provided is a narrative and not stated as a percentage.

Considerable International Recognition. The rating categories A and B require, in addition to a significant and coherent body of research, evidence of international recognition. Here, one needs to provide substantiation of this recognition. This is where having a strong network of collaborators is important. These are the people who might end up reviewing one's application or at the very least these are the researchers who are likely to cite the publications of the researcher and to contribute to their citation statistics.

Attending meetings relevant to one's field, both nationally and internationally, provides important opportunities to build collaborations and to expose other researchers to one's work. Most universities will provide support for researchers to travel, especially for younger staff. The support is not always comprehensive, and, in some cases, one might need to use some personal funds to make this possible. I have, for example seen many different ways in which researchers have managed to attend meetings at substantially reduced cost. The most expensive budget items in this regard are the travel and accommodation costs. Often academics and graduate students travel together to local meetings to reduce travel expenses by sharing fuel costs. I even know people who have pitched tents at the meeting, due to camping being the cheapest accommodation available.

For international meetings that are not on the continent, one is forced to fly. Here booking early can reduce costs. In terms of accommodation, it is often possible to stay with friends. Over the years I have

had the privilege of good friends offering me accommodation to attend meetings and we then returned the favour when these colleagues have travelled to South Africa. To reduce the cost of food, I have witnessed some very innovative, and at times amusing, solutions. Once, at an international meeting, I encountered a trail of white grain leading up the stairs of a university residence in Scotland. Some of our students had travelled with maize (mealie) meal to supplement their food and the bag had broken, leaving this trail as they climbed the stairs to their accommodation on the floor above ours. This is perhaps extreme, but it does illustrate the fact that when a priority is to attend a meeting, it is possible to do so without having to depend on expensive restaurants.

An aspect of international recognition that is commonly misunderstood relates to the size of the community reflected by one's own research. For example, if one is *the* expert in a very narrow field, it is unlikely that one will have CIR for this research. Thus, to gain wider recognition, it is important to broaden one's research questions such that one's research will have a wider impact and interest internationally. For example, research conducted on the virus MERS-COV (causal agent of Middle East Respiratory Syndrome Coronavirus) has generated just over 6,600 scientific publications. Compare this to the 162,000 published about SARS-COV-2 (causal agent of Severe Acute Respiratory Syndrome Coronavirus). MERS-COV is a problem in the Middle East whereas SARS-COV (particularly SARS-COV-2) is a global problem and of interest internationally. Both viruses are corona viruses and cause human disease. MERS-COV caused around 1,000 deaths, whereas SARS-COV-2 has resulted in millions of deaths. This is not to imply that one should change one's field of interest solely on the basis of international interest, but that there are ways to view research more broadly and to ask research questions that will attract a wider audience. This is well-illustrated by papers accepted by the broader research journals such as *Nature, Science* and similar journals, where a general reader interest is a key to acceptance.

Leading International Scholars. To be awarded an A-rating means that not only does an applicant need to be internationally recognised but they must be seen as a leader in their field internationally. It is difficult to provide evidence of this standing, and this perhaps is where the review reports are the most important aspect of this peer-review system. To be a leader in one's field means that one is a seen by peers as producing

leading research in a particular discipline. This means that one's research outputs are published in the best journals, conference proceedings or other avenues of research available. It is also likely that researchers in this category have been invited to be the keynote speakers at meetings and that they would serve on international boards, councils or similar bodies relating to their disciplines. Similarly, researchers qualifying for higher levels or ratings are typically involved in organising sessions at international meetings; serving as senior or associate editors for significant journal(s) and engaged in similar activities. One aspect that is not always understood is that a research profile needs to reflect that the person being evaluated is seen as leading the research agenda in the field. This is different to having an international profile and serving on international panels for other reasons, such as adjudication panels, and research grant panels.

I cannot emphasise enough how important it is to engage actively with other researchers nationally and internationally in one's field. Peer review is all about how one's peers view your research outputs. Publishing excellent research is not enough. One needs to be engaging other researchers about the ideas one has, collaborating in writing grant proposals, showing that you are not a passive participant in the research that you publish. I am an introvert and I do not easily talk with strangers and I can be very awkward and often have very little to say. I remember that at my first Academy of Science of South Africa (ASSAf) council meeting I quite literally said nothing. My mantra is that one should only say something if one has something significant to contribute. This is in contrast with some of my colleagues who are extroverts and manage "small talk" very easily. I have had to learn to emerge from my shell, and this is not always easy for me. Quite often at university open days I hear learners say that they want to go into science and do research as they do not like engaging with lots of people. The reality is that as an academic and researcher you *must* learn how to engage with people.

What is an RU? There is a sixth rating category that nobody really wishes to talk about. This is the Rating Unsuccessful (RU) category. This rating is very uncommon and institutions hope that none of their researchers receive this rating. This category is the reason why many institutions invest considerable time and energy in having internal committees assess applications prior to submission. Here the goal is to ensure that their research-active staff have a reasonable chance of achieving a rating.

The NRF decides on an RU rating when most (50 per cent plus one) reviewers do not consider that an applicant is an established researcher. In the case of the emerging researcher category, an RU is given if most of the reviewers fail to agree that the applicant has the potential to establish themselves as a researcher within a five-year period.

An important consideration regarding an RU outcome is that applicants should consult with their line managers about a way forward. I always suggest to colleagues who have received this outcome that they should not define themselves personally based on an NRF rating, nor their research. This is true no matter the rating one receives. An applicant whose rating application has been unsuccessful *must wait* for three years before they apply for re-evaluation. In the case of emerging researchers, it is possible that after this time they would no longer be eligible in the Y or P category and would then need to have a profile that would satisfy the criteria for the established researcher category. The hurdle for this category is higher in terms of outputs. This is where it is vital to have engaged with senior researchers in your institution to determine when one can realistically apply for rating again.

Let us now consider who can apply for an NRF rating. Not everyone is eligible to apply for an NRF rating. Those who may apply are essentially the research-active staff at NRF-recognised research institutions, which are declared (and gazetted) by the Department of Science and Innovation (DSI) and they include public South African Higher Education institutions (HEIs), science councils, and other research-performing public institutions.

Most institutions ask applicants to submit rating applications a few weeks before the NRF deadlines. These applications are then considered by a committee within the institution that includes senior researchers. This committee reviews the application and, in some cases, will ask applicants to consider revising their applications. The committee also assigns a suggested rating. This is added to the application by the institution before the application is finally submitted. In this way the institution can ensure that the applicants have not made any unfortunate mistakes in their applications and that the application is supported by the institution and that they fulfil the requirements for application.

Having this administrative layer with regards to the rating system seems unnecessary but has the potential of avoiding unfortunate mistakes. Such a system saved me with regards to my first rating. After I

submitted my documents, I was called to the dean's office. In those days the application was not online but a physical document. The dean asked me to justify submitting an application based on a single publication. I was mortified as I had a number of publications at the time. What had happened was that in the duplication process of my application, one page had somehow been omitted. This, unfortunately, was the page with the remainder of my publications. The document did not have page numbers and so it was not obvious that there was a missing page, essentially a page full of my publications – a rather important page. I was able to provide the missing page and eventually succeeded in getting my first rating.

*It is also important to take note of the different types of evaluation***.** There are four categories of NRF evaluations: (i) new applications, from researchers who have not applied previously; (ii) re-evaluations by invitation for researchers who have applied previously and have a current rating; (iii) re-evaluations for researchers who have applied previously and do not have a current rating; and (iv), the last category, which is a special re-evaluation that is for researchers who wish to be re-evaluated before the end of their current rating cycle.

*Let us now take time to consider the crucial issue of how you should deal with the application form***.** I received my most recent rating at the end of 2019 just before Christmas and it was a rather nice Christmas present. However, I started to prepare my application in October 2018, more than a year before I received the rating outcome. The point that I wish to convey is that completing the NRF rating document is not a trivial task and that it is important to start early. Most universities and research councils have internal deadlines for submission of rating documents, thus allowing them to conduct an internal review process. It is thus necessary to find out what these dates are and not end up rushed in completing the application.

While I started to prepare my application in October 2018, there are some items that I needed to change in February the following year. Most institutions have committees that will consider one's application and inevitably they will identify some aspects that they feel should be revised. This happens even to researchers like myself who have been involved in the NRF rating system for a long time. Therefore, it is important for you to be aware of the deadlines of the committees in your institution, making it possible for you to have the time to address

any concerns or revisions. It is imperative also to understand that your employing institution must sign off on all applications and this will not happen until their suggestions have been accommodated.

There are many sections to the NRF rating application form and some details are quite obvious and need little explanation. Here, I will comment only on items that I think deserve discussion. I have copied some of these comments from a document that a close colleague of mine, Professor Henk Huismans drafted many years ago. These suggestions are not intended to be rigid requirements but only guidelines that applicants might find useful in improving their documents. It is crucial also to remember that it is one's peers that will be reading one's application. One would never want to subject peers to a badly written document. Here, it is always wise to have several experienced colleagues read through one's documents and to consider their suggestions. It is vital to remember that the sections of the application forms where one is asked to write about one's research are intended to be in the form of a narrative. Because the research outputs are already captured in another section, these should not be repeated, and a key aim should be to make one's application as easy as possible to read and understand.

Personal pofile: dos and don'ts

Do:

- Keep it short and informative; provide a very brief overview of your academic research career. Are you just getting started, or are you well-established or even retired? Keep it in the first person.
- Present the information in chronological order. Begin your sentences with: "I started as … completed my PhD in … since my PhD I have … I have now been appointed as … I am retired…" .
- Focus on:
    - » Research focal point: "My first research interest centred on this *big* question … It has since then shifted to this new question … or been expanded to …". Do not go into great detail. This section is meant to be an overall, top-down picture of your research interest.
    - » Outputs: "I now have … papers and books to my credit. These were all in internationally highly regarded peer-reviewed

journals or the best available local journals." It is critical to be honest.
  - » Degrees: mention where they were awarded with distinction.
  - » Recognition: "This research has been recognised by having been awarded the following prizes … has received international recognition through … I have been invited as keynote speaker … received the Nobel Prize … have been cited … have an h-index … (if this applies in your area of research) … have been invited to become an editor of … have reviewed …".

Do not:

- Assess or praise yourself except for neutrally and briefly listing the outside recognition received. Keep the self-assessment for the "self-assessment section" where this can be properly motivated. A personal profile is not the same as a well-structured self-assessment: do not mix the two.
- Waffle on about issues that have very little to do with research. Remember that this is a research evaluation.
- Be unprofessional. This creates a terrible impression, particularly if your application is sloppy, badly written, outputs are exaggerated and lacking the required information. It is important to realise that this application could be the reviewer's first introduction to you as a scientist and researcher.

Research outputs

If possible, provide a better reference than just the title and date. Provide title, journal and authors, page numbers. The authors, journal and lengths of a paper are important for a reviewer, and he/she should not have to go back to the publication list to get this information. Motivation as to why one's research outputs are the best is important. A mere description may not be sufficient. What is the impact of the paper? Quality of the journal; perhaps it was highly cited or maybe even ground-breaking in the field?

Publications may not be the best form of research output in your field. Make sure that you understand what is appropriate for your field. Ensure that your reviewers can access your outputs: a website might

be appropriate to guide reviewers. The application form provides the option of uploading documents: be sure to do this.

Brief description of completed research

Focus on answering the following questions:

- In the eight-year period under review, what major questions were the focus of your research?
- What answers were obtained, what progress has been made, what milestones were achieved? And (very important) in which publications or books was this progress and completed research recorded?
- What other aspects are immediately related to your completed research and the decision to publish this either as an edited book, monograph or paper?

And remember: non-research-related issues are usually not relevant unless they add more insight into completed research.

Do not:

- Over-rate, compliment or praise your own research in any detail in this section. This is the factual part of the document. It is fair to make factual comments about the standing of a journal or publishing agency, research impact, but do not link that to statements such as "therefore I am the very best". There is a self-assessment section where this can be done.
- Provide lengthy biographical detail about yourself, your teaching, or your hobbies. This section does not cover a researcher as a person, but rather focuses on the research that has been completed in the period under review.
- Elaborate on research that cannot be verified as part of your listed recognised research outputs. Research needs to be linked to specific research outputs. A reviewer cannot review undocumented research because it is not published. The standing of an applicant is based on peer-reviewed outputs.

Self-assessment of research outputs

- This is the section where one has the option to highlight important issues that may not be covered in the earlier parts of the document. It is possible that you have only a few publications and in this section you have the opportunity to motivate that they are ground-breaking. Explain, if appropriate, why some outputs are highly cited; why your best outputs are indeed so good. Refer to the relevant best outputs in this section and explain why they are the best. You can also expand on your earlier assessment of what is the best.
- This part of the assessment is not an assessment of the person but rather of one's research.
- Do not over-inflate your accomplishments as this may tempt reviewers to provide a more balanced view and "prick the balloon". Provide evidence that a reviewer can use to provide a positive rating.
- If one praises oneself with words like, "ground-breaking", "seminal", "leading", or "earth-shattering", it is necessary to motivate this. Preferably you should provide evidence by using the comments of others and from other peer-reviewed assessments.

Ongoing and planned future research

Research is about asking and answering questions. In this section you can outline the most important research questions that you will be considering in the future, whether these represent a continuation of research that has already been started, or new research. Possibly indicate whether grant funding has recently been awarded to undertake a specific project. Preferably do not list publications which have recently been accepted or submitted. This should be a narrative, not a list.

The assessment panel

The NRF asks applicants to choose the assessment panel they wish to have consider their applications. It is possible to select more than one panel and, in this case, these should be presented in terms of priority. The Specialist Committees will decide amongst themselves which is the most appropriate panel. If they wish to refer your application to a panel not listed by you, you would be requested to give permission for this to happen.

Possible reviewers

The NRF website provides some guidelines for the selection of peer reviewers. While these guidelines are fairly comprehensive, there are some important points that you should consider with regards to suggesting reviewers. This is a peer-review system, and it is important to nominate peers. Thus, for example, if you are to have CIR, early career researchers should not be chosen.

The NRF panel ideally wishes to have six reports from reviewers. Usually, they would prefer to have three reports from researchers that have been nominated by a candidate, with the remaining reviewers chosen by the specialist committee. It is important to give careful consideration to the reviewers that you choose to nominate. This is an opportunity to have people who really know and understand your research write a review. Here, the best choices are those colleagues that are part of your research network, who you know have an understanding of your research, and can comment realistically about its impact. It is not acceptable to nominate close colleagues or collaborators because of the obvious conflict of interest.

When considering names of people to suggest as peer reviewers, I recommend asking them if they would (if asked) be able and prepared to do this review. The report that a reviewer produces is a confidential document and it is important not to bias the process by making any suggestions regarding the review. I am aware of cases where this has occurred, and it is not seen in a positive light. Yet by asking a colleague if they would be willing to undertake the review, they will be primed to receive a request and are more likely to accept invitation to do so. In addition, by asking reviewers if they are able to undertake the review there is an opportunity to remove their name from the list in cases where they would not be able to write such a report. There are cases where colleagues in one's research network decline to undertake a review due to their perceived conflict of interest. Knowing this in advance allows you to nominate others who would be able to undertake the task. What is most important is to ensure that your application receives at least three strong reviews thus providing you with a chance of getting the best possible rating.

When preparing an NRF application, it is also important to consider the questions that the reviewers will be asked. While some of the

reviewers may know the applicant and his/her research, other reviewers will likely not know the candidate personally. Part of the review process is that the reviewers are asked to read the five publications that the candidate has selected as their best research outputs from the last eight years. It is thus very important to realise that these might be the only publications that the reviewer will read. These publications must thus best reflect your research outputs and it should be clearly motivated why they have been selected as your top research outputs. Most importantly, these outputs need to reflect research and not some other form of output.

The questions that reviewers are asked to answer and what they are asked to do can be summed up as follows: They are asked about their background knowledge of the applicant, whether they have collaborated/co-published with the applicant, and whether they have cited any of the applicant's work. They are requested to do a report which includes (i) an appraisal of the quality of past research outputs (i.e., in the last eight years), (ii) an estimation of the applicant's current standing as a researcher, and (iii) feedback to the applicant.

Excluding reviewers

There is a section where an applicant can ask specifically to exclude a person as a reviewer. There are very few occasions when it is advisable to exclude anyone. I have occasionally seen examples where applicants have excluded close collaborators and provided this as a motivation. In this regard, close collaborators are unlikely to be asked to provide a review and excluding them is pointless. I have also seen family members excluded; again, they are unlikely to be asked and would probably refuse based on conflict of interest and thus excluding them is futile. Having said this, where there is a very real reason why one wishes to exclude a person from being considered as a reviewer, it is important to be sure that motivation is clear and justified. Generally, though, it is best not to exclude anyone as this raises questions as to why one might do so.

Some final thoughts. The NRF rating system was established primarily to promote research excellence. It has been criticised by some as being elitist. In many respects this is true, but I would argue that this is how it should be. The greatest threat to research excellence is mediocrity. Thus, if we "dumb down" any evaluation system aimed at promoting research excellence, the ultimate end will surely be mediocrity.

South Africa has some of the most preeminent scientists and research institutions on the African continent. The COVID-19 pandemic has certainly thrown a sharp spotlight on this fact. This does not imply that we are excellent or even properly research active across all our institutions. We can and must do better. We need to have the top researchers to drive the South African research agenda and to ensure the long-term health and wealth of our people. I feel strongly that we cannot depend only on imported ideas and products. Strength in research is not an expensive ideal or one that we cannot afford. Rather, we cannot afford not to invest strongly in developing a robust base on which to build a much more vibrant research culture and many more excellent research programmes in the future. We need to understand that we cannot afford not to aspire to research excellence. The ideals that are inculcated in the NRF rating system are part of the solution.

16

Applying for Promotion

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An academic career is a heavily scrutinised one. That is the price you pay for a life of the mind. On the one hand, it is a life of great freedom and a life that offers many opportunities to make a difference to the world, but, on the other, you are held accountable for what you do with that freedom. In every class that you teach, your students are, at the very least unconsciously, judging how well you are doing this job; with every piece of academic writing that you produce, the quality of your research is judged by your peers – first by the reviewers and later by the readers; when you serve on committees, your colleagues will form opinions about your preparedness and your ability to debate and persuade; and when you step into the public arena by writing in the press or appearing on radio or television, everybody out there will have a view about how good they think you are. On top of this comes the scrutiny of the modern bureaucratic university: in most universities your first appointment will be on probation and made final only after you have been judged to have performed satisfactorily in all the core areas of the academic job for a number of years; your students will be asked formally to evaluate your teaching, which will form part of an annual performance evaluation in which you will have to account for your activity in all the different areas in which universities typically require their academic staff to engage: teaching and learning, research, service to the university, and outreach activities in the form of engaged scholarship and social responsiveness.

You will probably be encouraged, or even required, to apply for a rating from the National Research Foundation (NRF) quite early in your career, in which specifically your research will be judged. And then, when you apply, or are nominated, for promotion, the committee responsible for deciding on your advancement to the next rank will take a particularly close look at how you have done in all these areas and what promise you show of achieving even more at a higher rank.

You will doubtlessly have become aware of all of this soon after taking up your university job, and you may even have felt privately that it is a level of scrutiny that you could do without. But, in truth, you can make these systems of evaluation work for you to build a successful and fulfilling career – if you approach them in the right way and with the right attitude. The key to approaching these processes of evaluation correctly lies in proper preparation; and the attitude with which you should engage with them is the same as the attitude with which you should approach all academic life, namely with humility and a willingness to learn from others. We all have our fears and uncertainties, and sometimes not knowing what others think of you is better for the soul than knowing. However, in academic life not knowing what others think about you is not an option, so taking up this profession requires that you develop a healthy level of resilience, since the very essence of academic existence lies in challenge, debate and critique. A distinguished professor at my university once remarked that the term "constructive criticism" is tautologous: all criticism is constructive, he said, because you learn something from even the most biased and unfair criticism, if only about the person providing it.

That is all very well, but one does not want a jaundiced view influencing the success of one's promotion (or of any other activity for that matter). You need not be unduly worried: the system of peer review is designed to prevent decisions about academic activity that cannot be defended by adequate reasons. It is the academic world's primary mechanism to ensure the quality and integrity of the academic enterprise – and the different forms of scrutiny that I mentioned above, including the promotion processes, are all examples of peer review. On the whole, the system in which your work in the vineyard is judged by your fellow workers delivers good results. It is undeniable, however, that it fails sometimes despite all its formal safeguards – a fellow worker, who wants your patch of the vineyard (or your whole vineyard) may,

under the cover of ostensible objectivity, unfairly rate the quality of your harvest. The best systems are sometimes manipulated, but, in my experience, attempts to subvert fair processes are thwarted more often than not. That having been said, promotion all over the world does stir up emotions. Decisions about promotion are so tied up with the essence of who we are that strong reactions in response to negative results are completely natural. Below, I will have something to say about how to deal with the situation if you are unlucky enough to be the recipient of a negative result. But let us start at the beginning and with a few preliminary points about the advice coming up.

First, I am going to talk about only one of the many evaluations that will come your way, namely the evaluation for promotion to a higher rank. However, it is important to keep in mind that all the other evaluations will inevitably play a role in your promotion, so taking care with them will be "paying forward" towards your meeting the requirements for promotion.

Second, I am making a few assumptions in sharing my experience with overseeing the promotions process for all the faculties at one South African university for a number of years. I am assuming that there are published guidelines in your university setting out the procedures and exactly what is required for promotion. You might be surprised to learn that there are prominent universities in which the promotional exercise is a "black box" and the process governing whose names are fed into it and whose names come out of it remains inscrutable. If you find yourself in such a university, make sure that you rage against that state of affairs when you attain a position where it will make a difference, since the clearer the rules are stated, the greater the probability of a fair process. I am also assuming that the standards set for promotion to the various ranks at your university conform to the internationally accepted norms applicable to each academic rank. Although there is considerable variation in these norms, and they can be particularly stringent at top-end universities, there is a good international consensus on what the profile of the incumbent at each rank should be.

Finally, I am assuming that you occupy a standard academic appointment, which involves both teaching and research (so keep in mind, if it is relevant to your situation, that there will be different criteria for teaching-only posts; for purely research-related posts, and for certain professional disciplines, such as, for example, the health

sciences and the accounting and actuarial professions); and that you are a senior lecturer – that is to say that you have perhaps already had one promotion and that you have set yourself the goal of moving into the professoriate, which at any one time makes up about ten per cent of academics in the country. (However, most of what I say below will also be relevant to promotion to any rank in the university.)

When I started working on my doctorate at the University of Leiden in the Netherlands, I was amazed by the productivity of my supervisor, who had a healthy social life, was involved in many scholarly societies, and had an astounding output of impactful publications. I asked him how he does it. His answer was: "*Goed beplanning van de dag, meneer Visser*!" I have made that my motto, and I can commend it to you as well – not only good planning of the day ahead, but also of the year, and beyond. It is of the utmost importance to remember that when you apply for promotion, you are going to be judged on what you have done since you were appointed, or since your last promotion. The key thing to keep in mind is this: when you are appointed (or promoted to a particular rank) the clock starts ticking towards the next rank. At that moment you must be aware of what is expected to get you to that next rank, because then you can tailor what you do towards the expectations of the next rank. Every university has its own formulation of the expectations of each academic rank and what evidence is required to show fulfilment of those expectations. This means that the first rule is that you must read your university's guidelines on promotion very carefully, and then set out to fulfil them in an organised way in the time period you envisage for moving to a higher rank.

I want to pause here to say that you must take care that your existence at university is not dominated by a single-minded pursuit of the next promotion. There is no doubt that, because it affects our reputations – and our purses – promotion is important, and I would never suggest that you should not take it seriously. What I am saying is that you must not kill the joy of an academic existence by thinking only of the next step up the ladder. Ultimately, your reputation will rest on your contribution to education and to scholarly production – and if a particular promotion comes a little later than you wished it had, in time no-one will remember exactly when it happened. Remember that when Albert Einstein produced four articles which would fundamentally change the understanding of physics (in his "miracle year", 1905), he was a clerk

(second class) in the Patent Office in Basel, Switzerland – and grateful to have that job because he could not secure any university position at that time. But this is just a reminder to strike a healthy balance – my job here is to give advice about how to go about tasks when you do seek promotion.

Each person's journey in academia is different. For instance, if you are a woman, you will face choices that a man may not have to; if you are differently-abled, you will face challenges that others do not; if you enter academia after having spent time pursuing another career, you will have to develop strategies to equalise your position with that of your peers who have been in the game for longer; if you are in a field where a PhD is a prerequisite for your first appointment (as is typically the case in a science faculty), your post-appointment trajectory will be different to a field such as the humanities, where your PhD is often earned after your appointment.

And promotion to a specific rank also has its own dynamics. At your first application for promotion you will in all probability not have been in academic life for very long, and during that time you will have had to establish yourself in all the different areas of the job that universities care about. Chances are, no matter how hard you worked, you will have had some vulnerabilities in each of these areas due to the fact that you had to kick-start all of them at the same time – and there is a perception that promotions committees tend to focus on the gaps in applicants' CVs in early promotions. Knowing this from the start should prompt you to realise that, although you cannot be perfect in any area of academic citizenship, you should try to devote equal energy to all of them, because a marked gap in any one area may be the catalyst for a failed application.

Applying for promotion to the higher rungs of the profession – associate professor and professor – has its own, different challenges because universities tend to protect these ranks, since the reputation of a university correlates to a high degree with the reputation of its professoriate. Therefore, the prerequisites for promotion are particularly stringent at this level, especially when we are talking about a full professorship. Whereas for promotion to senior-lecturer level you will have had to have established yourself in the different areas of university work, the committee will assume that you are established in all the areas when you seek to progress to a higher rank, and it will be looking for indications of an international reputation in your area of expertise,

leadership in teaching and learning as well is in university service, and impactful public service. A word of caution: if you find that your university's guidelines for promotion are not particularly rigorous, you should be worried. You should be worried because the standards for promotion are high internationally and the academic profession is an international endeavour – and whatever you do will ultimately be judged by those standards. Also, it is important from a personal point of view to set high standards for yourself: expecting more from yourself is essential to developing your full potential. Therefore, remember that academic success lies in asking hard research questions, rather than easy ones; in constantly seeking ways to be a better teacher; and in always seeking out ways to make a meaningful contribution to your university and to society.

As much as our personal circumstances differ, and allowing for the fact that each promotion along the way has its own dynamics, there are enough common features to enable you to take proactive steps to enhance your chances of promotion. Therefore, let us consider what you need to pay special attention to in putting together and executing your plan to take the next step on the ladder.

First, teaching and learning: to have developed the required proficiency and reputation as a good teacher by the time you want to apply for an associate or full professorship, you will have had to have thought continuously about how to go about the job and what you want to achieve with your teaching. Some universities require teaching staff to be able to articulate their teaching philosophy (see Chapter 8) – and if you are not specifically required to do so, it is probably a good idea to include your teaching vision in the narrative part of your application anyway. Remember, an application for promotion is as much a dialectical process as any other activity in academic life: you have to *convince* your audience that you are deserving.

And to convince the assessors that your teaching performance is at the required level you will have to be able to demonstrate not only having a sound teaching philosophy, but also that you do serious undergraduate and postgraduate teaching successfully. To allow you to lay claim to the title of associate professor or professor, the committee of assessors will want to see a healthy teaching load, good evaluations by your undergraduate students, and a record of successful supervision at postgraduate level; and, in addition, involvement in curriculum

development is likely be a prerequisite. In other words, you must not only talk the talk, but you must also walk the walk. And the better the walk, the higher the likelihood of a successful application. Keep in mind that university promotions are invariably comparative: the committee sees all the applications and an application that might seem convincing on its own, may be outshone when more impressive achievements are put alongside it. The academic profession is not just about turning up at the office; it is about doing the best possible work while you are there.

What planning, then, should you do in respect of your teaching? As you know, a popular question at interviews for appointment or promotion is: "where do you see yourself in five years?". If you, as a senior lecturer, were to ask yourself this question in a promotion context, the obvious answer would be: "at the very least matching my university's criteria for promotion to associate professor". That means that you should prioritise these criteria as your goals and then work towards achieving them. I give you just one example of what is expected in the teaching sphere at a South African university's science faculty to illustrate that the expectations are high. To score 9 to 10 for teaching (at all ranks), the criteria are as follows:

> Consistently excellent student evaluations. An all-round outstanding teacher, recognised as an expert who has influenced and inspired other teachers in their field within the Faculty and in the external context. Plays a leadership role in course and curriculum development, reflecting own research activities in course design and teaching. Record of successful leadership in educational development initiatives at institutional level as well as national level. Well established reputation among staff and students for excellence in all aspects of teaching, in the field and/or in the classroom. Probably the recent recipient of a University or National teaching award.

To score 7 to 8, the criteria are as follows:

> Consistently very good student evaluations. Clear evidence that candidate's teaching is able to facilitate high quality student learning. Able to show a track record of the development of teaching and curricula at both course and programme level. Has

> successfully executed teaching innovations in a course and/or programme curriculum. Able to articulate a sophisticated and coherent teaching philosophy. Recognised in the Department, in the Faculty, and possibly externally for teaching expertise. Making a contribution to teaching and learning beyond the candidate's own course(s).

To score 5 to 6, the criteria are as follows:

> Student evaluations are generally good and fulfils teaching requirement. Shows evidence of an appropriate approach to teaching for their context, using student feedback, evaluations and exploring different teaching ideas. Shows some involvement in discussions around teaching in their Department and possibly in the Faculty. Typically an adequate teacher with substantial experience or a good teacher with limited experience.

I think it is clear that scoring 5 to 6 does not mean that you are a bad teacher at all – quite the contrary – but scoring 5 to 6 will probably mean that you could not get a high enough overall score to be promoted. I am giving this level of detail to emphasise that for promotion one has to go the extra mile.

Second, what is expected on the research front? Here you must consider a number of aspects to put you on the right track towards promotion – and to keep you on that track. A few general pointers: (a) you must keep both quality and quantity in mind – the quality of your research is going to be the main determinant of your success as an academic, but you also must have "a body of research" in terms of which you can be evaluated; if your corpus is too thin, it will tend to count against you, despite it being of high quality; on the other hand, if you "salami-slice" your research to get more publications, your peers will see through the stratagem and you will lose their esteem; (b) if you are doing research in science or engineering, you will in all probability have been drawn into a team when you started out – that will have got you going in doing and publishing research – but it is important to establish your independence as quickly as possible and to assemble a team of your own, for which you will need to recruit Master's and PhD students as well as attract funding – the latter playing an increasingly important

role in judging research performance; (c) if you are doing research in the humanities or the social sciences, getting started would probably have been a lonelier pursuit, but, as throughout the academic world, here, too, you have to develop your own voice to make a mark. Without an independent contribution, you will not be able to have the impact that will secure you an international reputation – and international impact and leadership in your field are the keys to the professoriate. I am saying this to impress on you that the outcome of your application for promotion is decided by what you do in the years leading up to it. What then can we say more concretely about what research performance qualifies you for promotion to associate professor or professor? For some perspective on this question, here, by way of example, are the criteria in a humanities faculty in South Africa: To score 8 to 10 ("exceptional") in the evaluation for promotion from senior lecturer to associate professor, the relevant considerations are as follows:

> Has produced a significant corpus of work and has established a national and emerging international reputation as a recognised researcher in the field/producer of creative work. Produces impactful research (such as a monograph, journal articles, book chapters and conference presentations) or creative outputs of quality on regular basis.

To score 5 to 7 ("Good to fair") the following is considered:

> Sustained production of recognised research/creative/performance outputs. Presents research papers regularly to research conferences and seminars. Participates in and has input at creative events. Is developing a national reputation in field.

The difference between getting an "exceptional" rating and a "good to fair" one lies in the impact of the research. Research that does not build international recognition will not be good enough for a promotion at this level. Whatever your university's formal promotion requirements decree, in fact, your research profile plays a dominant role in your promotion prospects – despite the ubiquitous denials of, and efforts to counter, the dominance of research performance: it is part of the DNA of universities to give special recognition to discovery and the creation of new knowledge.

After all, what else would justify the enormous investment in universities if not to ensure that they deliver something to society that is not (easily) attainable in another way. In this regard, to ensure that you play your part in this greater purpose, it is particularly important to have a mentor to steer your research towards the appropriate channels. Again: what you do in the years leading up to your promotion is crucial: you obviously cannot fix an insubstantial record at the time of applying for promotion.

Third, you must demonstrate competence and leadership in university service. Here the academic enterprise as a collegial enterprise comes to the fore. If you are unwilling or reluctant to serve on committees, to act as a student advisor, to be a course convenor, or to do the chores that are part and parcel of the academic job, such failings will going to count against you in a promotions exercise, since this is invariably an express heading in promotions proceedings under which you will be evaluated. However, in regard to this aspect of university life, you must also maintain balance and not take on too many, or inappropriate, administrative tasks that hold back the key aspects of your academic citizenship. Certainly, a university, as a community of scholars, rests on a complex network of ethical systems, part of which is the expectation of collegiality – a notion that includes that each member of the community should shoulder a fair amount of the unavoidable administrative duties. However, if the relevant structures in your university lean on you to take on too-onerous administrative roles (including even being head of department, as we witness in some universities) early in your career, do not succumb! The numbing effect of taking on too much administration and of being tempted into leadership positions too soon will be felt in especially the research side of your career.

Fourth, like any corporation – or perhaps even more than most other societal entities – universities, especially where they are publicly funded, are increasingly seen as having an ethical duty to act in a socially responsible way, and universities are urging their staff to use their skills and the results of their research in public service. Universities have different interpretations of what counts as social responsiveness and engaged scholarship, but usually the definition of outreach activities is wide enough to allow everyone to find a way to turn at least some of what they do at university into a community benefit. Examples of this kind of service include being an advisor to government or other organisations, nationally and internationally; serving on boards and committees

of learned societies or on boards in industry and commerce; and influencing policy through policy briefs that are adopted by government or by other organisations. A global trend is that performance appraisals increasingly include a requirement for a narrative of how the staff member's work is having a demonstrable effect on the real world. Above all, it is satisfying to be involved in the greater good of society in this way: be engaged in socially responsive activity for its own sake, and see the effect of it placing extra arrows in your quiver when you apply for promotion as just an added bonus.

Let us now talk about the actual application. It would be ideal if you were to keep a "promotion folder" in which you place documents relevant to your promotion as you go along. This means that when the time comes for you to apply, you will not have to scramble to collect the necessary evidentiary material. In this folder, the following items will prove useful:

First, download a copy of your university's promotion regulations and save it in the folder. Talk to your mentor(s) and peers about how these regulations are typically interpreted in the university so that you have an exact idea of the in-action meaning of the requirements on paper. Detailed as your university's regulations may be, they are going to need some degree of interpretation. For instance, in the extensive promotion guideline of the University of Ibadan in Nigeria (one of the best universities on our continent, which strives to attain globally acceptable standards of appraisal for its staff) there are detailed instructions on how all the elements of university work should be scored and what the minimum required score is to be considered for promotion, followed by the promotion criteria which requires, among other things "outstanding" research, "exceptional" teaching ability, and "adequate" experience. The points score gives one an indication of what is required, but one needs to know what these adjectives mean to the persons interpreting them. As with the Rolls-Royce company, which for many years merely stated that the horsepower produced by their engines was "adequate", one knows it is a lot, but you need a knowledgeable person to tell you what a reasonable estimate is.

Second, you should also create a document in which you can pen your evolving approach to teaching – and annotate it regularly with notes on how you have incorporated the learning from student evaluations into your approach. And do keep the student evaluations on file as well as a detailed record of your postgraduate supervision, when your students completed, and where they published their results.

Third, keep a diary in which you describe the impact of your research. This should include a record of the bibliometric impact of your research if these datapoints are important in the field in which you do research – and do record any shout-out citations or references to your work. But this document should go beyond the citation of your work by others to include a description of the real-world impact of your work – continuously updated as you become aware of the impact. In other words, in this document you should describe how your work makes a difference. This will be important to make a good case for your promotion, but it will also serve as a vehicle to help you think, as you progress, about where your research should be concentrated to be of maximum value.

I think it is clear from everything that I have said so far that to have planned carefully will prove to be of the utmost importance when you decide to apply for promotion. The next question is about timing. How do you decide when to take the plunge? It is important that you be neither too timid nor too bold in your timing. If you are unduly pessimistic about your chances of success, you place an unnecessary brake on your progression in the academic profession; if you overestimate your achievements, you risk demotivation in the wake of a rejection. I said earlier that one of the attractive aspects of academic life is its collegiality – and when you are deciding whether to apply for promotion, as at any other tipping-point moments in your academic career, you must turn to your mentor (and trusted peers) to help you make the decision. It is also important to talk to the head of your department or the dean, who will have a good sense whether you are likely to succeed. Listen carefully to what your advisers say, and try to be as objective as possible about your chances.

What should you do if you do not succeed in your application? The important thing in this situation is not to act impulsively. Take time to process the disappointment – and do not immediately fire off an angry letter to your head of department (HoD) or whoever else is responsible for the decision-making. The first thing that you should do is to find out the reasons why you were not successful. We live in a constitutional democracy which has at its heart a culture of reasons – whenever a public university comes to a decision that affects your well-being, you are entitled to know the basis of the decision. In most universities, someone – usually your HoD – will be delegated to give you feedback. If you do not receive the feedback automatically, ask for it. And when you have the

reasons, once again turn to your peers and mentors to help you analyse the promotion committee's motivation for not granting your application. If you do not find the reasons good enough, your university may have an appeals procedure or, alternatively, a review procedure. The difference between appeal and review proceedings is that in the case of appeal the person or body hearing the appeal is asked to reconsider the merits of the decision and to replace the original decision with its own decision, while in the case of review proceedings the person or body hearing the request for review is asked to consider whether the process through which the decision was reached was flawed in some way. Either way, you should know that experience shows that neither an appeal nor a review is ever an easy option. And, unless there is a glaring irregularity, the game is mostly not worth the candle since you will have the opportunity to apply again the next year. (Sometimes, however, universities prescribe a minimum waiting period when an application for promotion is unsuccessful, and this is also something to take into account in deciding whether to apply for promotion at a particular time.) If you do find the reasons given by the promotions committee plausible, then they provide the basis for remedial action on your part. Use the rejection of your application as a learning moment: let it inspire you to adapt what you do to ensure that the obstacles to your promotion are eliminated by the time of your next application. Failure is a valuable teacher – it almost always shows us a better way to do things. And remember: a failed application for promotion mostly does not convey that you are not good enough; rather it conveys that you are not there yet.

A not uncommon reaction to a failed bid for promotion is to seek appointment at the higher level at another institution. This is an option that you could consider, but you should weigh your options carefully. There are many reasons why there is more than a bit of truth in the commonly held perception that it is easier to be appointed to a particular rank at another institution than to be promoted into it at your own. Some of the most obvious of these reasons are that in your own institution both your strengths and weaknesses will be better known and, when you apply for a post at another university, there is an actual vacancy that the institution wants to fill, while promotion positions are sometimes subject to numerical and/or budgetary constraints. If you think of moving, you must take into account that, just as your institution knows you better, you also know your institution better: it has recognisable

flaws, but the university to which you will be moving will have flaws too – and they will not be recognisable from the outside.

Securing promotion is a tough business. However, I would like to give you a brief comparative perspective (and I give only an outline, leaving out many details and exceptions) in order to show you what the picture looks like elsewhere in the world. It is important to have this perspective because, I would like to stress once again, more than ever before, the walls between universities are disappearing and achievements are judged by international standards.

The academic ladder in South Africa has very few steps. (I am speaking of permanently appointed staff.) Once you have been appointed as a lecturer you will have only three steps to climb to full professor. The good thing about this way of doing things (which is essentially based on the UK academic-career model) is that you have a gradual climb to the top and time to prepare for each step; and there is virtually no official bar to, or external influence on, you reaching the top rung. The constitutional imperative of affirmative action, as implemented through equality legislation, may have an effect on an individual promotion if that promotion is not in line with the targets set for a particular rank in a university's employment equity plan. However, since promotions at university normally do not involve competition for a specific post but are granted on the basis of performance against a set of objective criteria, the chances of the promotion of an individual being prevented by equality measures is less than in the case of appointments where there is competition for a particular post.

So, what are the advantages of a gradual climb up the academic ladder? Spare a thought for the aspiring professors in Germany, where the traditional route to becoming a professor involves you having to invest a great deal of time and effort up-front without any assurance of getting a permanent post: all the preparation to become a professor is done before you get a permanent appointment. First you need to secure an assistantship with a professor to do your doctorate; then a second appointment to do your "habilitation", essentially an advanced doctorate, which is the licence to teach in the subject in which you have been habilitated; and then you are a Privatdozent, which allows you teach, usually on invitation, while you wait for an opportunity to apply for an advertised chair. The window in which you should secure an appointment is fairly small, and if you do not manage that, your years of

investment will have been for nought. To counter the brutal finality of this approach, a system of "junior professorships" have been instituted, which allows an incumbent to be evaluated after six years for a full professorship, but the traditional route is still the preferred one (and it has equivalents in other countries in Europe). Our way of doing things avoids this "all or nothing" approach: you have time to build your profile over time and there is space for both early and late bloomers.

As to the advantages of an essentially open promotions-line, it will help you to maintain perspective as you grapple with the promotions process to know that in the past it was even more difficult to gain promotion in this country and that in some other countries there is excessive central control over promotions. In the past, in most South African universities, the professorship was tied solely to a chair – in other words, one could only gain a professorship where one had become vacant (with the exception of when a "personal chair" was awarded to individuals of exceptional merit, the requirements of which were usually far more onerous than for an ordinary chair) – and so the eye of the needle was exceedingly small at the top.

Nowadays, one is able to achieve professorial status without having to wait for the incumbent of a chair to retire or to be promoted to higher service in the afterlife. Also important is that South African universities have managed to retain a high degree of autonomy. Compare the situation in France, where all aspects of the academic world, including promotions, are highly centralised and controlled by the government. In France you start your career as a *maître de conferences,* which is roughly equivalent to our senior lecturer rank, and to be able to apply for a full professorship (*professeur des universités*), you have to complete a *habilitation à diriger des rechersches,* which involves rigorous deliverables over a five- to ten-year period. Achieving this qualification is equivalent to being promoted to associate professor in South Africa – and then you are eligible to be the main supervisor of students and to apply for be a full professor by enrolling with the national *Conseil National des Universités.*

The process after that differs, depending on the discipline involved. For instance, in law, political science, and economics you also have to pass a competitive examination, the *agrégation du supérieur* (which involves a number of tests over a period of six months), in which you are ranked. The ministry decides how many professorships are available and ranks only the number of candidates corresponding to the number

of positions that are available, and the ranked candidates are then allowed to choose from those positions in order of rank. In short then, the climb up the academic ladder is steep in our country, but it is often steeper elsewhere.

Universities can fulfil their societal role only if they maintain the highest degree of excellence in every aspect of their endeavours – and the system of academic ranks based on the individual performance of their members constitutes a crucial part of the mechanism through which they maintain their currency. By having to conform to the stringent conditions placed on moving up the ladder, you form part of the preservation of the quality of universities. You should take comfort in the fact that having been appointed to an academic position means that you have already been identified as someone who has the potential to fulfil the high expectations of the academic profession. This means that if you conscientiously attend to the basics that the university requires of you, you are likely to rise through the ranks. And good luck on your journey, because we all need a bit of that along the way.

Section VII
Becoming an Academic Leader

"New ideas come to researchers when they are making genuine human connections – or simply having fun."

17

The Wisdom of Practice: An Intergenerational Conversation

Tebello Nyokong and Siphokazi Magadla
Rhodes University

A new building, for the Institute for Nanotechnology Innovation (INI), was constructed from the ground up at Rhodes University. It is funded by the Department of Science and Innovation (DSI) and is managed by its founding director Tebello Nyokong. At 70, Nyokong excitedly speaks about her dream of seeing students, researchers, companies and governments from across the world working together to use science to make the world a better place.

The intergenerational conversation reproduced in this contribution, which is reminiscent of fireside storytelling between elders and young people across African communities, was between Nyokong, a chemist, and Siphokazi Magadla, a political scientist at Rhodes University. The themes that illuminate this conversation cut across disciplines.

Nyokong speaks passionately about her view that research starts from simple ideas and a curiosity to explore. She explains that young researchers must not wait for big grants to start their research because "the best ideas are free". Her journey shows that a young researcher must be prepared to take risks, fail, and grow from the critical engagement with a community of scholars. She tells a story of how a failed attempt at karaoke in Japan led to an international research collaboration. New ideas come to researchers when they are making genuine human connections, and often in simple moments of fun.

Her journey into cancer research is illustrative of how young researchers can move from the foundation of their doctoral studies, to ask new questions that have the potential to transform their disciplines. In Nyokong's case, her cancer research was ignited by her discovery that she could make certain molecules, which were thought to be insoluble, dissolve in water – an idea that was rejected by her then supervisor. A young researcher must be prepared to follow their intuition and explore beyond the boundaries of what they have learnt.

This conversation also provides a glimpse into how a woman researcher navigated motherhood, how she draws boundaries with students in research supervision, and how she defines the terms on which she shares her research with the public. Nyokong resents the fact that research is being reduced to a quest for academic promotion or funding. Ultimately, longevity as a researcher is determined by a commitment to the creation of new knowledge and a passion to support generations of researchers that expand on those ideas. Here is the conversation between Tebello Nyokong and, her mentee, Siphokazi Magadla.

I looked for things that did not need money – I used my brain

Tebello Nyokong: My first question would be why should anybody do research? I want to be a role model to my students, and I want to train people who are leaders, who are passionate about research. But when you are a young person coming into any university, what makes you want to do research? Even though research remains a primary concern for universities, I don't think you need a strong research profile quite as much as in the olden days. In the olden days you needed it: you couldn't even be a head of department, without being rated by the National Research Foundation (NRF) in the natural sciences. So, your existence was mainly determined by research.

Research should, however, not be related to the subsidy money which universities obtain. I don't wake up and say "Whoopee, I'm going to make money for Rhodes".

Siphokazi Magadla: What you are saying to the young scholar is that, in a way, they are coming into the university and the messages they are receiving is that research is important for the university primarily to get money?

Tebello Nyokong: We should never bring money into the equation at all. Universities are for the creation of knowledge. If you do not create new knowledge, you are in the wrong place. When I started at university, there were very limited research facilities and equipment. But I would find ways of doing research. You'll see that, in the papers that I published from 1992 to about 1998, that I was the sole author. I was using my brain to exploit whatever means I had around me.

Siphokazi Magadla: In those years, what are some of the strategies that you used to carry out your research?

Tebello Nyokong: Well, first of all I had children, but they were teenagers. They were old enough that I could go and do experiments, while they were at home. I would do those experiments using old equipment with absolutely no money. I looked for things that did not need money, I used my brain. People use money as an excuse all the time. There are some people who receive millions of rands, but they will still produce nothing.

Siphokazi Magadla: That is very important, often young scholars are waiting for that big grant to start going, but you have to start from your ideas.

Tebello Nyokong: The best ideas are free. When the dean came to view my new facilities, they were quite emotional about what we have achieved. They couldn't believe it. Now I tell stories about how I got this equipment in the Institute for Nanotechnology Innovation, how much it costs, and how someone called me at 10 p.m. and wanted a proposal by morning, and there it was. You must take every opportunity.

Another thing about research is this: don't be afraid of criticism. Seriously, don't be afraid of criticism because some reviewers for scientific manuscripts believe Africans are not supposed to know science. They would come back and insult me and say "your plots in your papers look like sausages". Ignore that, look at the good points. I tell you Siphokazi, in this world there are still good people. There are people who will see goodness in your work, and you have to just take the chance and do it.

Siphokazi Magadla: Your point is that young people must take the chance and submit to prestigious journals?

Tebello Nyokong: Some reviewers are quite reasonable. They are not rude, they give constructive criticism. One of the things I do in the natural sciences – yes, as you know we work differently from you – I make students be the corresponding author, so they deal with the editors themselves. It develops them because then they begin to understand, they enjoy research, and they feel grown up.

Another thing I really want to remove from people's heads is the notion that when you are a good researcher you are a bad teacher. My teaching was influenced by my research. You know, in the olden days people would teach from notes that had never been updated and the paper looked yellow. My notes are refreshed all the time because of the new ideas that come because of research.

Siphokazi Magadla: How should the young scholar look at university promotion policies, because I can hear that you are quite passionate about them not only thinking about their research to justify the promotion criteria?

Tebello Nyokong: That is what many young scholars do: they just want to appease the system. There is nothing more fulfilling than being an international scholar and let us stop being local, let us be all over the continent. Indeed, you can be anywhere in the world: be marketable, be movable, have links all over the world. You know, in my research I have collaborators, and we give each other new ideas and we write joint proposals. For instance, we are writing one now with China and India. We have just written another one with China and Brazil. When you are writing these proposals, you get new ideas and you give new ideas yourself. Do not be afraid. When you go to conferences, go and socialise. Get to know people, do not sit in your room and do not believe you are inferior. South Africa is doing very well. We have to stop feeling inferior about ourselves.

Siphokazi Magadla: Tell me about your conference experiences.

Tebello Nyokong: There are lots of those, some of them are very funny. At one of them I was in Japan with a male researcher from England. We went and tried karaoke. We failed. We said: "Let us just collaborate in science, and forget about karaoke." But to be sure, one also learns from

interactions in the conferences themselves. For instance, in the first conferences that I attended, the one in Hawaii in 1995 in particular comes to mind, I was with some top people in my research area and benefitted from their responses to my presentations. When people are high achievers, they tend to encourage others, and certainly such high achievers encouraged me a lot. After my presentation they would come and say "that is good work, please continue, we will support you". This was good for a young researcher.

Siphokazi Magadla: That is a point about building communities of scholarship. But before that, I'm keen to hear a story about a conference in Africa.

Tebello Nyokong: It was in Malawi in 1989 where I attended the International Chemistry Conference in Africa. Malawi was probably the only country that approved of apartheid (or perhaps I would say, rather than that they approved of apartheid, that they were friends with South Africa under apartheid). And so, most of the white South Africans brought presents to try to please the conference organisers because they felt isolated. And then this conference made them come together with other chemists. But the minute they arrived, the delegates from Nigeria and Kenya left, so the conference was cut short.

Siphokazi Magadla: What did that walkout teach you? Some people think that scientists just care about science.

Tebello Nyokong: I think these countries were very strict during apartheid: they did not approve of the way Africans were treated by the apartheid government. I'm sure you've learnt from me that I know more about politics than you would expect.

Siphokazi Magadla: How does a young researcher identify colleagues that are good people, that care, that can see your vision?

Tebello Nyokong: The thing is, to be honest with you, when you first arrive in academia you are clueless. You need someone to begin to direct you, and in due course you will be able to make a decision on whether these people are good or bad.

The other issue is that young people are often given such a heavy teaching load. When I started, I was given three months of absolutely no teaching so that I could get my research group going. The vision was: if you do well, the department does well. I would like to suggest this to universities generally: look at who is actually productive and give those people a break. Those who are not productive (the deadwood) and pretending to do research should do the administration and free the young people.

Siphokazi Magadla: But is there not a tension in what you say? If you put the deadwood in those spaces, are they not likely to produce more deadwood because they will block the productive people?

Tebello Nyokong: Yes, deadwood is a problem when they are in administration positions such as heads of departments or deans. People who hold these positions should be true scholars.

Asking new questions, supervision and visibility

Siphokazi Magadla: How does a young scholar dare to investigate a research question or subject that, in their field, no-one seems to be thinking about? How do young scholars take the risk when they suspect that the questions they are asking have the potential to transform the entire discipline?

Tebello Nyokong: You can start with something related to your PhD. I started with the molecules that we are using to treat cancer now (but we weren't using them to treat cancer then). My supervisor refused to believe that I could cause these molecules to dissolve in water, but I could, and that was my first publication on my own after my PhD. Because my supervisor rejected the idea, I took it and played with it on my own, and then I began to think of other applications. So, I started with this small idea and propelled it. Sometimes in the sciences, you have to allow students to take a small idea from their PhD and then expand it.

Siphokazi Magadla: What I'm asking is how young researchers can gain the confidence to actually move beyond their PhD work and ask connected, but also really fresh questions?

Tebello Nyokong: My feeling is that in order to progress quickly, you can start with what you already understand and take it in a different direction, because starting a completely new idea can be very hard. The important aspect is that research should be solving societal problems and advancing knowledge. Talking with others, attending conferences, also reading a lot are all valuable ways of developing confidence about your ideas and finding new ideas, but I think conferences are the easiest and quickest way to advance knowledge. You are not stealing the ideas that you encounter, you are just saying that they can be taken in a different direction. You need to know what the state of the art is in your area. You don't want to reinvent the wheel; you can take something forward in a new direction without going back.

Siphokazi Magadla: So, the next question is about supervision. What are some of the key lessons you have learnt about supervision? How does a young woman scholar set boundaries for themselves about how they supervise?

Tebello Nyokong: First of all, I avoid personal things. I don't want to know whether you have a boyfriend, it is none of my business. But in a sense, I am a mother to the students because these are people who are away from home. I think about them all the time: some of them are away from home for six years, starting from undergrad upwards. In 2019, one of my students learnt from social media that her brother had passed away. So, the students are away from their parents, you cannot neglect them. You have to sit down with them, let them cry, whatever they want to do, and console them. So, it's not only supervision, it's also parenting. But you also have to keep a distance. I don't allow them to call me on my cellphone. They have a WhatsApp group, but I'm not part of it: I don't want to know about their fights because they will affect me.

Siphokazi Magadla: One thing I know about you is that you are very quick with your emails, because some of the students would want to phone you, and would use the excuse that, if there is an emergency, they need to access you on the phone so that you see the message quicker.

Tebello Nyokong: I tell them if they send me an email, I will respond in the next minute.

Siphokazi Magadla: My next question is about how a young researcher negotiates the link between research and public intellectual life. We want to see more women researchers speaking authoritatively to shape public debates in their area of research. How does a young scholar use public platforms to gain some visibility for their research area without finding themselves bombarded with media requests for interviews that take them away from their research?

Tebello Nyokong: Yes, I understand that. I learnt a good lesson when I won the 2004 *SABC2/Shoprite-Checkers Woman of the Year in Science and Technology* award. I shared my personal phone number, and everyone was calling me, and that left me so exhausted. So, I learnt from that experience to select who I talk to. But I had to have that experience to know what to do. In Paris at the *UNESCO/L'Oreal* award, I did 101 interviews in one day. So, at the beginning, when you are young, media can promote you. I keep saying to people: "don't shy away when you are a young researcher or young person, don't shy away from media; use it to promote your work", because probably I am also a product of the media.

You see, now I can choose which media I would like to deal with, but this was not the case at the beginning. I did many interviews in the past, but only a few radio stations would call and give me feedback after the interview. This is what is lacking in our media relations: they do not realise that we are human beings and that we are nervous.

Siphokazi Magadla: Exactly. Because sometimes you ask the producer at the end "did it sound okay?" and they seem surprised that you want feedback, but it would be easy for them to say something like "you know, maybe you can speak a bit slower next time", that's good feedback.

Tebello Nyokong: They don't realise how hard it can be: they do this every day, we don't. Then another problem is that I think the whole Sotho community will be disappointed in me because I cannot do interviews in Sotho. I can't speak science in Sotho. This is where the contradiction is, in that you are now removed from your society. I can speak at family events. When it comes to science, because we haven't developed the language or the terminology, it is hard. So, I felt I cannot embarrass the Sotho nation by trying to speak Sotho, so it's mainly English.

Siphokazi Magadla: Do you think your current students are seeing the importance of language in science and society?

Tebello Nyokong: They see the importance, but as scientists we hide behind big words. I tell them to speak science in English. They must be able to talk to anybody, everybody should understand it, don't use big words.

Siphokazi Magadla: Same with our discipline, you must speak in a way that people can understand you. Thank you so much for lifting the veil on key moments in your journey to becoming a top scientist. Your examples and the nuggets of wisdom that you have shared will be an inspiration to all young researchers.

18

An Unexpected Duty: Academic Leadership as a Young Head of Department

Philippa Tumubweinee
University of Cape Town

As a new staff member and an emerging academic, I did not come into the institution with predetermined ideas about what academic duty is (see Chapter 11). My approach to joining an institution of higher education was one of curiosity. Curiosity about how I could grow and develop into as a teacher and researcher. This allowed me to explore possibilities and seek out potential opportunities from which I could grow and learn about what it means to be an academic. The curiosity with which I approached my academic duty was in part responsible for landing me the role of Director of the School of Architecture, Planning and Geomatics (APG) at the University of Cape Town (UCT) from 2019 to 2022. I started in this role shortly after graduating with my PhD, and just a year after joining UCT.

The appointment came at a time in the school when there was a leadership vacuum, as a result of the resignation of the previous director of the school in 2018. After his resignation, the school was placed under administration while the Faculty of Engineering and the Built Environment (EBE) tried to address the antagonism between different factions in the staff body, with some of the students taking sides. At the

time, it seemed that I was facing an almost insurmountable challenge with a great deal of resistance. Headship was an interesting prospect, but the realities of the duties I had assumed quickly dampened any excitement that I had in taking on the role.

For starters, I am not a typical head of school. I do not speak like a professor. I do not dress like a professor. I am not a professor. I am somewhat gregarious. I am a bit of a hooligan. I am young-ish. I am an African. I am a woman. None of this should matter in the 21st century – but it does, and it has implications for not only how you are perceived within an institution but also for what is expected of you. Beyond the challenges of being atypical, there was an expectation from the start that I should have an in-depth and intimate understanding and knowledge of all matters and concerns in the school, faculty, and more broadly at UCT. Academic duty became complicated, and fast. In staff meetings, colleagues would bring up historical concerns of which I had no knowledge; partly to humiliate; partly to distract; and partly as a continuation of discussions that had been going on in the school for a long time. Worse, as a new staff member, still unfamiliar with UCT's notoriously complex, ever-growing minefield of acronyms, let alone progression codes, I was suddenly in a position where I had to explain these acronyms, and assign and advise on a complex system of coding that indicates how a student has progressed and how they have fared on an academic cycle. This was just the tip of the iceberg when it came to the things I had to learn while on the job, in an unknown, strange, and at times hostile environment.

No concessions were given; no excuses were taken – out flew whatever perceptions I had had about the academy and in settled the obscure realities of my duty. I had to learn to shapeshift on command, sometimes to buy time as I educated myself on a concern tabled, and sometimes to draw out more information. It was a dance the music to which I could not hear, nor did I know the steps, but I had to dance nonetheless in whichever form I assumed in the moment. It was in this tension, one that generated a shape-shifting, dynamic dance, that I found the promise of opportunity.

This tension provided me with the chance to gain insights and understanding into what the realities of my academic duty were and allowed me to engage with the question of whether I wanted to take it

on. The opportunities presented in this tension between what I thought I was doing and what I was expected to know and do was of particular significance for me. I learnt to do more than ask questions about the role I had taken. I started to see how I could shape the role to accommodate my understanding of not only the role, but what this role meant in my journey as an academic.

I realised that while it is one thing to address and respond to the administrative, financial and management requirements of a predetermined role, it is quite another to – within the requirements of that role – develop an understanding of yourself and your journey in an institution. As an example, I was aware of and passionate about how to build capacity to increase the number of PhD candidates coming through architectural learning sites and had made several proposals on how to address this. Within the administrative and operational machinations at UCT, I found and developed avenues from which I could, with minimal financial infrastructure, develop a platform to provide foundational research skills for potential PhD candidates. The platform is designed to develop basic skills that are essential for a student to undertake a large-scale research endeavour such as a PhD. The platform also provides support for supervisors and in this sense builds supervisory capacity particularly for first-time supervisors.

The atypical nature of my appointment, which was like a shotgun wedding with no option for divorce, meant that I had to make it work. When you are in a position where you have no option but to make things work, surprisingly you do. And that is the lesson – whilst academic duty is not something that comes with its own manual, it is something that you must make work, not only for your career as an academic but for the betterment of the institution in which you are employed.

For the first few months the question I asked myself every morning was, "W*hat have I done*?". I consistently asked myself this question while tackling the unfathomable, obscure task of running a school made up of six programmes and departments whilst COVID-19 ravaged everything and everyone. No matter the limitations of the abnormal conditions under which COVID-19 placed everyone, the expectation of academic duty remained the same. Academics in institutions were still expected to teach, undertake significant research, and contribute in an appropriate and responsive manner to a community at UCT and by extension the broader society in which it exists.

I was not a UCT alumna, nor had I ever seriously engaged in the sometimes-intransigent approach to teaching in the school. I was still in the process of learning about the school's culture and its positioning in the faculty and at UCT. I was also one of the youngest academics on staff, both in terms of age and rank. My age and rank rattled a long-held saying in the school: "*We need to grow our own timber.*" There was timber and grow it did, painfully for the most part. Through this haze of growth emerged a clarity about academic duty: it is not complicated; it is complex, and that distinction is significant.

In the beginning, I imagined academic duty as coming to class on time and undertaking large-scale, exciting research and creative projects. I did not think of attending numerous departmental and faculty meetings, signing documentation, submitting, and approving leave forms, amongst a range of other, perhaps mundane, tasks. The latter I saw as being separate to my aspirations as an academic, which was to construct and build on good and appropriate curricula, knowledge bases, systems, and creative projects within the first-year architecture studio. Over the last three years, I have realised that the two are not separate, they are not even two sides of the same coin. They are the same thing. You need a functional understanding of institutional operations, administration, human resources, and technical processes to construct a good and appropriate curriculum, knowledge base, system, or creative project. Because when you combine a functional understanding of these processes with the passion and aspiration with which you see academia, you can create and bring into being an incredibly powerful thing. The perceived mundane nature of these processes as being there to allow for you to function in an institution is wrong. You leverage these processes to ease and smooth the development of institutional knowledge. Once this passion for the academy is tangible and you can feel it, see it, smell it, touch it, you begin to understand the expectations of the duty that you have as an academic, and this you build onto in any form over time.

This tangible material experience of the institution is the foundation for your academic duty. As an example, understanding the rules and guidelines for promotion to a higher rank signals to you that your teaching and research have to come together, that they cannot be engaged as two discrete activities. In the same vein, your contribution to and in society has to converge with your teaching and research – this what is referred to as engaged scholarship. As an academic, you must

be able to shift your understanding of your duty beyond any ideological position towards the reality of the material tasks that are required of you in a particular discipline within a higher education institution at a particular time.

In retrospect, the material reality of an atypical director allowed for staff and students to re-engage with how the school was realistically placed within the faculty and at UCT. It also brought to light idealised views of how the school was perceived. The provocations that emerged meant that both the school and I had to re-learn that within the histories, rituals, traditions, standards, and norms that make up the academy there had to be a place for difference. This engagement with difference allowed me to position myself and my life-worlds in a context that went beyond the role of director and my duty as an academic.

This broader view of academic duty beyond your course, programme, discipline, and faculty provides opportunities for any emerging academic to gain intimate knowledge on how institutions work and why they have the ability to move beyond ideologies, personalities, and socio-political movements into an unknown and sometimes precarious future. If, as an emerging academic, you understand that the academy is broader than the course, programme and faculty in which you are located, then building relationships and bridges across the institution will allow you to not only get a better understanding of what is expected of you, it will also deepen your experience in and of the academy.

Being able to engage broadly within an institution is something that is crucial for any emerging academic. This for me was an invaluable opportunity. Regardless of my position as the head of department, I found that my understanding of academic duty grew as a result of the relationships that I cultivated across departments, faculties and the various administrative and operational sections of the institution. The opportunity to engage broadly is not always possible for younger academics. This means that as a young academic you must make a considerable effort to consistently and continually find avenues and platforms from which you can engage broadly in any institution. This engagement should not be limited to fellow academics – I have found that I have gained broader insights by engaging with people and processes in the administrative, human resources and financial departments at UCT. For example, my understanding of admissions processes at UCT and why these are structured the way they are has come from the faculty

and school administrative and finance staff. Likewise, insights into promotion processes have come from engaging in promotion selection panels, with both senior academics in the faculty and school but also with the staff of the human resources department who service and manage this process. In the context of the ongoing debates on re-thinking the knowledge project, the experience of gaining an understanding of academic duty is enriched when the academy is understood as something that is tactile and can be assessed as a construction. This way of looking at the academy is useful for me, because it conveys that academic duty is built, as opposed to being built-in.

Although my teaching is embedded in how to read and understand buildings as a material construction, I have not become an academic that writes about building materials, construction technologies and structures. My fascination with how things are put together to construct another thing has revealed itself in my understanding of education. I have translated the rules and principles for putting building blocks together to create a piece of architecture in my teaching and approach towards creative and research projects. In architectural education I constantly ask: how do you put various triggers in a curriculum to support learning? How do you construct these triggers? How do you put them together? How are these triggers understood by students? Do these triggers get the most out of students?

At an institutional level, I started to explore and experiment with how to construct triggers that can allow for the visualisation of a space that speaks to transformative ideals, policies, and frameworks. How does one embed these triggers into the experience of higher education to materialise this image of transformative ideals, policies, and frameworks?

The hypothesis here is that if within the discipline of architecture one can assemble and arrange building blocks to create and place an image of an idealised building in a specific context, and through that image develop a framework for how to build it, then surely this process can be applied in the construction of an academic and their duty in an institution. This way of thinking about the academy and the associated duty that comes with being in it as a construction is useful. In this understanding the academic determines the process, the nature and the manner in which their duty as a construction comes together in an institution. This places control in the hands of the academic because if

your duty is a construction and you are the person constructing it, you determine which building blocks you can use, how you can use those building blocks and how they come together. You control the image and the placing of that image in the institution. When you understand your place as an academic in an institution as being made up of constructed building blocks and the relationship between these building blocks as being your duty, you can start to produce and create knowledge beyond what you find in the institution.

19

Mentoring and Coaching

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This chapter aims to provide insights into the advantages of having a mentor and/or coach. We address the following questions: What do mentors do? What do coaches do? How does mentoring differ from coaching? Who is a good coach or mentor for you? We also consider why you may want a mentor at various stages of your career; how to find a mentor; the role of the mentee; and the supervisor as a mentor. We point out the downsides of mentoring; but also emphasise the fulfilling role becoming a mentor can be and why academia is an ideal place for mentoring.

As part of our focus on mentoring and coaching, we, Ahmed and Moyra, reflect on some of our own experiences of having mentors and coaches as well as having been mentors or coaches. In this way we give insights into the mentoring relationship and the different forms mentoring may take. Mentoring may be a significant aspect of an academic's career advancement.

Moyra:

> You may ask: Do I need a mentor? What about a coach? What's a coach anyway?

Niels Bohr had a mentor; he won the Nobel Prize for Chemistry. Maya Angelou had a mentor in Oprah Winfrey. Barack Obama had a mentor. I had a mentor. Well, okay, I didn't make VC or an A-rating – never mind the Nobel Prize, but I may still have not got much past a matric without a mentor.

I dropped out of Wits at age 17 and doors seemed closed beyond a life of menial tasks. An old music teacher mentioned one afternoon: "What a pity to let this brain go to waste." Me (silently): "Brain?" Well, no-one had told me I had potential. This may seem a trivial and silly story, but it demonstrates what was needed to get me to enrol in a course of study. Mentors have a kind of super-power it seemed to me. Even now as I coach or mentor academics, I sometimes think that what I say is obvious, the challenges set out are in plain sight but are not obvious to the mentee. A mentor or coach can often give a push or a suggestion or pose a question that leads to new possibilities.

The Australian keynote speaker at a conference in Durban agreed to my hesitant request as a despondent PhD student – on the spur of the moment – to come to my remote research site at two rural schools near the Valley of a Thousand Hills, South Africa. He spent two days walking with me in the dusty pathways of the village, talking to children and elders and visiting the school. He gave me advice in finding direction and for generating data. Mostly he gave me confidence and encouragement. Mentors do that – even transient ones.

Mentoring

Mentoring advice or guidance may be brief, it may last a lifetime, it may be formal, it may be unsolicited, it may be accidental, it may even be wrong. It may be from a role model, a younger person, someone of a different gender and culture and religion; mentoring may be set up for a purpose or be self-initiated. This may sound as though *every* encounter is mentoring – well no. Not every encounter with someone/anyone means that you are being mentored. But, there is a mentoring way of being in

the world: a manifestation of *ubuntu*; or the Masai concept of *osotua*, which lets us know that *relationships not only shape reality – they are reality*. This chapter is about coming closer to our interconnectedness, finding ways of being in academia without being isolated and in constant, and often tense, competitiveness. In academia a mentor may give you access beyond the formal curricula to the hidden curriculum – How to be "uni-wise".

What do mentors do?

Academic mentors provide direction, motivation, and support in diverse ways so as to help the mentee achieve their dreams and use their talents as a productive member of society. Academic mentors usually provide guidance in an organic, personal way that centres on goodwill. Often there is a specific goal in mind – that of promoting the mentee to reach academic goals – or maybe more importantly – to achieve holistic happiness in the academic, administrative/managerial, and social arenas; and to grow into a well-rounded scholar. Mentors generally provide support through direct personal involvement and role modelling as well as direct assistance towards the mentee's career and development. Mentors may facilitate access into a scholarly community. The mentoring relationship is based on trust, mutual respect, and confidence in each other and in the relationship. Often it is the mentor who sees the potential in the mentee and initiates or provokes action. Often the learning is mutual: a mentor benefits from the relationship too.

Early records of mentorship reflect that the concept of mentoring originated with the character Mentor (a close friend of Odysseus) who was asked by Odysseus to take on the responsibility of his son while Odysseus was fighting in the Trojan war. However, there are many equivalent historical instances, not prominent in Western literature, and we can all probably identify mentoring from our own cultural upbringing. Already we see a continuum from formally assigned mentors to mentors who informally assist you as a family member might do. Mentors are often not "trained" for the task. This is one of the key differences between a mentor and a coach.

What do coaches do?

Coaching has become a well-talked about concept and a popular career path. Various forms of coaching include a focus on the development of professionals towards their specific careers (career coaching), executives (executive coaching), leaders (leadership coaching/enneagram coaching), personal life issues (life coaching), patients and/or healthcare professionals (health coaching), and students and academics (academic coaching).

Generally, coaching consists of conversations and challenges with a trained professional who works under an ethical umbrella with the specific aim of achieving the client's (coachee's) objectives. Coaching may be for individuals, for pairs, or teams. There are different coaching models but the principles are generally the same across "Results Coaching", "Enneagram Coaching", "Co-Active Coaching", "Ubuntu Coaching", and "Organisation and Relationship Coaching". The emphasis varies from more spiritual-intuitive approaches to more output-determined processes.

Coaching is usually more formal and structured than mentoring and rests on evidence-based approaches and pedagogies that deepen reflection and self-awareness, improve intercultural communication, explore values and motivation, and include homework (for the coachee/client to reflect and work on issues discussed during the coaching session for following up in the next session and for developing accountability). Coaching pedagogies align with experiential and transformative learning, learner-centeredness, mindful inquiry, and deep approaches to learning. Theories in coaching practice come from philosophy, sociology, communication, neurolinguistics, anthropology, and sport, as well as leadership theory and systems theory. Of course, the different models of coaching will emphasise different aspects.

A coach needs to have a specific coaching qualification, but does not need to be in the same field as the coachee. A coach is not a therapist nor a counsellor. Unlike therapy, coaching is forward-focused and assumes that the coachee is not in need of "healing" but rather has a strong sense of agency and is capable of achieving their goals. It should be clear that coaching may be expensive. Typically, a coach engages for between eight and thirty sessions and each session may cost between ZAR 1,000 and ZAR 4,000.

Key differences between academic mentoring and academic coaching

An academic coach has to have specific training and a qualification in coaching. Typically, an academic mentor draws on life and career experience and academic qualifications in their field. Coaching is more transactional: a coach is paid for a set number of sessions; mentoring is often informal and continues organically over time as needs arise; a coach does not give advice nor relate their own experience, while an academic mentor seeks out opportunities for their mentee, advises, guides and is a role model. While the focus here is on the academic aspect, both coaching and mentoring need to be holistic and therefore relate to the person as a whole. Aiming for work–life balance is a recurring theme for academics.

Who is a good coach or mentor for you?

Mentoring is viewed as an ongoing, often informal relationship between a senior or more experienced person, usually from the same area of specialty or profession. In contrast, coaching has a finite (usually shorter) duration, undertaken formally by a qualified coach.

Many people may believe that having a mentor or coach from the same profession as their own is desirable. However, there are advantages in working with someone unconnected to your own field of interest as their questions and challenges could unlock ideas that you had not considered previously. Mentors and coaches should have well-developed interpersonal and listening skills, the ability to generate trust, provide support and be committed to the appropriate process to motivate and "stretch" the mentee or coachee. In both cases self-awareness is key.

A practical task: Imagine having someone in your corner

Here is a self-reflection task. Do a four-minute free-write on what it may have been like in one particular time in your life if you had had a mentor. Begin (and simply continue with what comes to mind). Here is my [Moyra's] free-write:

> If I had had a mentor …
> If I had had a mentor when I walked into Wits at 17, I may not

have dropped out. I may have known that there was such a thing as a postgraduate degree – and thus may not have had to wait until eventually many years later I could complete an HED and then a part-time BA. I may have thought, after completing a Master's degree, that it was possible for me to register for a PhD – you didn't have to be a Nobel Prize candidate to do that.

It must be occurring to you that I was "slow on the uptake". I could have – I would have – I may have – but mostly it was mentoring encounters that presented "green lights".

Ahmed:

My academic career started in 1975. Pre-internet and cell phones. I was young, I was eager, I was enthusiastic and I was "full of myself." But I was a "non-white" in apartheid South Africa. I consider myself extremely fortunate – or that the "gods" were smiling upon me – for that is when I met two people who moulded my life, my thought processes and my way of being. Neither of them thought that they would be mentors. Indeed, they had no conscious intention of becoming mentors. Both were in the field of medicine, one a clinician who late in his life decided on reading for a PhD; the other chose not to practice clinical medicine after graduating with an MBChB degree, but rather entered pathology and medical research as a career.

And so, my journey began. Eyebrows were raised and some softly spoken questions asked if it was advisable to have a Muslim boy in a laboratory where the academic personnel were white and mainly Jewish. Besides I may have wanted to stay away from work on Friday afternoons as I would be at mosque and use that as an excuse to enhance my laziness. Neither of the two blinked and eye. My stories with these two men who had mentorship thrust onto them could fill a fairly large book of memoirs. I relate a few here only because they are the most memorable. The clinician took me under his wing noticing that, as a biological scientist, I knew very little, if anything, about "real life". And so, my time with him was learning about clinical medicine as he practised and lived it daily.

Then there were interactions with the pathologist who started my research training interspersed with numerous jokes (many

unsavoury) but with sensitivity and caring in the manner in which he spoke to me. Both often reminded me that I actually knew very little about anything other than medical science. So academic learning happened but the life journey had just begun. I went to a church, a synagogue, and a Hindu temple. I was exposed to new literature and, most importantly, learnt about nature, and the appreciation of learning for the sake of learning. My pathologist mentor still sends me jokes, checks in on me, and phones me from America.

It is important to remember that mentoring may happen at any stage of one's career and life. As a young "brown" professor I was elected onto the senate of Wits university long before 1994. Milling around the foyer and with no eye contact or any interaction with other colleagues (all of whom were white) I felt very much alone and isolated. Then a tall man came up to me, introduced himself, and instantly made me feel like a human being and a colleague. He turned out to be the registrar of the university. I looked to his advice and counsel for his entire time at Wits. The most memorable of his informal mentoring arose years later when I was the assistant dean of health sciences and was elected as chair to the University Forum committee – with immediate effect – in the middle of a meeting. I landed with a thud. Out the corner of my eye I saw the registrar rise from his seat and gently walk over to sit beside me and very gently "held my hand" through that stressful and fraught session such that I was praised for great chairing. No-one appeared to focus on the man to my right who just provided the instant support and mentoring. There were many such instances, from novice academic to dean, where someone mentored me through a particular issue. Perhaps that is why I championed various mentoring programmes for both staff and students.

Skills of a mentor

The ability to build a rapport between the mentor and mentee – or anyone for that matter – requires the important skill of listening. When there is real listening, both trust and understanding develop. Mentors and coaches are also attentive to body language and behaviours. These

include posture, facial expressions, tone of voice, energy and silences. Intuition arises. Both mentors and coaches provide constructive feedback and thus strengthen positive qualities as well as enable one to work on "blind spots". As far as providing opportunities, the mentor's networks, connections and experience are key. A mentor provides assistance, and guidance on the setting of realistic career – and life – goals. They are able to work across boundaries of gender/sexual orientation/race/culture/religion.

Within a department, faculty or university, mentor–mentee relationships are developed between individuals who are professional colleagues. It goes without saying that an ideal academic space should be collegial and collaborative rather than fraught and hostile. This, unfortunately, is not always the case. When academics complain about work–life balance, we wonder if the distinction is unnecessarily polarised, since, for the most part, academics find their work fulfilling and interesting with, hopefully, a degree of freedom. However, stress is more likely to arise in a mentor-less context; in a context of escalating expectations of outputs and surveillance. A mentor could provide an alliance or a mediation.

Why you may want a mentor

Of course, once you have a mentor, they are usually there for you, like family. It is likely to be a long-term relationship. But you may not have a mentor yet or need someone specific for a new situation. For example: being new to the environment – within the department, faculty, university, or country – you may be feeling a sense of isolation, excluded from colleagues; you may be shy or a victim of bullying; you may feel clueless and bewildered. On the other hand, you may feel up for a challenge and have a clear ambition. A mentor may support, advise, and give guidance in various ways for you to navigate new and challenging contexts. You may have a few mentors; your own "advisory committee" or "board of directors", so to speak.

Responsibilities of a mentee or coachee

This is a two-way relationship. The mentee or coachee needs to show up with a willingness to engage authentically. The main difference between

mentoring and coaching is the more hierarchical relationship between mentor and mentee, compared to the more equal relationship between coach and coachee. Both modalities require commitment to the process, willingness to work outside of one's comfort zones, respect, integrity and authenticity. It is helpful to keep a journal, set aside time for the process. An important aim is to be committed to ultimately developing scholarly independence.

Finding a mentor and pairing mentors and mentees

Some formal mentoring programmes take care in matching mentors with mentees. This may be done on the basis of, for example, skills, fields of study, gender, race, interests, or specific needs. Often intuition plays a part. If you are in a mentoring programme you may think about the kind of mentor you would like as well as what your needs are and how you would like to interact.

Supervisor as mentor

Of course, in academia a supervisor may also play the role of a mentor. This is often a very effective way of being inducted into a field of study, to research, to writing, presenting, seeking promotion, joining a community of practice and finding networks. If you see your supervisor as approachable and a role model you may seek out advice on these various aspects. Many supervisors are keen to promote their students, but it also takes a level of proactivity on the part of the student. A student may offer to be involved in projects and offer to assist in research projects. Mentoring in this way has been going on for many decades.

In 1912 the physicist Niels Bohr left Denmark a to do a postdoc at Cambridge with the Nobel Prize-winning scientist JJ Thomson. Peter Watson, in his book *Convergence*, tells us that Thomson was apparently not very impressed with Bohr's English ability, nor was he too interested in the young man's work. Bohr was also criticised by senior colleges for being too philosophical and intuitive. Then, fortunately, Bohr met a mentor, Ernest Rutherford, another Nobel laureate. Rutherford later claimed that Bohr was the "most intelligent man he had ever met". Mentors can see past your limitations. Of course, there is a happy ending: Bohr went on to win a Nobel Prize for his work in unifying physics and chemistry.

What appeals to us in this story are the lessons that we can be wrong about students; that even super-achievers have critics. That what set Bohr off on his path was a mentoring and mutually respectful relationship. And as Bohr said: "Prediction is very difficult, especially about the future."

Choosing a coach

Coaching involves structured, focused interaction and the use of appropriate strategies, tools and techniques to promote desirable and sustainable change for the benefit of the coachee and potentially for other stakeholders. Coaching has recently gained popularity and some universities provide coaching for managers and academics.

The coach would not offer advice but rather encourage you to wrestle with the problem by using challenging questions such as "What would it feel like if … ?" "What are the possibilities?" "How important is this for you?". A coach asks you to self-reflect and undertake self-enquiry so that you have deep conversations with your thoughts, motivations and actions.

Coaches do not focus on the more therapy-aligned "why?" or "why not?" of a situation. The focus is rather on setting clear rules regarding meetings: confidentiality, frequency, agenda, deliverables, intentions; on having a clear, inspiring vision; on setting goals; on posing challenges and on accountability. Coaching models broadly follow a step-wise – and yet flexible/organic process. The coach–coachee relationship is based on a contract. Once the goals set are reached, or the term of the contract completed, the coaching relationship is terminated.

A basic coaching session structure could include: finding clarity on one's own vision and purpose; setting goals; planning action steps; reflecting on learning as steps are implemented and committing to agreed tasks. Coaching draws on transformational learning and experiential learning, while at the same time being more structured in the coaching process than mentoring. The focus is holistic, coachee-driven, challenging and self-reflective. Here is a simple example.

A practical task

Reflect on these two typical coaching questions:

1. What do you feel you need to accomplish to make your life meaningful?
2. What one step could you take this week to bring you closer to this?

Mentoring and coaching remotely

Although the other aspects of physical presence that aid communication are absent, for some mentees, there may be less anxiety in remote communication. There is the also the convenience and opportunity to have mentors across the globe. Remote/online mentoring and coaching – especially in the individual one-on-one mode – may be more convenient for some than face-to-face.

Beware the downsides

This must be said: beware of becoming someone's lacky. Or even a clone. There may be give-and-take, reciprocity, mutual sharing – but it does happen that junior academics can get stuck doing too much administration or routine tasks for years because it is convenient for the more senior mentor.

One may also be aware of what we call anti-mentors – those who deliberately block your progress and malign you. There is recourse in universities and processes to follow. Do not stay in such situations, or at least try to resolve them. Normally one would seek advice from a line manager, head of department, industrial relations, staff union or human resources – and there may be a bullying or ethics hotline.

There may be downsides for the mentor too. A mentee can overstep the mark, expect too much, send inappropriate trivia, break confidences, or not realise how busy the mentor may be.

Being a mentor

Ahmed:

> It is interesting to have experience as both a mentor and mentee. My experience in being a mentor started with the MESAB (Medical Education for South African Blacks) programme, set up with private donors from the United States of America and the late Professor PV Tobias. I, together with colleagues, set up a mentoring system in the Faculty of Health Sciences at the University of the Witwatersrand. Our mentoring activities

went from student group support to a programme made available faculty-wide for all undergraduates as well as a number of postgraduate students. Several mentees still contact me after many years to ask for advice on their life challenges. What also happens in these interactions is that mentoring comes the other way by my learning from their experiences and the suggestions they make to me. I do not see this as having developed a reliance of the mentee on me as a mentor, but rather as a long-lasting relationship from which we both derive the benefits of our different experiences. While, in one case, the formal mentoring ended with the mentee having graduated, the relationship evolved into a friendship built on mutual regard and caring. So, for me, academic mentoring and coaching provide me with an inner satisfaction of being a "helping hand" to our young academics on their journeys, bearing witness to their growth in many spheres, and knowing that I played a role in their development as productive, contributing members of society.

Moyra:

Speaking as a teacher, mentoring or coaching is like teaching or facilitating without a curriculum, without exams and without evaluations. Just being available with the other person's best interests at heart. Here is a simple example from a formal mentee:

Dear Prof. Moyra
I am confused … I really need help, Please advise. I will then take it from there …

[A brief email from me]
Good morning my sister. Thank you for the advice. I will let you know … Thank you once more for being there for me."

Three things strike me: the agency of the mentee in reaching out, the warm appreciation, and my own sense of joy that this is so easily possible – and in spite of gaps in age, culture, language, discipline and location.

Academia is an ideal place for mentoring

In universities the availability of assistance is part of the culture. We read each other's draft papers or proposals for free, comment on ideas, collaborate on projects and – for many – enjoy teaching. As our physical, intellectual and even social context becomes increasingly diverse and globalised, we may all have a greater need of mentoring: being mentored into the unfamiliar and challenged to take up unforeseen opportunities. We may also experience greater complexity, stress and unpredictability in our lives. Working in isolation may not be the most viable option. In the African paradigm of *ubuntu*, connecting and mentoring may be particularly culturally consonant and alleviate prevalent experiences of alienation and exclusion. We may not only ask "Who am I becoming?" but "Who are *we* becoming?".

Mentoring may help not only our career advancement but our understanding of ourselves and each other and contribute to humanising the university.

20

Supervision and Mentorship as Building Blocks for an Academic Career

Chika Sehoole
University of Pretoria

An academic career can be a challenging endeavour if starting this journey fails to get the fundamentals right. However, such a career can also be a fulfilling and rewarding experience if the right steps are taken.

I entered academia in my mid-thirties after spending the early years of my working life in education NGOs (non-governmental organisations). Terms such as "novice researchers" were of often used to describe those of us who were aspirant academics. Sometimes, opportunities were denied in the name of not having a PhD or lacking in experience. This led me to embark on a journey to acquire a PhD with the mission to pursue an academic career.

My academic journey in fact started in the fifth year of PhD studies. Since then I have experienced the normal challenges and successes of academia, and fortunately I have had a fulfilling and rewarding career. However, none of this would have been possible without the gifts of supervision and mentorship. As one enters and continues in this vocation, it is expected that you too will supervise and mentor students and, in some cases, your peers. In this chapter, I will share seven elements of building an academic career with a particular focus on supervision and mentorship.

Supervision and mentorship are related, but not the same. Mentorship is a higher and deeper level of supervision. Supervision in this chapter is used in relation to training and guidance given to a postgraduate student by an appointed supervisor. The purpose is to ensure that a student acquires the necessary training, knowledge and skills not only to fulfil the requirements of the degree registered for, but also to lay a foundation for the start and pursuit of an academic career. Mentorship has some elements of supervision as far as training and guidance are concerned, but it goes deeper as the relationship and training becomes more close and personal. The training becomes more goal orientated and intentional. The mentor takes a role of inducting, role-modelling, taking the mentee by the hand, providing honest and critical feedback with a view to laying a good foundation for entering the world of academia and making a success of it.

First of all, entering the world of academia can be a daunting task, often characterised by a sense of helplessness and feeling overwhelmed. Questions you grapple with include the following: Will I make it? What does it take to make a successful academic? How will my first lecture go? Will I be able to supervise a student? These kinds of questions become even more pronounced if one has not as yet acquired a PhD.

Not having a PhD can even determine your access to certain rights and privileges in the academic environment. For example, in the first year of my employment as an academic I was allocated a small office, with little ventilation. When I complained and asked for a bigger office, I was told: "Get your PhD first."

It was not easy. In my first honours class as a lecturer I was confronted by a question from a student who was shocked at being taught by a black lecturer. I was a question which required an immediate response: "*Wat is die toekoms van die Afrikaner jeug in hierdie land?*" ("What is the future of the Afrikaner youth in this country?"). I calmly responded, reminding him that there is no need to worry about the future, as long as they buy into the vision of the new South Africa and support it.

These kinds of questions have the potential to unsettle a novice lecturer, but instead they motivated me to complete my PhD as a matter of urgency. The question made me realise how important it was to prepare thoroughly for my lectures to deal with the stereotype that employing black lecturers implied the dropping of standards and therefore a threat to the future of "*Afrikaner jeug*".

This brings me to the next point about navigating negativity, namely to always remind oneself that you know something of substance. The fact that you have a Master's degree, and in time a PhD, means you have assets which you should use to your advantage. This is particularly the case when you have to deal with the preparation and delivery of lectures. You need to dig into these assets as an important source of intellectual and cultural capital that enables you to put something on the table. This includes the secure knowledge that you have been appointed on merit and that you have something to offer.

You also need to navigate expectations. In every workplace there are always expectations set for employees in terms of their performance. Meeting the performance criteria helps the university to realise its strategic goals, vision and mission. Delivery on performance criteria puts you on course to meet promotion criteria, which will assist you to climb the academic career ladder. The three-fold mission of the university is teaching, research and service engagement. It is important as an academic to ensure that you get the right balance of involvement in those three activities. This will assist you in having a balanced academic profile and will benefit your career, not only in your current institution but also when you apply for job opportunities elsewhere.

Postgraduate supervision is also one of the competences you should acquire in the early days of your academic career. This is also good for the faculty or department you are working in, as postgraduate supervision experience and skills are often in short supply in universities. Just as the publication of one's first article boosts one's confidence and morale, the successful delivery of a first Master's or doctoral graduate represents a major milestone in building an academic career and profile.

Supervision comes with its own challenges, especially in the early days. Many institutions have a policy of having a co-supervisor with your first engagement in supervision with a view to gaining experience from your more experienced peer. Such opportunities need to be used to your advantage. Often you will find that, as a junior co-supervisor, the bulk of the work falls on you. You may find that you are doing more of the reading and providing detailed feedback than the main supervisor does. Do not despair, continue doing the work, for you are gaining a valuable experience under the guidance of the senior co-supervisor. The main advantage of the co-supervision arrangement is that, if things do not go as planned, the senior supervisor is a resource to draw on.

After graduating from a mandatory co-supervision arrangement, you will be expected to do sole supervision. The skills and experience you acquired during your Master's and doctoral studies, combined with your co-supervision experience are major resources that you will bring into your sole-supervision practice.

Just as you need to have a vision and plan for your career, you need to have a vision and plan for each student you supervise. Students bring strengths and limitations into their postgraduate studies. You need to identify what those are in the early days of your supervision meetings with your student. Conceptual, analytical and writing skills are some core skills which, as supervisor, you will have to get a sense of; and you will have to develop a strategy to support the student, depending on their level of development. For example, when I had a doctoral student who was a cabinet minister, who had good writing and conceptual skills but had busy schedule, I had to develop and plan to manage her, but also to keep her motivated. This included ensuring that there was a quick turn-around time in terms of the feedback I provided to her. I also ensured that I supported her to acquire conventions of academic writing, which are different from conventions of writing in government. On the other hand, when I had a doctoral student who did not have the requisite English language skills, I had to refer the work to a language editor to avoid spending time on language issues rather than substantive content and conceptual issues.

One of the valuable attributes of good supervision is to pass to your students the gift of academic writing. Writing is an art and skill that can be acquired. The student should be actively involved in the acquisition of this competence under the tutelage of the supervisor. Under close supervision, the student needs to learn how to develop clarity of focus, acquire the habit of reading and rereading drafts, learn how to be attentive to critical feedback, and cultivate the patience and discipline of staying on task.

You also need to agree with the student on the frequency of meetings and your mutual expectations in terms of the delivery of work and the expected turnaround time for feedback. These would normally be contained in a memorandum of understanding between the student and the supervisor which both have to sign at the beginning of each academic year for the duration of the supervision arrangement. Please make sure that you keep a record of all the drafts of the student's work

that include the feedback that you provide to the student. These will become useful in the event of disputes arising (as they sometimes do) between a student and supervisor.

The practice of always reading one's work from the beginning every time one resumes the writing process is that it provides an opportunity and enables one to become familiar with the contents of the writing and to grasp the flow and the logic of the paper. The benefits of this laborious writing process are that the author will become familiar with every aspect of the arguments made and that will put him/her in the best position to be able to present and defend the argument.

All academic writing needs to be founded on an argument. An argument is a central idea around which a paper, essay or dissertation is organised. In the first essay I wrote for my supervisor in my honours degree, we were given the opportunity to present a draft for guidance from the supervisor to check if we were on the right track. I submitted the draft and was invited for a feedback session. One of the first questions I was asked was: "What is the argument of this essay?" I mumbled a few sentences in response. In the process of doing that I uttered a particular statement which solicited a response from my supervisor, namely that I should "stop and write down" what I had just said. Thereafter I was told: "That is an argument, go and write your essay around that argument." Having identified an argument, I had to go and read literature around the claims I was making in the argument.

My search for the literature, and organisation of my ideas to support my argument, helped me acquire reasoning and argumentation skills which are all essential for effective writing. My confidence in writing was boosted when the essay was given a distinction pass. That confidence imbued in me an enduring love for reading and writing. I had acquired a formula and a key to academic writing that I used for the rest of my postgraduate studies and in "writing for publication" later in my academic career.

The key to the discovery of that elusive writing skill was having a supervisor with a heart for student development and who was willing to share his knowledge and skills with his students. Success in academia is not only beneficial to a student, but also rewarding to the supervisor. In a good supervisory relationship, inputs are made from both sides and when they result in success, the outcomes are joy, happiness and a drive and search for further opportunities that will reinforce such results.

This builds a bond between a supervisor and a student, in a strengthening a relationship of trust between the two parties.

Critical engagement, the ability to critique the ideas or work of others, is another important skill to acquire and use in academic writing. The tools for producing effective critique involve wide reading and familiarity with the literature and debates around the subject one is writing in; the ability to characterise and analyse different sides of the debates on the subject; and in the end being able to express your opinion on the subject, backing that with evidence and data. The ability to do this well gives you "a voice" which is critical to your standing as a scholar – and the confidence to search for funding.

As a researcher and supervisor, you need funding to support your academic career, including support for your students. Postgraduate studies can be expensive in terms of delayed earnings for students and therefore access to financial support in the form of bursaries and scholarships become crucial for students to sustain their studies. As a supervisor you will find that a student will rely on you for referral to funding opportunities, and the writing of reference letters to support funding applications. The most effective way to support your students is to involve them in your funded research projects. You will find that the financial support that a student receives from a supervisor often motivates that student to be more committed to his/her studies.

The involvement of students in your funded projects also provides extra capacity to enable you to carry out the projects, as there are often competing demands made on your time. Such involvement by students is also an efficient and effective way of sharing your skills and knowledge with the students in the course of delivering on a research project. This also helps in building the bond between the student and yourself as the supervisor, which is vital for successful supervision. The end-product of such arrangements and the delivery of a successful Master's or PhD graduate is that a student ends up holding a supervisor in high esteem as a mentor, role model and funder. Then follows the "postdoc" experience.

After gaining experience in Master's and doctoral supervision, the next level is hosting a postdoctoral fellow as a mentor. Postdoctoral fellows are holders of the PhD qualification who want to pursue an academic career and are often appointed within the first five years of their completion of a PhD. The primary aim of their appointment is to

extend their own education and experience, by exposing them to the world of academia in order to hone their knowledge and skills with a view to academic appointments after their fellowship expires. Although they hold a doctoral degree, they are not yet considered independent researchers and cannot serve as principal investigators. Such fellows need to work under a mentor, and this is yet another opportunity available for postgraduate supervisors to pass on their skills to the next generation, while also advancing their own academic careers.

A postdoctoral fellowship is often funded, therefore there is usually no need to fundraise for the fellow once it is awarded. However, sometimes the grant is not sufficient, and the mentor might need to guide the fellow in terms of raising supplementary funds. This might be in the form tutoring, student assistantships and involvement in available short-term research projects.

Mentoring a postdoctoral fellow often follows the same process as that of postgraduate supervision. Again, a mentor needs to have a vision of what kind of "postdoc" s/he wants to develop. Given that one of the purposes of a "postdoc" experience is induction into the world of academia, that vision should enable the recruit to become a successful academic. This means reading the fellow's work, providing honest and critical feedback that will advance the work, advising when the work is ready for submission, taking the fellow through the process of choosing the right journal for an article or publisher for a book, providing support with the rejection or revision of the article, and celebrating with the fellow when the paper or monograph is accepted for publication.

Conference attendance is an important aspect of mentorship especially at "postdoc" levels. Fellows should be taught about the importance of sharing their ideas in the public domain and how to receive and respond to sometimes harsh feedback. Conferences provide an opportunity to the fellow and the mentor (in the event of joint presentation) to expose their work to peers and experts in the field.

In some cases, the mentor may not be able to attend the conference, or may receive invitations to speak at some workshop, seminar or conference which s/he is not able to honour. The mentor should send the mentee fellow in their stead as part of the process of exposure, development and mentorship. As much as the fellow needs to work alongside or sometimes under the tutelage of the mentor, s/he should gradually be released to work autonomously.

Mentorship at this level also includes exposing the fellow to the administrative aspects of academia by taking him/her to departmental meetings (if allowed) to experience how an academic meeting is conducted, what issues are discussed, and what expectations are set for reports submitted. It further involves identifying developmental events and opportunities in the university such as seminars, guest lectures, and workshops from which the fellow will benefit. Opportunities should also be created for the fellow to present research work in progress to the host department and faculty. A mentor needs to attend the mentee's presentations to hear how the work is received and assist in dealing with feedback. These opportunities develop the art of public speaking, presentation and defence of one's work and dealing with feedback which are all important attributes for a successful scholarly career.

The successful delivery of Master's, doctoral students and postdoctoral fellows enriches the knowledge, skills, experience and standing of the mentor and enhance the academic profile of an up-and-coming scholar. In this pursuit, academic networks matter.

Networks (both national and international) are important for building an academic career and can also benefit one's supervision and mentorship roles (see Chapters 9, 10 and 11). They can be valuable and used for bouncing off ideas when one comes across difficulties in supervision and mentorship roles. It is important to have a mixed bag of networks, those composed of peers at your level, and those composed of more accomplished scholars that you look up to. Both can be used for providing expert advice and peer reviews of one's emerging work.

As in any other relationship, networks must be serviced to be maintained. This includes constant communication with your networked partners so that in times of need, they should not be surprised when you reach out to them. When you get an opportunity to work with partners in the network, do not turn it down and ensure that you deliver quality work. A constant delivery of quality work will result in more invitations coming your way, which will assist in building a stronger academic profile for yourself. Networks are also handy when one needs external examiners or peer reviewers of your mentee's work.

By way of example, during my postdoc period I managed to establish networks with three leading scholars in my field of specialisation. The first was Professor Fazal Rizvi, who was also my host and mentor on a study-abroad fellowship, and who specialises in higher education

and globalisation. Then there was Professor Philip Altbach who is an expert in international surveys of higher education; and Professor Jane Knight who is an expert in the internationalisation of higher education. Professor Rizvi introduced me to the other scholars. When he learnt that I was interested in publishing my thesis as a book, he advised me to contact Philip Altbach during my attendance at the African Studies Association Conference held in Boston in the USA. Upon reading my thesis, he recommended it for publication to Routledge. My ability to attend to the recommended reworking of the thesis into a book, and to deliver the manuscript on time, earned the respect and trust of Philip Altbach, with the result that I was later invited to participate in three of the research projects he led.

When Jane Knight visited Fazal Rizvi during my postdoc tenure at Illinois, Fazal invited me to join them for dinner. At the dinner table, Jane mentioned an interesting article on the General Agreement on Trade in Services and its implication for higher education in South Africa. The article was written by a Chika Sehoole and she was interested in recommending it for publication in a special issue of the *International Journal of Higher Education* she was guest editing. I responded to her that Chika is the person sitting across the table. The article was published that year in the special issue after some minor revisions. That dinner meeting was the start of our research collaboration which has since resulted in projects, which, in turn, have led to a number of publications including an edited book.

Fazal Rizvi was impressed with my work ethic and my capacity to deliver high volumes of work. When Routledge made me a book offer, I was left with four months of my postdoc period. I sought his counsel, whether to work on a book or to concentrate on the three journal articles I was busy working on. He advised that "the lifespan of a journal article is five years, and that of a book is ten years and beyond". I decided to work on the book under his guidance. After agreeing on the outline of the book, we also agreed that I would produce a chapter every two weeks. There was an exchange of eight chapters over a period of three months and the book was done. This discipline to deliver on what I promised built a trust relationship and laid the foundation for an enduring academic collaboration that continues to this day.

The lessons learnt from these collaborations is that when you are given that rare opportunity to do the work, make sure that you do it

and deliver on the promise. This makes people believe in you and trust you. When other opportunities for collaboration arise, they will invite you. As you continue to deliver and not disappoint, you build a name and reputation for yourself, which in the business is referred to as a brand. These collaborators have served as referees for the various job and promotion opportunities I have applied for.

Finally, an important consideration in starting an academic career is to make sure that you choose the right institution that aligns with your career aspirations. An enabling environment was created for me in fulfilment of the promise made when I was recruited and had to make a choice between two institutions. Professor Jansen, who was dean at the University of Pretoria advised to me to "come and work with me, I want to give you a career, the other place is giving you a job". True to his commitment, when I completed my PhD and was awarded a post-doctoral fellowship overseas, he released me to take the fellowship, despite having worked for the faculty for a short period of time.

In exchange, I rewarded his trust and generosity by coming back with a draft manuscript to be published by Routledge. The manuscript was based on my PhD thesis which I had converted into a book. In addition, two articles in international journals were also accepted for publication, and two were in the process of being finalised. Reacting to this capacity to deliver, he, then close to tears, said: "This is what we call delivery. You know Chika, this book alone justifies your ten-month stay in the US." The relationship of trust between the mentor and the mentee (employee) was solidified.

Section VIII
Finding Balance

"Tensions in the cultures of academic institutions collide in the bodies of young scholars."

21

Academic Well-being

Mothomang Diaho and Chantelle Wyley
Spiral Aloe Health and Wellness and Baobab Consulting and Training

"I just can't say no." This is the lament of an outstanding scholar reflecting on her lack of sleep, exhaustion, and inability to attend to self-care. The pain inherent in this statement speaks to complex layered issues of identity, gender, race, hierarchy, power and agency. The words speak to her doing her best to be productive and to play a leadership role in a complex institutional environment, in this case, a department split across two campuses, a university in transformation with student protest upheavals, with constant shifts between online and in-person teaching due to COVID-19. As leadership and wellness coaches, we understand that nothing has prepared her for this, and that there is almost invariably a distinct lack of support in this situation.

Our scholar is a young woman scientist, has a number of post-graduate students to supervise, a considerable research grant and active collaborations with international scientists to manage, and serves on the editorial board of a respected journal. Her field work is dependent on weather and plant cycles, and she may not be able to get out to collect samples if restrictions on movement continue. Student unrest on campus has turned violent and has been personally threatening for her, and she is helping her close friends manage the loss of their mother to COVID-19.

"I feel like a second-class citizen," says another scholar. She is a first-generation graduate in her family, so she carries the burden that she

cannot be seen to fail. So, she just continues working. She is caught up with managing her time for research, teaching, marking, and managing overdemanding students. She overstretches herself in assisting with their Master's theses, even writing parts of these theses, and she helps with groceries out of her own pocket. How can she say no?

Take a deep breath. These are their stories, the stories of many scholars in these times. It may also be your story.

The psychological and physical wellness confronts all of us who work as scholars in universities. This chapter is about the steps we can take for long-term self-care and overall well-being, and what we need to heed, as we address change and transformation in our institutions and our personal lives.

Psychological and physical wellness are aspects of university work-life – not spoken about or relegated to employee wellness and counselling programmes in human resources departments – now coming to the fore. Acknowledging and meaningfully addressing staff (and student) wellness is urgent after a prolonged period of COVID-related lockdown, existential threats around illness and death, working from home, having to adapt to online engagement, and social isolation. A 2020–2021 study of university and college staff in the United Kingdom revealed four-fifths of staff members were struggling with an increased workload and poor mental health. The study strongly recommended decreased workloads and more institutional support related to mental health and well-being. The suicide of University of Cape Town (UCT) professor, Bongani Mayosi, in 2018 had already alerted us to unhealthy dynamics in academic work- life locally.

Picture this. You wake up to a busy day of lectures and assignments ahead. You want to go straight back to bed – the thought of doing any of these tasks seems completely overwhelming. You are feeling irritable and seem unable to calm yourself. Everything feels as if it is too much. If you recognise yourself here, you may be experiencing academic burnout.

The "occupational phenomenon" of burnout, as the World Health Organization (WHO) refers to it, is commonly understood as a condition that is the result of chronic stress in the workplace that has not been successfully managed. It was originally thought to be specific to the human services sector, but nowadays is recognised as a serious occupational health condition in most sectors. That being said, there

are groups that are more susceptible to burnout, such as teachers (read: academic professionals) and healthcare workers (the helping professions), for whom burnout has always been an occupational hazard, but one that has been exacerbated by the COVID-19 pandemic.

It is important for us to understand that while burnout is a form of stress, there is a distinction between the two. We can recover from stress with certain management techniques, but burnout is different, resulting from cumulative stress that has not been managed. Once burnout sets in, it cannot be cured by taking a vacation, a massage, slowing down, or working fewer hours. You have reached burnout when your academic work and your home life seem overwhelming, and you think you cannot cope anymore.

The life of an academic scholar is a complex one. There is no such thing as free time – not really. Free time is for getting emails done, for grading, for preparing lectures, and for submitting overdue referee reports. An academic's weekend is having Sunday afternoon off. Academics are expected to be sheep with five legs. Academics must not only be good – no, excellent – at research (i.e., get as many high-quality papers published as possible), they must carry heavy teaching loads (and make sure to get good student evaluations), engage in professional communication and collaboration, supervise (Master's and PhD) students, exercise leadership, sit on committees and attend numerous meetings. Furthermore, academics need to be compassionate and caring, open to students' challenges and tribulations, and also thick-skinned, able to bear nasty, even brutal, comments among competitive peers or from aggressive students, as witnesses or victims themselves.

It is imperative to understand what happens to our bodies and minds during burnout if we are to effectively manage it. It has been hypothesised that the two main stress response systems, the autonomic nervous system and the hypothalamus–pituitary–adrenal axis, are involved in the pathogenesis of burnout. The autonomous nervous system consists of two parts: the sympathetic (SNS) and parasympathetic (PNS). The parasympathetic is most active during sleep, when it efficiently helps us recover, repair and replenish including our nervous system and brain (this is why sleep is so important in managing chronic stress). The sympathetic nervous system is most active during the acute stress reaction, urging the body to fight, flee, freeze or fawn, with high doses of stress hormones to enable these responses.

The impact of chronic stress (constant SNS activation) has been reported as permissive in diseases including chronic inflammatory diseases, auto-immune disorders, cancer, cardiovascular diseases, diabetes, endocrinological diseases, irritable bowel syndrome, acute and chronic viral infections, sepsis, and asthma, to name a few. Additionally, a chronically activated immune system interferes with electro-neurochemistry, leading to a range of psychological disorders, dementia, post-traumatic stress damage, fatigue, poor sleep quality, depression, irritability, cognitive difficulties in attention and memory, and anxiety.

These medical implications of chronic stress have resulted in new thinking about prevention and the rise of lifestyle medicine. Lifestyle modification interventions that focus on slowing down or avoiding the progression to auto-immune disorders are encouraged. These include strategies around good nutrition, sleep health, physical activity, stress management, healthy social connections, and lessening the use of risky substances. With burnout levels rising, healthy-lifestyle behavioural coaching is becoming an essential antidote to treating and preserving physical and mental health and boosting resilience for all professionals.

Supporting employees with on-demand access to preventive care tools, including virtual behavioural-health coaching, can give them the mental fortitude to manage day-to-day stress, anxiety, and depression. Coaching is one of the most effective ways employees can build resilience. When individuals have on-demand access to a coach, they are able to acknowledge their situation, envisage something different, set goals, create meaningful change, and improve performance. Behavioural-health coaching has been shown to produce a 70 per cent reduction in depression and a 59 per cent reduction in anxiety within 12 weeks. By leading with prevention, stress and anxiety can be managed earlier in the health journey before evolving into burnout.

We want to share our experience as coaches on the Future Professors Programme (FPP) funded by South Africa's Department of Higher Education and Training (DHET). The programme nurtures the development of future professors in all fields, supporting outstanding individual scholars to move into the institutional and thought leadership of South African and African academic institutions.

Shortly after the intake of the first FPP cohort, a coaching programme was introduced. In previously coaching the postdoctoral fellows, both

as individuals and in peer coaching groups, we have heard many stories like that of the scientist whose lament opened this chapter. We heard stories of young scholars being loaded with teaching and committee responsibilities because "it will be good for your career" or "this is necessary for you to get promotion". We heard about older established professors – wielding the power that comes with age, status and race – depriving younger scholars of opportunities (to supervise, or to gain international exposure) and acknowledgement – and constantly, so that this develops into bullying. We heard about scholars on hard earned sabbatical leave subjected to demands to take on administrative work and come into the department because "there's no-one else to do this". On the home front we heard about FPP fellows caring for aged parents, children, some with special needs, sometimes as single parents. And in the background was the COVID-19 context: working from home, home schooling children, fearing infection, caring for sick family members, getting infected and ill, and losing family and friends. Some fellows moved house, got divorced, gave birth, and changed jobs, all major stressors even in "normal" times.

As coaches, we were profoundly influenced by Sonia Nevis, a Gestalt therapist and coach, based on the US East Coast, who has been working with and observing human behaviour for over 60 years. Nevis emphasised that, as coaches, the most important (even only thing) to do is *support* people, and teach people to self-*support* and how to ask for *support* from others. Support is fundamentally missing from the modern world of work, and is also desperately needed. The modern workplace emphasises performance, deliverables and competition, thereby rewarding and encouraging extra- or over-work and self-sacrifice, to inhumane extents.

The findings of modern neuroscience contradict the prevailing self-sacrificial prevailing stance on work: human beings need relationships, connection, affirmation, acknowledgment, compassion, empathy, care, and to belong in order to flourish and be productive. We need to be in supportive relationships with others who see, affirm and celebrate us and our worth, and who engage with us appreciatively and reciprocally. The brain mapping and imaging breakthroughs in the late 1990s and early 2000s, enabled neuroscientists to assert confidently that our brains cater for two categories of response to environmental stimuli. The dominant response enables survival in the face of (perceived) threats: this is the avoid (defensive) response (fight, flight, freeze, fawn), designed for

short-term reactivity and activating the SNS. The response is important for flourishing, learning, growing and developing the approach that opens up the brain to connection, collaboration, potential, possibility, innovation, creativity, relationships, love, care and empathy (PNS activation). We are social beings and our brains are wired for supportive social connection, to survive in the long term and flourish.

So, what happens to us when we are spending more of our time surviving (defensive, avoid response) than thriving (relational, approach response)? As coaches on the Future Professors Programme our work was to support fellows to move from just surviving and coping, to thriving, fulfilment and productivity. How to do this? How to acknowledge the struggles and support resourcefulness?

Let us start with self-care, which is not the whole solution, but is a good place to start. Richard Boyatzis and Daniel Goleman began researching leader effectiveness in the late 1990s, publishing research that confirmed emotional intelligence as the key to leadership that gets results. This led them to look at risk factors and at leaders who succumb to the "sacrifice syndrome" (consequence of heavy responsibilities, perpetual need to influence, and pressure to deliver) and "power stress" (constant involvement in complex choices, communication, and decision-making). Their most recent research (2021) advocates personal sustainability, the importance of recovery time and activities that shift surviving into thriving. Their message is clear: prioritise frequent specific renewal activities that promote parasympathetic nervous system activation, deactivating the sympathetic nervous system. During 2020 and 2021, this was a frequent topic in FPP coaching. A list of renewal to-dos, from the Boyatzis, Goleman et al. research was discussed and circulated. These activities help:

- Sharing enjoyable meals with family (developmental for children too!);
- Volunteering or helping someone;
- Caring for others and feeling cared for;
- Caring for and playing with pets (more so than interacting with humans);
- Taking a walk in nature or gardening;
- Meditation;
- Centering prayer;

- Engaging in yoga, tai chi or martial arts conducted mindfully;
- Doing yoga breathing/ pranayama;
- Reflecting on or discussing one's greater purpose in life;
- Taking some kind of exercise;
- Laughing with others;
- Introducing and enjoying humour at work;
- Spending quality time with spouses or partners (in happy relationships); and
- Playing with a child and being playful generally.

We conveyed positive and encouraging messages and reminded scholars: you are resilient, studies show we can recover from burnout. We advocated: start by being gracious with yourself, give yourself permission to engage in self-care, take a nap, take a day off. Take up healthy activities, take a short walk in nature, get enough sleep and eat healthy foods, avoid sugar, be careful with alcohol and reliance on prescription drugs.

We explored lurking assumptions that stress and burnout are the price we pay for success, and we realised this is a collective myth, now dispelled by medical science. We talked about boundaries and saying "no", protecting our own precious bodies and minds. We prioritised holidays and time off (including digital time off), keeping emails off our phones. We refrained from bragging in a self-sacrificial way about how busy we are, and rather about confidently leaving meetings early to pick up kids and being open about having a life outside of work. We talked about modelling being a whole person with friendships, family, and a rich non-academic life.

And we empathised: this is all easier said than done. Still, making progress on the list is not impossible; it just entails costs and a certain risk. Yes, you may apply for fewer grants (increasing the chances of those without permanent contracts or research time). Yes, some student evaluations may be just fine (rather than "excellent", God forbid). Yes, you will publish less (but did you not once say: "Quality over quantity"?) And no doubt you're likely to become a little less "successful" or "competitive", according to some standards.

And we were clear, as coaches, that saying "no", pushing back against the system, asking annoying questions and making humanistic demands – if we all do it – not only might make those above us reach out to those above them, it will also send a message that the state of academia is

unacceptable. It sends a message that we want to be academics *and* have private lives, that we want to be able to do our research, be inspired and be intellectually passionate in normal working hours. Pushing back and saying "no" sends an important message to the organisation, that something is not working optimally. It is not an indication of personal failure, but is feedback about the impact of an aspect of a system's functioning. In this case, saying "no", pushing back, signals that there is a need for change in the norms and leader behaviour that determine the organisational culture. Our colleague Annie McKee, an international emotional-intelligence writer and organisational-change facilitator, is clear on this strategy: it takes a dedicated group to consistently behave differently, this is how systems change, not through resolutions or policies.

Jennifer Moss, in her 2021 book *The Burnout Epidemic,* is emphatic that burnout is not only a self-care issue, it is an issue for organisational and institutional culture change. Why is institutional culture so important for employee well-being? Research shows that when we prioritise our well-being we are more creative, productive, and resilient. We make better decisions. Well-being is not just a perk, it is a competitive advantage for the institutions we work for. And there is a direct connection between an institution's performance and the health and well-being of its most important resource – its people. So, in the same way that well-being boosts our immune system, a healthy culture serves as a company's immune system, giving it the resilience to meet inevitable challenges.

What have companies tended to do in addressing burnout? The unprecedented realities of the past few years are creating a seismic shift in what "workplace wellness" means. Employers are recognising that the old compartmentalised, programmatic approach (all those isolated wellness "perks" such as gym memberships and yoga classes) are not very effective at tackling the now triage-level issues of stress, burnout, and work–life imbalance. Employees are keenly aware that workplace wellness programmes are often a cynical band-aid for an unwell company culture. We are entering a new era for the employee well-being concept that expands to more meaningful, "get real" approaches: a new focus on offering employees flexible work, fair compensation, paid time off and family leave, professional development opportunities, financial wellness coaching, and building stronger social connections.

These new, meaningful approaches to managing people demand a new type of leader. Sadly, we are hearing that the academic institutions

in which our fellows work and to which they contribute, are, with some exceptions, generally unsupportive and unappreciative, and may harbour passive hostility or be rife with microaggressions and bullying. We have some understanding of this. These are institutions that evolved to support a hierarchical culture, advocating status achievement, with rank and power associated with prestigious degrees and titles. These features are fundamental to universities' function in society: separating the uneducated, or undereducated, from the educated, and allocating value to the latter. In the dominant socio-economic cultures of previous centuries, status and othering based on education, race, wealth, age, gender, was intrinsic to the social order in colonial societies. The 1968 student revolutions in Europe questioned and shook these assumptions, and invited consideration of peer learning, valuing students' experiences and voices. The leadership challenge then became: how to balance values of equality and inclusion with recognition of achievement and academic brilliance. In South African institutions this process seems to be in flux as older norms around rank and power are considered necessary academic traditions, while a movement towards transformation, diversity, inclusion and social justice slowly and painfully moves institutions forward and sometimes sideways.

These tensions in the cultures of academic institutions collide in the bodies and experiences of young scholars. With adeptness in managing global worldviews with traditional roots, they are alive to the need to adhere to the best of academic tradition and to align with the system, and at the same time to forge something new, something uniquely African. The tension and internal conflict is not easy to live with, in daily struggles of fitting in and "playing academic politics", while also being oneself and staying true to one's own noble purpose and academic work.

Complexity theorists, applying chaos theory to human systems, tell us that working with competing polarities like these, in systems and inevitably within our ourselves too, is a matter of integration and constant dilemma management. There are seldom moments of rest on either side of the polarity. The process involves valuing and integrating the best and moderating the cost of each competing tension. Therapists invite us to inhabit each, to own both. Fritz Perls, the founder of Gestalt therapy and resident in South Africa in the 1930s and 1940s, invented the "empty chair", inviting movement from one position, speaking to the other, and then exchanging places and speaking from the second and

back to the first. In this way the voices of each, inside ourselves, become explicit and more integrated.

This approach is the essence of inviting wholeness into our bodies, minds, hearts, spirits and lives. Holism is a tradition in philosophy that is different to unity. Holism invites integration and ownership of competing tensions. Unity demands conformity and agreement. Holism influenced Gestalt therapy and coaching, as Fritz Perls reacted to the demanded conformity of Nazism in 1930s Germany, and came into contact with Jan Smuts' ideas about holism and evolution. Faced with complexity and challenge, we can choose to revert to known sub-groups, othering those outside, or we can choose to integrate and own, what is in ourselves, and enable integration around us as a result. This concept of using holism and integration to thrive in complex situations underpins the latest trends in wellness.

Let us go back to our Future Professors coaching groups, the wellness of our scholars, and your wellness and wholeness …

In the first cohort of the FPP, coaching groups were introduced in mid-2020 when the isolation and existential challenges of COVID-19 and lockdown were affecting fellows and the ability of the FPP leads to proceed with the objectives of the programme. The cohort of 30 fellows was organised into three coaching groups of ten people each, and met monthly for two hour online sessions with the coach.

We had attended the International Organization and Systems Development (IOSD) Programme offered by the Gestalt Institute of Cleveland, and subsequently taught on this and its successor programme, the International Gestalt Organization and Leadership Development (iGOLD) Program. The groups' format was based on the person-system learning groups used in Gestalt organisation and systems development programmes: spaces to work on how the self engages with the group, and hence becomes more aware about engagement with other systems in which the individual lives and works. The first FPP coaching session began with each fellow introducing themselves, personally and academically, their history, "Where are you from?", their lives and work. Following these introductions, the coach asked: "What do we notice about us as a group?" in order to begin to build the identity of the group and the commonality of their experience. The second session opened with each participant being invited to share "I want …" and "We need …" statements. This invites internal reflection on own needs, as well as connection with others'

needs, or own projection of the group's need. This movement between the "I" and the "we" (tension management) was maintained throughout the coaching process, with the intention of developing self-reflection and self-care, while holding social awareness and a service orientation. The coach actively encouraged the sharing of feelings in the self-reflections: "What do you feel when you say this?", "How does that feel in your body when you talk about this?" At all times the whole person and his/her/their experience was acknowledged and honoured.

As the groups proceeded, themes and topics came up across the groups, and a couple of the programme's Friday "de-caff" coffee sessions were facilitated by the coach. One example of a topic was "My Noble Purpose as a Scholar", repeated as a topic for the second FPP cohort the next year. The intention was to support fellows to keep the focus on their core purpose, on their life's work, given all the other demands and distractions. The guided reflection offered by the coach leaves participants refreshed, reinvigorated and excited about themselves, their worth, and their valuable work in the world.

As the coaching programme progressed, the group coach and the FPP lead realised that some fellows would benefit from individual conversations, and each month two or three fellows scheduled individual sessions with the coach. In addition, some needed a deeper level of support, and a coach and medical doctor joined the team to provide stress and grief counselling help to those who were in acute distress.

Very soon, the impact of the coaching groups was felt. Fellows reported feeling less alone, that their negative experiences were normalised and shared with others, that this invoked less self-judgement, and most importantly, that the peer sharing was deeply supportive in terms of practical and implementable hints and ideas of how to cope, survive, and thrive. They shared stories about family, childcare, caring for elders, loss and separation during COVID-19 , their research challenges (limited access to labs, field work inhibited, falling behind in international collaborations, not having time to focus on their own work) and successes (books published, journal articles accepted, research grants awarded, prizes and accolades), their struggles with university management, lack of support from management, lack of leadership from the university executive in times of uncertainty (woeful COVID-19 decision-making, indecisiveness around student unrest), lack of resources (laboratories, equipment, funding), their need to

be available for and to support struggling students. They shared the actions, practices, habits, behaviours and mechanisms that kept them on track and productive, or simply coping: time in nature, time playing with children, quality time with friends or spouses or family, eating well, sleeping enough, digital detox times, prioritising time for the important things and delegating the unimportant things. Mind, body, heart and spirit were all in the Zoom room; their whole selves.

The programme reported that the coaching groups were serving their intended purpose, they were:

- providing community and a sense of belonging, especially at the height of the pandemic, working-from-home isolation and disconnection, as well as a sense of community and belonging for young brilliant scholars in sometimes hostile and hierarchical workplaces;
- offering an open space to share ideas and experiences, in order for individual fellows' experience to be normalised and validated, especially when challenges leave them questioning their own value, viewpoints or stance; and
- offering a space to ask for practical inputs on challenging situations (e.g., aspects of online teaching) and hints on useful opportunities (e.g., how to apply, what grants are available).

Fellows expressed warm and deep appreciation for the coaching groups, for the space, the facilitation, the access to support from colleagues and the coach. This positive feedback continued into 2022, and was echoed by the fellows in the second FPP cohort.

Adding this coaching space to the FPP acknowledged the whole person of the academic/scholar, whether the physicist, the engineer, the mathematician, the zoologist, the medical researcher, the historian, the political scientist, the psychologist, or the poet. The coaching programme acknowledged each fellow as a unique and valuable person, and went further to express care and concern when appropriate. The programme instilled a culture of belonging in each fellow, inviting them to fully join and invest in the group, and hence develop a cadre of scholars that could continue to support one another in the years to come.

This last point is significant in terms of the shift in the culture of South African universities referred to previously. This group of scholars will introduce and instil a new culture in South African academia. It is

worth reminding ourselves of the research which concludes that organisational cultures are not defined by policies and resolutions, but by the behaviour of leaders. During a coaching group discussion on modelling a new way of being as academics, a fellow said: "We are role models for lots of different people; if we role model damaging things we propagate a system of brokenness."

The coaches reminded fellows that when they move into university leadership they will have a choice, unlike their forbearers perhaps, to behave differently as leaders, to behave empathetically and supportively to the staff and students who look to them for guidance and direction, for leadership. This acknowledgement, and active appreciation and fostering of the whole human being (which is so key to academic self-care, wellness and institutional culture), has its origins also in many ancient and spiritual traditions.

For example, indigenous North American cultures' medicine wheel teaches the balancing of the physical, mental, emotional and spiritual in order to live in harmony with self, others and the Earth. The word "yoga" means union and attests to bringing the physical, mental, emotional and spiritual bodies together in order to achieve blissful union with the self, and the divine. African spiritual traditions invite daily existence that is cognisant of the spiritual world, which affects and determines emotions, thought, and one's physical state.

Of relevance to the world of learning and teaching, also advocating a holistic approach, is David Kolb's adult-learning research. To learn fully and meaningfully, adults need to experience, reflect on the experience, conceptualise and make meaning, and take action or experiment.

The FPP coaching groups and FPP leadership have fostered holism and wellness in our engagements with fellows, and this has had a highly positive effect on their abilities to keep their research focus and their life/work purpose alive, and on their abilities to push back on the systems which govern their workloads and the climate and culture of their workplaces. Many have reported epiphanies in their self-awareness and self-management, and in their perceptions of the people and systems around them. Our encouragement to all of us is to take from their experience the importance of:

- prioritising self-care and introduce many small opportunities to renew and replenish, bolstering our personal sustainability;

- getting support around us, peers who care and can empathise, and with whom we meet regularly to experience the support, and for whom we in turn can express compassion and offer support; and
- pushing back against the system with strong and clear feedback messages (using the rules, linking to outputs, and appealing to values) that enable the organisational system to learn about itself and adjust.

Hence the central question of this chapter is: how can holistic health and ways of being be fostered in academia, and how can this be encouraged and insisted upon by our managers, leaders and institutions?

An approach for academic institutions to consider is to operate from the inside out. Operating from the inside out means checking in with academics and all staff to provide the support and time needed to be physically and psychologically safe. It means collaborating across diverse (gender, class, race, hierarchies, departments, disciplines) teams to develop an authentic response to the deeply human issues that impact everyone. It means taking a hard look at processes, systems, and relationships to ensure they align with the university vision, mission, and values in daily practice.

As young academics and leaders, being conscious role models is one of the most powerful tools we have for influence and for change. Other staff and students may mimic and follow the behaviours of leaders, so changing our conversations with ourselves, with colleagues and with the institution, is already an important change intervention. As leaders we need to be open about our mental and physical health, and should not shy away from saying, "I am struggling with my mental health" or "I have struggled in the past, and here's how I worked through that." This vulnerability allows staff to feel safe talking about their own health and well-being needs, and creates a sense of connection and belonging that has a ripple effect across the university.

Yet again, we need to switch from the individual scholar to the institution and its responsibility when it comes to change. We want to emphasise that the climate (how people feel) and the culture (how people behave) of an organisation can be attributed (70 per cent, we would say) to the behaviour of leaders. And when it comes to the university, research shows that academic staff have separate experiences with their heads of departments versus those in higher levels of university

leadership. The data reveals that higher-level university leaders have a much stronger effect on a scholar's commitment and loyalty. Leadership, alignment, and development had about a 50 per cent higher impact than heads of departments on people's intention to leave.

The world of work is changing, apart from technological factors, and pandemic impacts, we need to also consider generational differences. Millennials have different needs to those of previous generations, and all students and many upcoming academics are millennial in outlook. For millennials, meaning and purpose in life and work are imperative (social and ecological impact), and in the workplace, relationship and connection (active identity affirmation and engagement from leaders), and personal growth/change/development opportunities are requirements. Young postdoctoral fellows struggling with the traditional academic systems are already heralding the shift. This cultural struggle and tension management is tough on bodies and minds. It manifests in burnout, sacrifice, with some tragic casualties. Our work as coaches has illustrated that there are two interconnected possibilities for positive intervention: individual self-care or self-support, and institutional support (processes, systems, leadership). Both are critical.

Student and scholar protests signal a new conversation between tradition and a world that urgently needs to change its approach to global warming, discrimination, exclusion, inequality and injustice. The binary rationale (the educated and the un-educated) and traditions that maintain the integrity of the tertiary education system are founded on privilege. Our upcoming young brilliant and outstanding scholars are facing this, feeling it in hearts and spirits and bodies, as well as minds, and are challenging this. We want and need this to be heard and heeded.

22

Balancing Academic Work and Home Life

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The year 2003 was a very interesting one in my life. It was fast and demanding and many things happened at the same time. In January, I started my career as a junior lecturer. In February, my husband, who was my fiancé at that time, started a church; in April, we got married; and in June I fell pregnant. Needless to say, I was overwhelmed. I moved from being a student to being an employee, from being single to being married, from being a daughter to being a *makoti* (daughter-in-law), from being a church member to being a church leader, and from being a woman to being a mother. My plate was not just full, it was overflowing.

During this season of my life, I felt like I was constantly in a state of collapse. I felt out of place, drained, and lost. I never had a chance to be fully present in one thing, because I had so many things to do in a short amount of time. Being married meant that I needed to accommodate a husband in my home space; being pregnant meant that I needed to keep up with what was happening to my mind, emotions and body. That alone was a big adjustment. Immediately before I was employed, I was a student without a specific routine. I could do whatever I wanted, whenever I wanted to. So, being married and starting work meant that I needed to establish routines in my life immediately. Not only did I get married and start work; life as a church leader also started. The

consequence was that I did not really have weekends. I would work Monday through Friday, and then Saturdays and Sundays were church days. On Saturdays, I would be having either women's fellowship, church leadership meetings, or preparing for a sermon on Sunday. Then Sunday would obviously be a day to go to church. After church, I would be preparing to lecture for Monday. I felt like I was working 24/7!

I was nauseous at times and sometimes I would just be tired and sleepy. Peace and quiet was a luxury I never had. To add to all of that, I was also studying and trying to complete my Master's degree in services marketing. As I was busy doing everything, I was also supervising some honours students who were doing mini dissertations. That for me was overwhelming because I did not know much about research then, even though I needed to provide guidance. At work, there was administrative work to do, I needed to attend meetings, and I still had to make time to see students for consultation. To this day, when I look back, I am still trying to figure out how I actually survived the year 2003.

I had a huge number of students because I was teaching first-year marketing. Fortunately, in the first semester, I taught honours students consumer behaviour and that meant I had fewer students to attend to. However, to my shock, in the second semester, just after I got pregnant, I had first-year marketing students and there were about a thousand of them. That, to say the least, was a lot. I remember when I had to mark the exam scripts, I had them on my dinner table, and they looked like mountains and mountains that I would never finish climbing.

I also needed to adjust to my new working environment. What was new in the environment was the culture. I was working mainly with white Afrikaans-speaking colleagues. They were wonderful people, but different to what I was used to. The culture was different, and I was okay with that. What I found most challenging and frustrating was the usage of the Afrikaans language. That made it difficult for me to blend in because I was not fluent in Afrikaans. Unfortunately for me, the language policy of the university at the time made it challenging for me to function and thrive as I would have liked. The meetings were conducted in Afrikaans. Even in social gatherings, it was a challenge for me to blend in because I could not speak the language. So, that added to my frustration and the anxiety that I experienced.

That experience affected my confidence because I was not always sure of myself. It is not that I lack confidence as a person, but if you

are functioning in an environment where you do not understand the language, where you are not always sure what the instructions are, you will doubt yourself since you will not always know what you are supposed to do. Here is an example: I would go to meetings that were run in Afrikaans and the minutes sent would be in Afrikaans. Keep in mind that in a departmental meeting, you do not just receive updates; instructions, duties, roles and responsibilities are given. Also, participation is expected. So, can you imagine how it felt going to meetings and not being able to participate or ask anything? That put me in a mode where I had to accept all the decisions without having a say. I was a young academic, positive and excited about work; but the heavy load in my life as a whole contributed negatively. At the same time, I was grateful that at least I had a job. I mean, getting a job as a student is an awesome break.

I share my initial experience as an academic so that other young academics can be inspired knowing that, regardless of the challenges that they might be facing, it is possible to succeed in an academic career. So, no matter what your situation is, whether you are at the beginning of your career or somewhere in the middle, it is possible to manoeuvre yourself through the challenges and actually become better as a result. In this chapter, I am writing about how you can find balance between your academic work, and the work you have at home. This is a topic that has long been discussed, and my reading and research convinced me that there are many perspectives to consider.

For me, balance starts on a mental level. In my personal life, my mind was constantly working and my emotions were also worked up, as a result of which I was extremely anxious. Being all over the place like that meant that I could not be fully present in the moment, leading to my mental imbalance. It goes without saying that when you are doing one thing and already thinking about the next few things that should be done, or should have been done, stress is likely to occur.

This overlapping of roles is indicative of a lack of planning. For example, when I was at home taking care of my baby, I would be thinking about a chapter in my thesis that I should complete. Then, when I was working on the chapter of my thesis, I would be thinking about preparing for my lecture that I had to deliver on Monday, Thursday and Friday. Then, when I was preparing for the lecture, I would be thinking about the baby and wondering if the nanny is doing a good job

at home. That meant, at a mental level, that all my roles were blurred and mixed, which was quite overwhelming. I never gave myself a break, not just physically, but a break to just not think about it all: everything was constantly on my mind. I think that if you are going to have balance in your life, one of the things that needs to happen is to separate roles in your mind, not just physically.

So, it is very important to understand that as much as your family life and your work-life run concurrently, you must keep the two separate. One of the ways of doing that is to fulfil the responsibilities of each sphere at the right time and in the right space. If you keep answering emails during family time and researching your child's school project at work for example, the two spheres will end up overlapping and that is a recipe for anxiety. It is important to have the discipline of knowing when to attend to certain responsibilities. Timing is thus critical. When I started as an academic, I was young and I thought that I could do everything. Certainly, we can all do everything, we just cannot do everything at once. It is absolutely okay to have ten things you want to do as long as you are able to decide what it is that you will start with, and what it is that you will save for later. As an academic who was busy with her studies and teaching, it was very important for me to realise that my time is limited. Therefore, one of the things that I did was to let go of some church responsibilities so that I could have time to focus on my studies and lecturing.

To find balance mentally I reverted to planning. In planning, it is important to be realistic with the time and resources you have available. Planning helps with prioritising. In other words, plan in such a way that you are able to do one thing at a time, as the old saying goes. Whatever else you are not able to do can always be done later. When you have a good plan in place you will realise that you become more productive and peaceful; your mind will not be running all over the place, thinking about everything else that you need to do. When your mind knows that there is a plan to do other things later, it is unlikely to bug you about them. Having a good plan means that you are consciously aware of the load you are able to carry in that moment and, more importantly, what you are not able to carry.

To have a good plan in place I took a piece of paper and divided it into two categories. One category was a list of all the roles I needed to fulfil at home and the other category was a list of all the roles I needed to

fulfil at work. My next task was to prioritise those roles. To do this I used the important/urgent matrix: I identified tasks that were urgent and important and I ticked them off the list in each category. I did the same for those that were important and not urgent; not important but urgent and; not important and not urgent. The things that were urgent and important had to be done immediately. Those that were important but not urgent, needed to be scheduled so that they could be done later. The ones that were not important but urgent could be delegated.

Finally, the ones that were not urgent and not important could be deleted. For example, responding to important emails and submitting a draft article due in a day's time need to be attended to immediately (important and urgent). Working out in the gym and engaging in continuous professional development need to be scheduled (important and not urgent). Cooking and submitting tax returns can be delegated (urgent and not important). Watching Netflix and talking for hours on the phone can be deleted (not important and not urgent). Below I share how I applied the matrix to find balance in my career and at home.

As an academic, there is some administrative work that you do and with good planning you can manage this area well. "Admin" can seem quite disruptive because often, when you are either doing research or preparing a lecture, there is a certain flow in which you find yourself and from which you do not want to be interrupted by administrative tasks. Administrative work is not stimulating academically even though it enables academic work. Therefore, I think that what would help to maintain your flow is to decide to have a specific day in the week or a specific hour in your day that you dedicate to administrative tasks. Doing this will prevent the administrative tasks from seeming like interruptions. Your choice is of course dependent on your situation. Personally, I do not enjoy administrative work, even though it is important – and, therefore, later in my career, I hired assistants and I delegated most of my admin work to them (do not worry, assistants are cost-effective). This approach continues to work well in my career and business. My assistants handle my forms, run my diary, run my social media pages, submit my tax returns, do filing, and many other things besides. Delegating such tasks has given me more time to focus on the core tasks which really matter, like doing research. I have dedicated Friday mornings to catch up with my assistants and to assign new tasks to them. Having a specific day and time allocated to do administrative work ensures that it never

piles up and, more importantly, that it does not disrupt my workflow. Leaving your administrative work unattended for a whole month or two can be quite messy and can ruin your reputation. At home, I do not peel my veggies and I do not clean. I have delegated these tasks. When I get home I just cook and this provides me with some extra family time. In your case, what do you need to delegate at home and at work?

Based on my early experience, I learned that making time for critical relationships is important because the state of our relationships affects the energy we carry when fulfilling both family and career roles. Spending time with loved ones and mentors at work, needs to be scheduled otherwise you can end up unintentionally ignoring these critical relationships. Relationships can be pillars to lean on when trying to find balance in life, provided that they are well taken care of. So, it is important to realise that part of finding balance has to do with ensuring that you have good support in place. In my case, while I was adjusting to married life, I fell pregnant, both of which required me to make major adjustments in my home life. I made time to communicate with my husband to let him know what was going on at work, and what I was going through. That helped him understand where I was. Similarly, he also communicated with me so that I could also understand where he was. We really needed to have ongoing communication so that we could understand and support one another. I strongly encourage prioritisation of family as a good foundation for work balance. For example, sometimes support is simply understanding that your spouse cannot be there. When communication lines are open in a relationship, the understanding is easily given and prevents the misunderstandings that could potentially hinder job performance.

When yours is still a young family, especially when you have small children, the demands on your time are very high, unlike a family with grown-up or no children. Either way, it is important to be available for your family, because, without such effort on your part, your family could be at a risk of either growing and developing without you, or, in some unfortunate situation, of falling apart. A broken family will throw you out of balance, while a healthy family is a strong support system that can help you find balance. It can provide you with the necessary mental strength and the affirmation you need to carry out your work responsibilities.

Moreover, it is not family relationships alone that can help us in finding (or maintaining) balance: professional relationships also do the same thing. This is where I fell short as a young academic. When I look back, I realise that one of the things I could have done was to seek help from my colleagues at work. I was more willing to communicate my needs at home than I was at work. That meant I had a solution for one space and tolerated a problem in the other. Instead of walking on two legs, I chose to hop on one. My point is that, as an academic, do not focus only on your research and teaching work; focus on your colleagues as well. Make time to get to know people and also to be known by them. Keep the communication lines open. If you find yourself in a challenging situation, you may try to tackle it by yourself. However, if you realise that the challenge is extreme, it is absolutely okay to seek help. Whatever help you might need, seek it.

As mentioned previously, my biggest struggle at work was working in an environment in which I did not understand the language. Meetings were hard to get through and social events were awkward. I just took everything in; and thought that if I kept working at it, I would get through. Somehow I felt like communicating my frustrations would be interpreted as complaining and somehow "troublesome". This was not the case and I hope you can learn from me how to not work against yourself in a work environment. Professional issues or struggles that are not dealt with will definitely throw you off balance in the long run. I did cope, but it took longer than it should have. Engaging your head of department, human resources, colleagues and even the dean (where necessary) can create a conducive environment for work where finding balance becomes possible. Professional relationships are not always the easiest to manage, but with time you will be glad that you invested time in them.

There are no instructions on how to lecture. So, you may often have to be proactive. For instance, making time to consult senior academics can help in finding balance. As a young academic, I did not have a mentor. So, I really relied on my student experience and often I was not too sure if I was doing it right. Even when I was supervising my students with their mini dissertations, I relied on what I knew as a student. This led to many hours of trying to figure out how to supervise my students. At this point, I just want to say that it is very important to network with

your colleagues. That network will be your base of consultation. Ask questions, without holding back. Remember that there are no wrong questions. Be the one who approaches your colleagues, instead of waiting to be approached. Do not only consult in your department. You can approach other colleagues in other departments and faculties as well; and seek advice from them. So for me, that is one thing I think I could have done more of. Somehow, I did not think I could because it never crossed my mind that I could actually ask someone else for guidance even if they were not in my field. Later in my career I built my own network and it saved me a lot of time. Doing this was instrumental in helping me find balance.

For my Master's thesis I had a study leader and relied mainly on him. After completing my Master's degree, I realised the importance of engaging other colleagues outside my study leader. As a result, when I did my PhD I engaged my other colleague who was not in marketing but in finance and entrepreneurship instead. I went to him constantly just to hear what his views and inputs were; and what he thought of the research that I was doing. This helped to enrich my study greatly. Of course, this needs to be managed well to avoid conflict between your supervisor and the colleagues you choose to involve. I could have done the same when it came to teaching and supervising students. All I am saying is that surrounding yourself with a strong professional team of colleagues, where roles are clarified, will help you greatly in finding balance at work.

What helped me handle things that were urgent and important, was having a to-do list so that I could remember all the deadlines. Items like a doctor's appointment, submitting reports when they are due and giving students feedback at an agreed time are but a few examples. These days there are applications on smartphones that can make managing deadlines easier. Choose what you feel will work best for you. Adhering to the deadlines will help you avoid crisis mode. That means it is important to have the discipline of starting to work on your reports on time, instead of waiting for the last minute. In other words, avoid procrastination as it may lead to an imbalanced life of stress. I have learned that procrastination is not only a thief of time but it is also a thief of peace. To avoid procrastination I decided to start my days by doing the things I find least pleasurable. That way, I know that they are done and, therefore, do

not have to be postponed. Also, I face the day knowing that the worst is behind me and I can spend the remainder of my time doing the things I love. What also helps me avoid procrastination is having my husband as my accountability partner. Telling him my plans also means that I need to give him feedback on the progress I am making. What can you have in place to make sure that important and urgent matters are attended to timeously?

One of the best things you can ever do for yourself is to learn to say "no", not only to others but to yourself as well. Saying "no" to "pleasurable" disruptions like being on Facebook when it is time to focus on your research, allowing your colleagues to barge into your office any time they please, calling your friends instead of preparing for your next lecture, etc., can help you find balance. Disruptions are those things that are not important and not urgent. In my case I have to say "no" to Fox News and CNN. For some reason I have a particular interest in US politics and I find it interesting to contrast Fox with CNN news coverage. To me, it is amusing how the same story differs when reported by left- as opposed to right-leaning news outlets. This is something I can do for hours for sweet nothing; although this is interesting, it is not important nor urgent. One of the things I did was to delete the "apps" of these channels on my phone. This is not to say that you should not do the things you like in your spare time. It is all about timing. In my spare time I listen to different news channels, I just need to ensure that I do not overdo it. Doing things that waste our time is a sure way of losing balance. Perhaps it might be useful to pause and reflect. Are there things and people you need to let go of so that you can get ahead?

Using the important/urgent matrix has not only helped me to prioritise my tasks, but it has also helped me be better organised. I think that organising your life is something that helps at a personal level as well as at an academic level. There is no one-size-fits-all approach when it comes to how you should organise your life. It varies from person to person. However, I think that it is important to be aware of where your family is, where you are as an individual, and what the demands of your work are. Not that my advice is absolute, but I think that the advice I am giving is intended to help you to be more aware of the different options you have so that you can live a better life. A better life is when your family is well, and you are doing well at work. When you are organised

you will find it easier to be fully present in your work and fully present at home. Therefore, it is very important to consider the time that you have, and then decide what you are able to do within that time. Also, know what you want to achieve at work. In other words, set clear goals, allocate time to those goals, and focus on them. Then, once you have achieved those goals, you can move over to your next set of goals. In my case, I decided to make more time for my studies and that worked well because I managed to finish my Master's and PhD degrees while I was raising my son and daughter.

What continues to help me in my journey as an academic is to empower myself holistically. Studying for and obtaining your Master's and PhD degrees is an important part of academic empowerment. Learning how to write articles and presenting research papers empowers you further for your academic career. However, you are not just an academic; you are also an individual. Focusing on just one side of your life without considering other aspects of your life can be self-defeating. By that I mean succeeding in your career at the expense of your health, for example, can be futile. I am personally committed to working on myself emotionally, mentally, physically and spiritually. When I am strong in these areas it becomes easier to find balance at work and at home.

I learned the hard way that if I do not make time to invest in myself, then the university that I work for as well as my family will not get the best of me. Be okay with focusing on yourself. By this, I am not talking about being arrogant or selfish, but I mean ensuring that you are in the best shape emotionally, mentally, physically and spiritually so that you are able to continue living your life well. Nobody will take care of you if you do not take care of yourself. In my career, there were times when I truly neglected my emotional and mental side, and it came at a cost. It does not have to be like that for you. Just understand who you are and what is important to you in each moment, because all of that changes as you grow.

What clarifies the importance of self-care for me is the instructions given by the air hostesses before the plane takes off. They usually tell the passengers that in case of an emergency an oxygen mask will drop. The first thing passengers are instructed to do is to put the mask on themselves first after which they can then help minors and seniors. I love this analogy because it highlights a very important principle of self-care.

That is, you cannot rescue others if you do not pause to rescue yourself first. I have learned to pause and take time to do for myself what I am always willing to do for others. Doing this has also helped me establish healthy boundaries. When I am depleted, I intentionally take time off so that I can recharge. Just as a car warns you when the tank is empty, your body does the same. Ignoring your body when it is signalling that you need to rest is like continuing to drive even when you are aware that the tank needs a refill. The problem with such an approach is you risk being stuck in the middle of nowhere with no-one available to help you. The same principle applies in life.

23

The Mom Penalty

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> "How are you able to be a mom and an academic and make it all work?" I've often had academics even younger than myself ask me this question. One answer, from a contributor to an online forum, is that you cannot: "I come from a European country with a lot of protection for mothers", she said. "What is the effect? Impossible to get hired, unless you put your uterus in a jar of alcohol on the desk"! (Quoted in: Mary Ann Mason, Nicholas H. Wolfinger and Marc Goulden. 2013. *Do Babies Matter? Gender and Family in the Ivory Tower.* New Brunswick, NJ: Rutgers University Press. pp. 26–45)

The incessant demands of motherhood have been well-documented over the years. Yet, as a young mother and academic coping with such demands, I have over the past few years gained newfound respect for those who manage to succeed in both of these challenging roles simultaneously. There has been a shift within the modern workforce towards dual-earner households, since single income streams are often simply not enough to sustain a household. However, even as more mothers enter the workforce, traditional conceptions of childcare and domestic chores as women's work have been slower to shift. Although the challenges faced by female academics go beyond motherhood alone – from household duties like cooking and cleaning, to caring for elderly parents

and nurturing friends and colleagues – for me, the biggest work-family challenge to date has been in raising my beautiful son; it has also been by far the most rewarding.

It goes without saying that solitude for writing is hard to obtain with an active toddler at home. This reality hit home in the years when I was doing my doctoral research. I did not anticipate how all-encompassing doing a PhD can be and soon realised that the only solitude I had was when my son slept. And so, my sleep-deprivation cycle started in those years as a doctoral student. As gender parity in South African doctoral education has made impressive gains in the last ten to fifteen years, I had female and male colleagues in nearly equal numbers during my PhD journey. My close circle within my doctoral cohort expressed explicitly the desire for flexibility and balance between their academic careers and other goals; yet the ingrained stereotype of the de facto requirement of utter and complete devotion to the academy alone still prevailed. However, I have yet to discover an ideal role model when it comes to attaining the work-family balance that my circle desired: the most successful professors I have encountered undertake unrelenting work hours.

I had the opportunity to do doctoral coursework in the United States before embarking on my research dissertation. This was a personal decision, since the South African academy follows the English model of research-only PhDs. While I did not do two full years of coursework, like most doctoral programmes in the American academy, I was able to complete several interdisciplinary courses in the sociology of education, epistemology and organisation and institutional theories, and to attain quantitative skills. This structured experience provided me with a much-needed toolkit for the research phase of my doctoral degree. I also regularly attended multidisciplinary discussion series, which encouraged broad and critical thinking about science and often addressed topics like scientific integrity and how to dissect scientific literature. These additional doctoral curricula steered me away from being a narrowly focused researcher and towards applying more rigour to the design of my subsequent research programmes. I believe this broad introduction to science allowed me to engage in enquiry more thoughtfully. My advice to anyone contemplating doing a PhD is to make a careful assessment of how prepared you are to begin the journey and to do what you can to take care of any deficits. What I chose to do is but one

of many available options of preparing for this phase of the academic journey but eliminating obstacles as early as possible can only enhance your ability to strike a healthy work–life balance as you navigate the increasingly demanding stages of academic life.

My doctoral period came during my later thirties, and my son was born in the penultimate year of my degree. A substantial part of my pregnancy was during my residency at Emory University, where I enjoyed graduate housing and excellent healthcare benefits for myself and my unborn child. Of course, there was the ever-present fear that motherhood would derail my academic career. This vulnerability is real. I decided to enjoy this first-time experience of motherhood and took a six-month break after my son was born. Luckily, I was able to easily transition back into the final stages of writing up my PhD – I had moved back to South Africa and could now also enjoy the benefits of family support for childcare while I focused on my research and writing. At the time of my son's birth, I was ten years into married life. Within a year of his birth, I was divorced. Needless to say, the vexing trauma of this life event threatened to derail my early research career in an instant. Let us just say, I pulled through and graduated with my 18-month-old son on my arm when I got hooded. I will never forget that day.

My postdoc years were instrumental in my success as a future academic. Despite an initial paltry income with limited benefits, this period coincided with working alongside a personal mentor that changed my trajectory. Even if doing a postdoctoral fellowship is not usual in your discipline, I recommend that you give it serious thought as another important step on the journey to full academic citizenship. Doing the right preparation at the right time is crucial to not being overwhelmed in the always difficult task of striking a work–life balance. Unlike in the US and UK, where "postdoc" is a relatively broad term that can refer to several types of temporary work post-PhD, in South Africa it is different. It is a unique position, in which you are neither a student nor employed by the university. It is seen as a training position, in which you undertake research and gain professional experience for a future academic career, under the supervision and mentorship of a principal investigator. The emphasis is on research, but because it is meant to equip you holistically for an academic career, you may undertake limited teaching and co-supervision duties. Since the position is regarded by the South African Revenue Service (SARS) as a training period and not as

work, the typically low emoluments are offset to some extent by you not having to pay income tax. But this also means that a postdoc's duties beyond research must not approach anything near a full load, so as not to amount to employment in disguise.

I refer to this limbo period between my PhD and academic appointment as my crucible phase. My postdoc contract had a clear research emphasis, as it should, resulting in an edited book, a co-authored book, several international conference papers and seven published research articles in international journals. My professional development during this phase created the reputational capital required to find the appropriate academic appointment for my skillset.

I was awake for more sunrises in my doctoral and postdoc years than I had ever seen before. The focused night-time hours spent to make significant gains, were crucial in my journey. Many times, I have had to reformulate a significant section of writing because the energy and prose did not come back together after an interruption from my little boy, or a phone call or text message. It is challenging when, just as you are getting into a rhythm, your adorable son walks in and says, "Mommy I love you, come sit with me please."

The pandemic lockdown brought a whole new meaning to "home" as well as to being an academic scholar. Not only could children only stay with their primary parent, but schools (and in my case, preschools) – were shut down indefinitely. Home as a concept shifts continually with many scholars having weighed in on its meaning – but it is unquestionably an intensely deep and personal space. For me, the most enduring quality of home during this time was the ever-present demands of my son. While for some of my colleagues working from home was a period of productivity, serenity and introspection, I oscillated between guilt, anxiety, and frustration while struggling to balance the dual roles of academic and mother while confined to the home. It became more of a living-at-work situation than working-from-home situation. The increased workload of adapting to online teaching and its associated administration also naturally increased the amount of time I had to spend on it at home.

This transformation of "home" was thus largely driven by the need to share a constant physical space with my son – in essence, I no longer had a designated space where I could do my professional work. Division of space with a toddler simply does not exist. Privacy, concentration

and access to resources all became more elusive under these circumstances and I felt extreme pressure to sacrifice my professional role in order to uphold my parental role. However, as I reflect on this period, the advantages of working from home outstrip those of going to the office. Not having to commute for hours is a treat I will indulge in for as long as I can! And despite the initial time-consuming transition to online teaching, I find that mode convenient for my current situation. What you do to achieve balance in your life is a very personal decision or series of decisions, but the important thing is that you must *take* those decisions and not allow conflicting demands to overwhelm you.

The postdoc years introduced me to the phenomenon of a burgeoning research programme. It was my mentor who repeatedly warned me: never wait for a single publication. That is, ensure you have three to five manuscripts on the go. Initially, I thought the notion was crazy; and it is, but the underlying message is that you must be ready to seize opportunities. Then, an opportunity came in March 2020. The pandemic lockdown presented a unique opportunity to our research unit. My professor and I proposed a national survey on the impact of the enforced lockdown on academic women. This was my first baptism of fire regarding ethical clearance. I had to navigate the processes of all 26 public universities, which was a three-to-six-month project; however, either clearance or gatekeeper access was granted by all of them and our national survey got underway. The study was time sensitive, in terms of the various stages of the lockdown, and we received an overwhelming 2,029 responses. This data set provided incredibly rich quantitative and qualitative data. We quickly realised we needed to expand our research team and invited several national and international colleagues to collaborate with us. To date, we have published seven articles and three book chapters from the data set, and we are currently conducting phase two of this project. My point here is that despite familial priorities, when opportunities do come your way, be ready to take them.

Close mentoring and regular feedback are where I got lucky – a second-year doctoral field trip to the Free State introduced me to the man who would become my postdoc mentor. Little did I know on the field trip that, a few years later, I would be employed by this National Research Foundation (NRF) A1-rated professor. He took his role very seriously – providing extensive research support, teaching me how to teach and helping me to develop certain analytical and technical skills.

There is no doubt that the presence of a highly successful and empathetic professor can be a powerful source of inspiration. I wonder what would happen if there were more female role models and mentors for young women in academia.

Most importantly, my mentor gave me the confidence to get into the game. He was incredibly generous with knowledge and resources in several ways: first, he seldom insisted on top billing – he was always happy to provide guidance, but continually emphasised that this was my work; second, he was generous with financial resources. Thus, the pressure for me to secure grant funding to subsidise my research was taken away – getting such funding has become an increasingly difficult challenge, as resources have steadily decreased over the last few years. Munificent international grants are extremely competitive, applying for them is laborious and the review and revision process can often take months or even years to complete. Our unit's financial resources enabled me to attend several international conferences (on the condition that I present a paper) and supplied whatever software and hardware I needed. Our research unit was also able to employ full-time language and technical editorial services, which certainly speeds up the final editing of manuscripts. Given the financial constraints within the higher education sector globally, I will need to develop the critical skill of grant proposal writing. My mentor is a gentle giant – a hard taskmaster, yet empathetic when empathy is needed. The demands of the unit are fast-paced, but he allows for slow days to recover from the incessant deadlines we face. He has also generously opened up connections with some of his American academic colleagues, which have resulted in several collaborations to date.

I got into the teaching faculty of the business school through good luck and good timing. I contacted the head of the graduate programme who knew me and was actively recruiting faculty at the time. I am now in the enviable position of not being burdened with an unmanageable teaching load as many other young academics are. However, teaching at a business school is quite different from, say, a "regular" department. First, it is a graduate school only and thus interdisciplinary in terms of student population. Second, most students have work experience as well as life experience, which adds a new dynamic to class discussions. Third, 70 per cent of the students are older than 31 years. For this reason, my experience in the business school has been that, to be a good teacher,

I needed to try to emulate a consummate polymath like my professor at Goizueta Business School at Emory University. In addition to being a professor of organisation and management studies, he was a scholar of the history of cricket. He also taught in the sociology and philosophy departments and wrote about American football and the recruitment of coaches, race in politics, and even on the structure and history of the American brewing and wine industries. None of this fits the stereotype of a hard-nosed professor, yet he was one of the most influential mentors in my teaching career. I soon realised that to succeed in teaching, I needed to have multiple projects with different lenses. If I could not speak to some topics as a teacher, I would be dead in the water. My research interests have expanded to include complexity theories, organisational and institutional theories, decolonisation and gender disparities within the workplace. This lesson, I thought, might work against several ratings and promotion criteria, which often encourage scholars to focus their research on one particular paradigm. However, I think this is probably more applicable to the scientific disciplines than to the social sciences. My message is that opportunities are different for all of us and depend heavily on one's area(s) of interest and the opportunities that happen to present themselves, but it is important to *take* those opportunities when they come around.

Conferences have provided me with unique opportunities to cultivate research partnerships globally. The two key conferences I attended during my postdoc tenure were the American Educational Research Association (AERA) and Comparative International Education Society (CIES). These are two of the major educational conferences and I have been lucky to have several papers accepted by them over the years. I learned that conferences are essential to professional development – but how to exploit the opportunities they offer is not often discussed. For all large conferences, programmes are exhaustive, often spanning several themes. First, it is critical to participate in the activities of special interest groups (SIGs) and standing committees. These structures often provide alternative programmes throughout the year and are essential for effective networking at conferences of this size. Through my participation in the Complexity Theories in Education SIG, I was nominated as a featured author in the quarterly newsletter – free press for any early career academic. Second, it is important to know who you want to meet at the conferences. For example, I often went to sessions whose presenter

I had cited in my research. This often gave me an "in" to the author, and I was able to schedule a meeting, often through the conference's online interface. Third, it is useful to find out which publishers are exhibiting. These conferences are often a hotbed for commissioning editors to examine new manuscripts. Be prepared to pitch an idea. I have been able to secure several international collaborations during international conferences and, in essence, extended my co-author network by virtue of my attendance.

Conferences are becoming more and more friendly towards mothers, often including childcare as an option. My son, during his pre-school years, would never attend any childcare facility he was not used to; however, the older he gets, the more amenable he is to childcare, once he sees the other children playing in the facility.

The concepts of research impact, ORCID, citation- and h-indices, journal impact factors, research visibility, open access, and the benefits of collaboration were not foreign to me. I had been exposed to the benefits of performance metrics tools through my previous employment within a university library system. Academic libraries the world over have made substantial progress in aligning services to key research support initiatives, often in collaboration with university research offices. I was lucky enough to be exposed to these services both locally and abroad, and these skills were utilised to the maximum when deciding where to publish. Carrying out topical searches in indexes like Scopus and checking citation scores and open access options, as well as turnaround times for publications came naturally to me. Naturally, I would ascertain the quality of the journal, its accreditation and the readership, as well as checking global representation of the editorial board and authors. Do not discount the skillset of research management professionals available on campus – they provide critical guidance and can assist in managing your research profile for impact.

Completing a manuscript for a book chapter or article is satisfying, but there are hidden personal costs that I, as an academic, have experienced. I almost always gain weight – the sleep deprivation keeps me from exercising regularly, and my dietary habits were never what they should have been! I do not see many friends for months and, although many survive the drought, some inevitably fall by the wayside. I think friends often do not understand the arduousness of writing for publication. The reading, reflecting, analysing and distilling are critical features of my

writing that I cannot do after a two-to-three-hour Saturday lunch. Yet such lunch outings are critical to one's mental well-being.

I struggle often to meet deadlines – like writing this chapter! As I write, it is school holidays and small interruptions by my son can set me back by hours, because I believe the spoiled window of his young self will not come around again – so I indulge his interruptions to a fault. I write about this and realise again just how distressing it can be because no matter how patiently I explain to my colleagues that I require an extension, they take exception, regardless of the validity of my situation. Once again, the guilt tussle of employment and family rages in one's psyche. It is not appropriate to feel guilty, but one has to make choices – it is important to make time for oneself since this is an important step towards achieving a proper balance.

I miss reading fiction, which was a favourite pastime in my high school and undergraduate years. Now, I read what I am writing about. And I miss the escape. I have developed a simple habit of reading at least one novel a year and that usually happens when I travel.

Another hidden cost is the creep of academic duty, which increases once a track record of publication has been established. Journal articles for my review started coming in thick and fast and I always felt it was taking me away from what I had to do. Similarly, many colleagues have asked me to read through their work and provide comments. I find it hard to decline, especially when one has a personal relationship with the requestor. Most academics require solitude and uninterrupted time in writing an article or preparing a paper for a conference. A diversion into reading a manuscript or reviewing a draft means that momentum is lost, and it is sometimes hard to pick up where you left off.

In conclusion, a few suggestions to early-career scholars. Environments that are inhospitable to mothers abound in every sector; yet creative and challenging circumstances that foster discovery and allow scholarship to flourish do exist. The challenges of academic mothers caught up in the struggle for work–life balance are not new – they are common, constant and consequential for women who choose to navigate both a professional career and motherhood. Do not despair. Despite the challenges, the enforced lockdown was a prolific writing period for me, so I write this reflective piece with a critical eye, yet grateful for the opportunity to have both finished a significant number of manuscripts and to have spent time with my son. My work has been published

in *The Conversation*, the *Daily Maverick* and other independent outlets, so my academic publications over the last few years have gained traction in the wider public discourse. My research has, for the most part, become all-encompassing and I see a need to shift into more duties – that of supervision and academic administration. I believe balance is important for a productive and fulfilling career, but I am still a long way from achieving this complex balance.

A major step toward reforming the workplace for mothers would be to create policies that enable female academics to straddle their various roles. It is also important that fathers also be given a flexible workplace to ensure that academic men can also do more within the household and caregiving. Many universities have started recognising that mothers require different support mechanisms – some provide childcare services onsite, others have started providing lactation facilities while, more recently, fathers have also gained rights to paternity leave. This is promising. However, I also recommend further policy changes: offering professional advice on work-family life balance; allowing faculty to switch between full-time and part-time work; increasing mentoring by female role models; providing medical insurance (including for dependents); extending completion time for degrees for new mothers; allowing departments to augment limited incomes; and providing on-campus lactation and childcare facilities.

So, I did not end up with my uterus in a jar of alcohol after all! Ultimately, my drive to succeed has been marked by devotion. As much as my son makes it more difficult to complete the work necessary for productivity and promotion, at the same time, he provides the motivation to strive to achieve and to do more.

The origins of *On Becoming a Scholar* lie in the realisation that there is a need for a *vademecum*, a handy compendium of ideas, plans and strategies for building a productive and fulfilling academic career to guide the host of prospective academics.

On Becoming a Scholar is geared to help relatively new scholars to construct personal futures and to find their way through the 21st century university. It is intended to be a map, and like any map it does not contain all the contours and details of the landscape, but rather seeks to reveal the important pathways and milestones in the journey to becoming an established academic.

Drawing on highly experienced academics and accomplished professors in their different fields, as well as promising younger academics already on their way, this book offers a concentrated resource of practical wisdom. The topics are broad and, cumulatively, they seek to answer the many questions that experienced mentors encounter every day in their work with new academics.

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