

# PROMISES, PYRAMIDS AND PRISMS: REIMAGINING POSTGRADUATE FUNDING

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## ABSTRACT

The promises of upward mobility and social transformation are intertwined with the story of higher education in South Africa. In the years leading up to and in sync with the democratic moment of 1994, multiple selection programmes and academic development projects engaged with questions of potential (e.g., Yeld 2007; Miller 1992) particularly in relation to the inequalities of apartheid schooling and implications for higher education. While access and success have been widened in the decades since, and participation rates are more demographically representative, #FMF and #RMF challenged the myth of meritocracy. In a disillusioning political present, higher education resembles a giant pyramid scheme in which the investment of many delivers results for only a “lucky” few, particularly the higher up the ladder one ascends (Bradbury 2022). This prioritisation of the privileged continues despite official labour surveys demonstrating that each step along the higher education degree path increases individual employment prospects and contributes to socioeconomic productivity. The focus of this article is on funding for postgraduate students who represent the intellectual future both within the academy and beyond, developing high level skills for the knowledge economy to solve the “wicked problems” of the 21<sup>st</sup> century. Inherited funding models reward individual excellence, treating students as isolated individuals, falsely assuming supportive middle class family networks and conceiving of study years as a temporal sequestration from communal responsibilities and projected future working life. In reality, the borders between home and campus, between studies and work, between (extended) childhood and adulthood, are far more porous. These funding models are unsustainable, irrational and unethical, and premised on “cruel optimism” (Berlant 2011) rather than the promise of radical forms of hope. The article presents some pragmatic possibilities for reimagining funding for postgraduate studies in South Africa in the present. It is however imperative that these responses attend to both the past and the future to create conditions of “freedom in security” (Manganyi 1973) in which individual and collective potential can be actualised for a more equal future.

**Keywords:** potential, equity, postgraduate studies, curriculum transformation, critical pedagogies, world of work, cultural capital, wicked problems

## INTRODUCTION: THE PROMISE OF HIGHER EDUCATION

Higher education, like all education, is about preparing for the future. In contexts where the future looks much like the past, only bigger and better, research trajectories extend across well-charted territories, and there are relatively clear maps for learning-teaching and reliable measures for access and success. The academy transmits and extends established traditions of knowledge, inducting new generations of students and scholars into historical flows of theoretical thinking and applied forms of problem solving. Postgraduate education operates at the critical nexus of research and learning-teaching, empowering young intellectuals to chart new directions of knowing and societal forms for the future. However, the terrain of higher education in South Africa is not stable, and the contours of the future landscape of work and life are not fully legible in advance. Across the continent and globe, the early 21<sup>st</sup> century has been characterised by disruptive events, including the increasing impact of climate change in “natural” disasters, the Covid 19 pandemic and the emerging and mutating power of artificial intelligence. While the disruptive impacts of these challenges have significant implications for the future, they are not exceptional, articulating with longer perpetual historical crises. Centuries of colonial violence and the growth of global capitalism underpin present conditions of violent inequality. In South Africa, these global historical formations culminated in the particular brutality of the apartheid state. Funding for postgraduate studies, the pinnacle of higher education, must be reimagined in the pivotal moment of the present in which “[t]he articulation of the past and the future renders education ambivalently potentially oppressive and liberating. In the context of higher education in South Africa, these antithetical impulses are starkly racialised and intertwined with historical inequalities perpetuated in the present” (Bradbury 2022, 1).

This article engages the task of reimagining postgraduate funding by confronting historical legacies of inequality that continue to constrain the realisation of individual and collective potential in higher education. The first section of the article focuses on how participation rates are skewed by the perpetuation of intergenerational inequalities that are reinscribed and entrenched in the sector at national and institutional levels. This historical location is critical in understanding the present funding difficulties in higher education. In the second and primary section of the article, some possibilities for the funding of postgraduate studies are explored. It is both beyond the scope of this article to provide a comprehensive overview of strategies, and beyond the interests and expertise of the author to offer an economic analysis or a blueprint for an alternative financing model. However, some potentially useful approaches to solving the crisis of postgraduate funding are explored, illustrating possibilities and problems. The conclusion of the article aims to rekindle critical hope for higher education as a public good.

An argument is made for the investment of material and pedagogical resources in postgraduate education as the pivotal point of articulation between the core functions of universities, learning-teaching and research.

## **THE PYRAMID OF PARTICIPATION**

The promises of upward mobility and social transformation are intertwined with the story of higher education in South Africa. In the years leading up to and in sync with the democratic moment of 1994, multiple selection programmes and academic development projects engaged with questions of potential, particularly in relation to the inequalities of apartheid schooling and implications for higher education. Apartheid schooling had deliberately prepared children for a racially stratified society and access to higher education was predetermined along these racialised and racist lines. In this context, it was impossible to rely on past measures of academic success (matric results or psychometric test scores) as indicators of intellectual potential. In these transitional years, a lot of attention was focused on the development of alternative tests that might provide more accurate measures of potential. For example, under the leadership of CHED (Centre for Higher Education Development) at University of Cape Town, multiple iterations of maths and English tests were developed culminating in the National Benchmark Tests (NBT) that were very widely implemented across the sector (Yeld 2007). However, in some circles, there was also growing recognition that there was no such silver bullet, and that potential could only be realised through the processes of learning and teaching (Miller 1992). As implied in its name, the Teach-Test-Teach programme at the then-University of Natal, exemplified this approach, sandwiching assessment between preceding and subsequent cycles of teaching (Griesel 2000; Bradbury 2020). For a while, funding and creative human energies were committed to exploratory and experimental practices that focused on the interface between school and university. The burgeoning field of academic development had variable impact on university curricula and pedagogies with the development of bridging units (primarily in STEM), in the construction of extended four-year degree programmes, foundation courses (some of which were innovatively interdisciplinary and credit-bearing) and support modules to address (computer, academic, mathematical) literacies.<sup>1</sup> These activities were necessarily reliant on resources beyond government subsidy or student fees (which were in any case heavily subsidised by the state), provided by industry (particularly in STEM and other commercially “useful” professional degrees), or by international donors and some budgetary reallocations at institutional level. Funding was directed towards both university learning-teaching activities and the scholarship / bursary support of individual students. These monies may not always have come with visible strings attached but were variably in service of the agendas of anti-apartheid

resistance and/or neoliberal development, sometimes aligned but often in tension.

In the transition from our racialised past, higher education was therefore recognised as a vehicle for the transformation of society but simultaneously, as a site that required transformation itself. However, institutional and sector-wide responses were often cosmetic rather than radical, and primarily understood as temporary fixes to address the failures of the state in the provision of basic education under apartheid. Post 1994, there was an expectation that once again learning and teaching matters could be relegated to schools where they properly belonged, and universities could focus on research and the cultivation of independent scholarship in the established traditions of colonial history.

Access to higher education has widened and shifts are reflected in enrolments by race over time. In 1993, 47 per cent of the student body was white and only 40 per cent African black (Soudien 2008). By 2010, 80 per cent of the student body was black, but the representation of Africans in the student body (67%) remained considerably lower than in the wider population (79%) (CHE 2012, 2).<sup>2</sup> The Department of Higher Education and Training (DHET) 2016 statistics indicate minimal progress with the proportion of white students dropping further to 15.6 per cent although this remains disproportionately high given that only 9 per cent of the South African population is white (DHET 2018). Higher education thus reflects the political and economic terrain beyond the university, particularly functioning to reinscribe the extreme inequality of basic education in which failures of the state are matched by increasing privatisation, widening the gap between poor and rich schools. “The bifurcation of schooling is mirrored in higher education ... African and female students continue to be considerably underrepresented at the postgraduate level and in science, engineering, and technology programs” (Badat and Sayed 2014, 134). In addition, beyond the crude measures of apartheid race categories, perhaps much more significant and less immediately measurable are the effects of deepening socio-economic inequality in parallel with steep increases in student fees across the same time. In the quest for (higher) education for “social justice”, Badat and Sayed (2014) differentiate between equity and equality, arguing that the absence of discrimination or equal opportunity for individuals regardless of race, gender or other identifications, is insufficient to generate conditions of equity or substantive equality. Access to universities remains financially prohibitive and the burden of debt created by long years of study remains high for most students and their families. Despite the ostensible progress suggested by massification and the deracialisation of the student body, and contrary to the promise of the Freedom Charter, Badat and Sayed (2014, 127) depressingly conclude that “the doors of learning remain firmly shut for the majority of South Africans”.

Resistance to this situation found vociferous expression in #FMF (Fees must Fall) and

#RMF (Rhodes must Fall),<sup>3</sup> challenging the myth of meritocracy (Piketty 2015) in the democratic present. These provocations to higher education through the student movement are inter-related: the epistemic injustices of colonial education are engendered and sustained through investment in the particular forms and fields of knowledge that society values. Claims that educational playing fields had been levelled through the democratic decades post-1994 were exposed as spurious and disingenuous, and funding models resting on this assumption, by implication, demonstrably inequitable. The student uprising had considerable impact, resulting in the introduction of the NSFAS (National Student Loan Scheme)<sup>4</sup> and the extension of state support to the so-called “missing middle”. However, in parallel with these shifts in public funding, there is unevenness across the sector with many (historically white) universities in effect semi-privatised through fee structures and, in contrast with increased funding for undergraduate students, research and postgraduate student funding from the state is shrinking. Access to higher education is increasingly restricted the higher up the educational ladder one climbs, as reflected in the racially skewed demographics of participation rates in postgraduate studies. Drawing again from the CHE Vital Statistics Report (CHE 2012), participation rates for black (particularly African) students decline at the Master’s and Doctoral levels and a comparison between 2005 and 2010 reflects minimal change. In 2005, the postgraduate diploma and honours cohort was 72 per cent black (60% African), and in 2010, 77 per cent black (64% African). At the master’s level, 60 per cent of the students were black (46% African) in 2005, and in 2010, 65 per cent black (50% African). In doctoral programmes, 49 per cent of students were black (35% African) in 2005, and 58 per cent of PhD enrolments in 2010 were black (44% African). Mbembe’s (2016, 30) observation about access is critical here:

“But when we say access, we are not simply thinking in demographic terms, although these are crucial. When we say access, we are also saying the possibility to inhabit a space to the extent that one can say, ‘This is my home. I am not a foreigner. I belong here’. This is not hospitality. It is not charity.”

This generation of students and emerging researchers has challenged the academy on questions of psychosocial belonging and alienation (Bradbury and Kiguwa 2013) and epistemological access (Morrow 2009). The politics of decolonisation is framed by both these senses of “access” that entail full participation in the academy in ways that will alter its form and content. While this expanded sense of access is important for all students, it is imperative for the academic citizenship of postgraduate students, enabling full participation in the development of knowledge and future lines of research enquiry. Participating in the academy beyond the undergraduate degree to actively contribute to the transformation of knowledge through research

and teaching, requires extended years of study, commitments of time and financial resources on the part of individual students. Arguments that there are substantial returns in employment opportunities and remuneration for graduates (e.g., World Bank 2010; Oketch 2016) are often oversimplified, taking into account neither who has surplus resources to invest in the first place nor the structural constraints of the social world within which students study and graduates will work. Furthermore, such benefits that do accrue to individuals are not isolated from wider benefits to society. These benefits may be the indirect (and even unexpected) utility of research findings but there are also more immediate essential benefits, possibly most clearly evident in the training of professionals such as teachers, doctors, lawyers, without whom the institutions of society could not function.

South African educational policy recognises higher education as *both* a public and a private good (White paper on post-secondary education and training, DHET 2013) and therefore contends that costs should be shared between public and private beneficiaries. This sounds reasonable with one important caveat, explicitly recognized by government: finances should not prohibit academically deserving students from accessing higher education (Parker 2023). As argued above, the question of how to identify “academically deserving students” or those with the potential for excellence is complicated by histories of oppression and perpetual conditions of socioeconomic inequality. Although the idea that meritocracy is a myth is almost commonplace theoretically, our politics and practices do not reflect this understanding. Particularly at the postgraduate level, perhaps because it represents excellence by definition, there is resistance to relinquishing antiquated notions of merit defined by raw scores, and available funding is often distributed in unfair and inaccurate ways that detrimentally affect present and future scholarship. The forms of life that characterise late capitalism and are infused in the practices of education, promise possibilities for flourishing, “by the incoherence with which alienation is lived as exhaustion plus saturating intensity” (Berlant 2011, 166). Higher education resembles a giant pyramid scheme in which the investment of many, delivers results for only a “lucky” few, those who got in at the beginning (Bradbury 2022). At the pinnacle of postgraduate studies, “[t]he current reality is that South Africa has too few doctoral students who are (1) studying full time; (2) properly funded and (3) able to commence and complete their doctoral studies earlier than the average [age] of 40/41 years” (Mouton et al. 2022, xxxi).

## **PROMISES, PROBLEMS AND POSSIBILITIES FOR FUNDING POSTGRADUATE STUDIES**

In these unequal conditions, it is evident that the current mode of postgraduate funding is wholly inadequate. Students who have excelled, often “against all odds” are deserving of support to

ensure that the difficulties they encounter are restricted to the anticipated challenges of complex theoretical work, rather than troubles related to accommodation, travel and subsistence. In a wonderful autobiographical account of an outsider's entry into higher education, Tamara Westover (2018, 235–236) comments on how financial precarity adversely affects the possibilities for intellectual enquiry:

“Curiosity is a luxury reserved for the financially secure: my mind was absorbed with more immediate concerns, such as the exact balance of my bank account, who I owed how much and whether there was anything in my room I could sell for ten or twenty dollars. I submitted my homework and studied for my exams, but I did so out of terror – of losing my scholarship should my GPA [grade point average] fall a single decimal – not from real interest in my classes.”

Although it is the individual student and her intellectual project that is centred in the pragmatic suggestions for postgraduate funding in this section of the article, these proposals entail systemic and structural accommodations that keep the broader socio-economic and political dynamics in play. Individual students and institutions cannot be understood without reference to the wider context and longer history (both past and future) but pragmatic responses in the present may still be possible. The suggestions offered here are tentative and partial but while there are both compromises and risks associated with action, these are far outweighed by the disastrous consequences of inaction.<sup>5</sup>

### **Self-funding and student loan schemes**

The status quo in South African higher education is that the burden of financing their studies is primarily devolved to postgraduate students themselves. “The most frequently mentioned source of financing doctoral studies is self-financing (33%), which includes taking out loans and financial support from family members, spouses or partners” (Mouton et al. 2022, xx). This approach to funding postgraduate studies rests on inherited socioeconomic status and contributes to its reproduction. Those with access to private economic capital are able to invest both time and money in the further accumulation of cultural capital that is in turn convertible to material value (Bourdieu 1986). Mouton et al. (2022, 46) observe that “[a] much larger percentage of white students who studied full time reported that they financed their studies themselves (60%, n=372) compared to black students (19%, n=120)”. Further, fulltime study is not an option for most PhD students with the majority (60%) studying part-time while working in order to fund their studies and maintain financial responsibilities for (extended) families. Studying part-time affects the length of time to completion and on average South African students are older than students elsewhere when they graduate, on average 40/41 years

old. Although this extended timeframe is facilitated by working simultaneously, individual students must absorb higher levels of (financial and psychosocial) stress for longer, and there are concomitant strains on the system in terms of supervisory load and other institutional constraints. However, the “proportion of part-time to full-time students (60:40) has remained nearly unchanged over the past two decades, suggesting that this is a structural feature of the South African doctoral system” (Mouton et al. 2022, xix).

It is evident that while self-funding is prevalent it is not viable and is impacting negatively on the quality of research, student experience and throughput rates. Confronting this reality has important implications for effective student support, both financially and pedagogically. Access to scholarships and bursaries is often restricted to fulltime study, and students are typically unrealistic about the amount of time and emotional and cognitive energy demanded by research. Missing deadlines and being constantly behind schedule is inevitable if registered fulltime but effectively only able to commit part-time hours to study. Funding for fulltime study should cover costs comprehensively or students will be under pressure to supplement funding by part-time work. Conversely, mature, part-time students bring great experiential strengths to the research agenda but time-fames should be realistically adjusted and the academic programme needs to be flexibly designed in order to harness these strengths. (See below for further discussion of structural changes to degree programmes and the risks and benefits of greater articulation between domains of research and the world of work.)

Student loans are an option that does not fundamentally change the self-funding model but may be appealing in the context of limited resources and competing legitimate claims on the public purse. A loan system delays the cost to the future when, optimistically, graduates will be reaping the benefits of their studies in secure well-paid employment. The World Bank (2010) estimates that in Sub-Saharan Africa, tertiary education delivers on average a 21 per cent increase in earning capacity. Reflecting on the employability of graduates in Ghana, Nudzor and Ansah (2020) caution that these advantages are not inevitable, affected by fields of study and the vagaries of the global and local economy. In an article provocatively entitled “The PhD Factory”, Cyranoski et al. (2011) point to similar dynamics across several countries, including Japan, China, the US, Singapore, Poland, India and Egypt (which they index as “the middle east” rather than Africa), raising questions about whether too many PhDs are being produced and the purpose of doctoral studies. Perhaps master’s degrees may have greater application to many fields of work and offer more rapid entry into the workplace. The notable exception in their analysis is Germany which has well-established links beyond the academy for the placement of doctoral graduates.

On the basis that the benefits of education accrue to the individual, an argument might be

made that a loan system fairly recoups this added value from those who have benefited rather than absorbing the cost in the general fiscus.

“The size of the graduate premium is considered sufficient to justify the individual investing in the acquisition of a degree. Moreover, the fact that the returns to the investment in the acquisition of the qualification flow primarily to the individual is reason for the state to limit the financial resources it provides. If it were to contribute, it would merely be using revenue collected from all to enhance the earning power of some” (Casey 2009, 220).

Neoliberal notions of progress and social mobility underpin this reasoning. Objections are both principled and pragmatic. First, the costs of higher education should be borne by the state because there are wider social benefits, partly through the contribution of specialist knowledge and skills to the economy, and partly through research from which all potentially benefit. Second, although graduates may have higher earning power, those who are unable to rely on private resources to fund their studies in the first place, are likely to have more extensive financial commitments once they start working and will struggle to meet repayment requirements. Oketch (2016) notes that although loans usefully increase access at the point of entry, they need to be substantial (covering all costs), affordable (low or no interest rate with repayments reasonably structured over time) and recoverable (through an efficient mechanism such as the tax system). In wealthy countries where student loans have long been taken for granted as a funding mechanism for higher education, these principles were swept aside in the interest of private investors. An article in *The New Yorker* narrates the devastating effects of this system on the lives and livelihoods of aging student debtors in the US, some as old as 80 or even 90, who have lived, and will now die, in debt. Despite earning the qualifications to propel them into middle class life, student loans have impoverished many in despairing spirals of loss (Schirmer 2022). Despite the alarming spectre of these lives ruined by student debt and rising resistance and anger among younger generations of students, the supreme court of the United States recently over-ruled a government bill to cancel student debt (Sasani 2023).

In the UK context, the relatively recent introduction of student fees in 1998, has been followed by threefold increases. An ostensibly generous student loan scheme provides students with access to funding with an extended repayment plan tied to earning capacity and the general taxation system. While this public funding system is less stringent than the extractive private loans of the US, there is evidence that the debt levels of this generation of British graduates are mounting while returns are diminishing. At the doctoral level, the funding support of the loan system may neither compensate for time spent away from the workplace, nor deliver higher earning capacity on completion. In particular, the academic job market is highly competitive,

possibly even saturated in many fields or parts of the country (Bryan 2018).

In South Africa, the pitfalls of a loan scheme in which repayment is perpetually deferred to when times are “better” are exacerbated by “black tax”. Although linking repayment to future earning capacity and tying it into the tax system seems to offer a fair way to recoup debt, equal earnings are not equally distributed. The everyday comforts of middle class life and investments in the wellbeing and education of children of nuclear family households are not the only demands on black graduates who must stretch household income intergenerationally and across wide circles of extended family (Khunou 2015). Diminishing returns for individuals and the prospect of burgeoning debt repayments are likely to dissuade students from higher degrees, and the emphasis on the utility and applicability of all degree studies may insidiously truncate more exploratory lines of research. Further research and careful financial modelling may be able to construct a system of state sponsorship tied to a graduate tax that recognises higher education as a “public good” (Ramoupi, Mathebula, and Godsell 2021) where both risks and benefits are shared collectively. However, lessons from elsewhere do not look promising and it is difficult to envisage a loan scheme that would not inevitably undercut its purpose, carrying the seeds of its own destruction.

### **Research grants and scholarships**

A primary source of postgraduate student funding in South Africa is the National Research Foundation (NRF) which supports both researchers and postgraduate students. Through an elaborate and rigorous evaluation process, academics are rated in relation to their peers. In the past, this rating was rewarded by research funding to enable people to continue with productive work. However, with shrinking allocations from the national budget to the Department of Science and Technology (DST) under which the NRF operates, prestige rather than funding is the primary reward of this system, although these rated researchers are then eligible for funding on a competitive basis. The NRF continues to recognise research excellence and distribute funding to sustain and develop the active programmes of research across the country, including the appointment of SARChI Chairs in critical fields, and targeted funding such as Thuthuka and the Black Academics Advancement programme to build the next generation of researchers. In many cases, postgraduate funding is linked to research grants, supporting both students and supervisors. In addition, the NRF is a primary source of postgraduate scholarships awarded directly to individual students for Diploma, Honours, Master’s and doctoral degrees. In this way, the NRF serves as the primary conduit for government funding for postgraduate students in a similar way to NSFAS for undergraduate students, although at the postgraduate level, funds are awarded on the basis of academic excellence rather than financial need. In recent years this

pot of funding has simultaneously reduced in size and been required to stretch further as numbers of postgraduate students increase.

The brief of the NRF is to build research capacity across the sector in line with national objectives, and consequently fields of study are variably supported (with more funding directed to STEM), and some funding being redirected from established research universities towards capacity building across the sector. These objectives and constraints are impacting on individual students who can no longer take it for granted that excellent academic performance in a previous degree will secure NRF funding at the next level. For Honours and Master's students this creates particular difficulties as NRF applications are due before the completion of the previous degree and hence before academic selection or assignment to supervisors. This disconnect between funding and academic processes is highly problematic, particularly as the basis for NRF funding remains primarily defined by student academic performance.

Mouton et al.'s (2022) doctoral tracer study revealed that less than a quarter (22%) of PhD students obtained financial support from the NRF or its sister organisations, the South African Medical Research Council (SAMRC) or the Water Research Commission (WRC). While national research priorities may be better defined through a central body such as the NRF, co-ordination with universities is essential, particularly in relation to student funding. In the light of the findings of their doctoral tracer study, Mouton et al. (2022) highlight a number of problematic disconnections between NRF policy and the realities of student life.

“From a policy point of view, these results call into question some of the rules of the most recent NRF funding policy, which focuses exclusively on students who study full time (the minority in the system) and who are not older than 32 at the start of their PhD studies (again the minority of students across all disciplines), and which ignore (for all practical purposes) the huge contribution that non-South African students (more than 30% of all doctoral students are from the rest of Africa) have made to our higher education and science system. We therefore strongly recommend that the NRF revisits and revises their current policy to take the above into account.” (Mouton et al. 2022, xxxi).

The question of whether the programme of study is fulltime or part-time is critical in relation to funding. Realistically, we know that most students (even those officially registered fulltime) must work to supplement any scholarship or research grant awards. By implication, students do not have sufficient time to focus exclusively on their studies, with the average completion time at 4.5 years, way over the stipulated 3 years, and NRF (or other funding) runs out before the degree is finalised. Rather than interpreting this as a failure on the part of students, who are the best minds in the country, this points to an urgent need for commensurate funding, and structural changes to the form and length of degree programmes (see discussion below).

Competition for the scarce resources of the state and difficult choices about where limited funding should be directed are complicated by what Motala (2001) terms the fragility of the state in the implementation of a modernist agenda. In relation to the schooling system, she comments that “the ‘fragile’ state is characterised by interdependencies with various organisations and interest groups, a weak administrative infrastructure, constrained technical knowledge regarding methods of economic and social innovation, and only slight penetration into a diverse society” (Motala 2001, 62). These dilemmas are not peculiar to South Africa with similar trends observed elsewhere: “Soaring enrollment and falling expenditures per student throughout the continent have also contributed to this decline in funding by favoring allocations to teaching instead of research and to undergraduate instead of postgraduate training” (World Bank 2010, 26).

Beyond the NRF, international research foundations are a crucial source of direct funding for researchers and postgraduate students. Cloete, Bunting, and Van Schalkwyk (2018, 9) note the significant development of “the Partnership for Higher Education in Africa (PHEA), a joint project established by four major foundations in the US including the Carnegie Corporation of New York, the Rockefeller Foundation, Ford Foundation, Kresge Foundation and the Mellon Foundation”. PHEA has subsequently collapsed but these large US foundations remain key players in the funding of research on the African continent, together with European entities such as DAAD, Uppsala and the Commonwealth. In the fields of health and medical research, the Gates Foundation and the Wellcome Trust, among others, fund large research programmes. While dependency on soft funding inevitably entails risks, including external (benevolent or malign) influence on research agendas, and the insecurity of sustaining the work beyond the grant period, these funders play a significant role in supporting postgraduate students. Beyond crucial funding support, students attached to funded research programmes benefit intellectually from joining a community of practice, and being connected to international research networks. Cohorts of students in research projects also provide one another with critical psychosocial support. However, these opportunities are not evenly spread across the sector and, within institutions, these grants typically support only a small group of elite students. The inability to effectively fund our current cohorts of postgraduate students does not bode well for the national vision to double doctoral enrolments in a decade to 5000 by 2030 (Madhani 2021).

### **(Inter)Institutional sources**

As already evident in the discussion thus far, higher education is a peculiarly hybrid field in that institutions and researchers are embedded in economic and political national landscapes, but simultaneously inserted into disciplinary and research networks beyond these borders. The

strength of these research networks and the international standing of institutions may be significant factors in facilitating student access to funding, the large research grants of international foundations discussed above, a case in point. Some institutions may be well-positioned to secure private funding for particular programmes of study that align with institutional histories and priorities. Despite entanglements with both the state and the private sector, the architecture and systems of institutions can be designed as more or less student-friendly, more or less concerned with equity, and questions of how to charge and / or fund students are largely matters of internal policy. All universities in South Africa and elsewhere, recognise the critical importance of postgraduate students who work at the pivotal point connecting research and learning-teaching. As noted above, the majority of postgraduate students are employed, at least part time, and self-funding their studies. What is less immediately apparent is that many of these respondents were employed in the very institutions where they were studying. Similarly, the Carnegie NextGen scholars project reports that of the doctoral graduates supported by the project, most “were employed by a university, increasing their likelihood of retention in the higher education sector and enabling institutions to increase their research productivity” (Madhani 2021, 25).

These students typically benefit from staff fee-remissions and simultaneously contribute to the academy by continuing to teach (often quite heavily) while completing their own doctoral studies. Institutions thus reap multiple benefits despite the loss of fees from these particular students: the teaching, pastoral and administrative labour of staff, and the eventual benefits of the doctoral research and, importantly, state subsidy for graduating a doctoral candidate and any publications arising from the research. While this is good news in the sense that this funding is supporting the next generation of active researchers, this may portend a plateau of both PhD enrolments and job opportunities for graduates. It is also worth noting that the funding component is not an additional source of funding but public money that is circulating.

Nonetheless, this model is instructive in that it consolidates funding to support not only individual students but institutional viability and sustainability. By extension, the benefits that accrue to institutions from the work of postgraduate (particularly PhD) students should be considered in any funding model. Contrary to the view of students as “paying customers”, all postgraduate students, not only those employed as academic staff, are fellow participants in the knowledge economy. While there is always the danger of exploitative practices, the critical roles of teaching and research assistants represent key part-time employment opportunities for students, and are central in the delivery of excellent undergraduate teaching and in driving research for both the present and future. The symbolic and intellectual contributions of postgraduate students are recognised by state subsidies. Together with student fees, public

institutions rely heavily on state subsidies for both research and teaching functions. In relation to students, institutions are awarded input subsidy on enrolment and output subsidies on graduation. The subsidy amount increases with each higher level of study, culminating in approximately R800 000 per PhD graduate. Given that this far exceeds the fees for the programme of study,<sup>6</sup> a fee waiver would remove initial financial pressure from students while entailing minimal institutional risk. This approach is both ethical and rational, displacing the initial financial risk from the student to the institution on the grounds that the institution has as much to gain from students as they do from it. Indeed, without students, the university would cease to exist!

The University of KwaZulu-Natal has adopted this model to positive effect, attracting more doctoral students and accelerating throughput (Samuel 2023, pers. comm.). These results are at least partly to do with lessening anxiety and precarity, but it should also be noted that this financial strategy is unlikely to be successful if implemented in isolation. Systems to monitor progress with interim milestones need to be in place, ensuring that time to completion is effectively shortened in the interests of both students and staff, and freeing up space for the enrolment of new students. Curriculum development and pedagogical innovations should ensure cohort support through communities of practice (Samuel and Vithal 2011). In particular, given the profile of South African PhD students, modes of delivery should be flexible and creative. The involuntary shift to online learning triggered by the pandemic was highly detrimental to learning-teaching, sending us all into enforced isolation. However, for many PhD students, isolation is the default condition in which they must work and, paradoxically, online connectivity may offer a flexible format for creating communities of practice across extended geographical space. It may also lend itself to the development of cohort and team supervision practices that both alleviate staff workloads and diversify students' learning opportunities (Maistry, Samuel, and Reddy 2021). Master's and Honours level programmes generally already include coursework components but here again, attention needs to be paid to both form and content, provoking curiosity and critical enquiry.

Top quality library and laboratory resources are similarly key to the research endeavour and to students' experience. New digital terrains of information and open access publishing promise to lower costs for students. However, it is essential that institutions invest in the human expertise and digital systems that will make this world accessible for students. It is clear that reimagining postgraduate funding cannot be effected in isolation, entailing financial and other implications for institutional practices that may be long established and quite resistant to change. Innovative practices within institutions or even at the level of programmes or disciplines are important for the vitality of teaching and research. However, some processes

need to be matched by structural changes at the national level (e.g., vertical articulation between levels of study, changes to length of programmes, or the introduction of coursework to the doctoral degree). Furthermore, Amin and Ntembe (2021) note a decline in state expenditure on higher education throughout sub-Saharan Africa. Instead of competing over limited state resources, they suggest inter-university collaborations and the pooling of resources.

An interesting vehicle for collaboration and the pooling of resources is the development of doctoral academies. These academies are typically focused on advanced research training, draw expert teaching staff from around the world, and are open to students regardless of where they are registered to study. In South Africa, the University of Stellenbosch's African Doctoral Academy has been running for several years, offering week-long residential programmes and inviting applications from across the country and elsewhere. The teaching staff includes international experts, certainly a drawcard for students. The financing of the programme combines fees from external students with free attendance for qualifying Stellenbosch University students. While this rationalises institutional resources and generates income, the fees charged for external registration are prohibitively high for most students. CHERTL (Centre for Higher Education, Teaching and Learning) at Rhodes University has generated a series of short video clips that students can access asynchronously and might potentially be extended to students from elsewhere, providing low-cost flexible support for postgraduate students wherever they are. Supplementary materials of this kind might alleviate supervisors from some of the repetitive, relatively simple skills-based instruction, freeing up time to focus on core theoretical and methodological questions.

An alternative model adopted by Pakistan takes a co-ordinated national approach, launching the National Academy of Higher Education (NAHE) "to improve the quality of teaching, research, and academic governance in Higher Education Institutions (HEIs) across Pakistan" (NAHE 2022). A central strut of the programme is preparing "fresh PhDs" for placement in universities and providing them with continuing mentorship (Rector of NAHE, Sardar Ali 2022, pers. comm). On the African continent there are a number of examples of institutional and cross-country partnerships focused on support for doctoral students, typically funded by international foundations. The University of Ghana is host to the Pan-African Doctoral Academy (Onyima 2020). CODESRIA has established a "College of Mentors from the diaspora to assist doctoral students with their dissertations, a visiting professor program, and a multinational joint research program" (Madhani 2021, 29). ARUA (Association of Research Universities in Africa) is a research network that is exploring possibilities for joint postgraduate degrees and staff / student exchanges. CARTA (Consortium for Advanced Research Training in Africa) offers funded research workshops to African academics doing

doctoral research in the health sciences (broadly defined). These continental initiatives are promising, relying on reciprocity and collaboration, and removing the burden of costs from individual students and institutions.

### **Articulation with the world of work**

While the PhD has conventionally been (and still typically is) an apprenticeship for the next generation of researchers and academics, this is not the case for master's degrees and may not be the sole future of doctoral training either. While universities and research institutes provide central hubs for research and intellectual work, there are many fields of work beyond the academy where knowledge is both generated and applied. Greater articulation between postgraduate studies and the world of work might generate new lines of research, provoke changes to curricula and pedagogies, and release funding for student support. Amin and Ntembe (2021) suggest internships and experiential learning programmes that would expose students to the world of work and provide some financial support. Others take it step further, proposing that postgraduate students, at the interface of new technologies and as active participants in contemporary forms of social life, are ideally placed to engage in forms of “academic capitalism” or “social entrepreneurship” (Mars and Rhoades 2012; Turner Johnson and Hirt 2011). Research that produces profitable solutions to “real-world” problems may be one promising line to pursue for funding. Aligning postgraduate studies with the needs of either or both the private and public sectors might secure employment or entrepreneurial opportunities for graduates. However, “[c]ritics argue that these [curriculum] reforms threaten intellectual independence (of faculty and students), cultivate obedience (in students), and decrease critical inquiry and access to knowledge, in effect undermining the traditional values of the public university” (Turner Johnson and Hirt 2011, 485).

The connections between universities and the world of work are not new, and several applied disciplines are engaged in the training of postgraduate students for the professions, such as education, engineering, law, psychology or medicine. These programmes of study typically already include internship placements or practical training in the workplace as part of the qualification. The research agendas of these applied disciplines may also deliver knowledge that is immediately useful to the world, creating questions about intellectual property, commercialisation and the “public good”. The flurry of activity in the scientific community in response to the Covid 19 pandemic dramatically illustrates the confluence of these conflictual forces in the production of knowledge. Despite the global impact on humanity, the vaccine programme was politicised and monetised. Researchers in South Africa, were engaged not only in the challenging process of solving the scientific problem and clinical trials, but also in the

politics of controlling the spread of disease, and subsequently vaccine distribution. Teams of researchers, particularly at Wits and UKZN, made remarkable contributions, resisting the dominant drive for profit from big pharma and economically more powerful governments (Desai 2022).

While the threat to academic integrity is perhaps most clearly evident from commercial enterprise, there are multiple threads of entanglement between higher education and wider society. Higher education on the African continent has historically “been shaped, limited and skewed by colonial legacies, internal political wrangling, and the influence of international donor agencies’ agendas and aid” (Cloete et al. 2018, 4). In a particularly damning and disillusioning example of how these interests may impact on university integrity, in the aftermath of the Marikana massacre, a sizeable donation to Wits university was acknowledged in the naming of the bridge that straddles its east and west campuses, Sibanye-Stillwater.<sup>7</sup> Ironically, this bridge that connects different parts of the university, symbolises deep tensions within the university community and in South African society. Mamdani’s case study of Makerere University, *Scholars in the Marketplace* (2007) traces the disastrous effects of subjecting the university’s research and teaching to “the logic of the market”. The construction of interdisciplinary programmes responsive to contextual demands may sound potentially progressive, contributing to the project of nation-building. However, Mamdani argues that these acts of smoke and mirrors eviscerated the humanities and, despite apparently delivering what students and the country “wanted”, failed to contribute meaningfully to either individual or social development. Berlant (2011, 1) describes the “cruel optimism” that characterises education and life under late capitalism that simultaneously generates desire and fails to satisfy it, and cautions that what “you desire is actually an obstacle to your flourishing”.

Articulation between postgraduate studies and the world of work is both essential and inevitable. The task is to forge these relations in ways that will stimulate lines of research enquiry to tackle the wicked problems of the 21<sup>st</sup> century and sow seeds for imagining the world of work differently (Vally and Motala 2017). The story of a Nigerian master’s project is instructive for thinking about these connections in new ways. Mayokoun Iyaomolere was puzzled by the startling annual loss of 65m land to the sea in the town of Ayetoro. His research revealed that the onset of this “natural” disaster coincided with oil exploration, causing soil subsidence. This research aligns with the interests of neither the oil companies nor the Nigerian government and is thus dangerous ground for a young researcher. The scientific evidence for his claims is presented in a conventional academic publication (Adetoro, Iyaomolere, and Salami 2022). However, the rapid transmission of new research via non-academic channels also means that non-scientists like myself can be inspired by postgraduate work in an unfamiliar

field in a place far from home, by reading the story in the popular media: “The town being eaten by the sea ... and the researcher racing to rescue it” (Okorie 2023).

## **CONCLUSIONS: PRISMS OF POTENTIAL**

Funding postgraduate studies entails redress for the past, commitments to the present, and imagination for the future. Rather than reductionist calculations of cost-benefits, or even restricted conceptions of individual or social development, funding should aim to create conditions for agency, curiosity and free-ranging exploration, humanising the experience of education. Manganyi (1973) theorises subjectivity as constituted in time and space, constrained by context and histories but activated and articulated in relation to anticipated futures. Each individual person “should be free to constitute his lived-space on the basis of an open appeal to time. An individual has potential. Time appeals to this potential to be realised freely. Such potential may only be realised in *freedom-in-security*” (Manganyi 1973, 32, emphasis added). These conditions are the very antithesis of financial precarity and its associated anxieties but more than this, also entail a world of relationality and belonging in which each person is able to fully participate.

While funding is imperative for access and security in place, the university’s primary obligation to students is to provide learning experiences that are challenging and enabling. It is therefore imperative that funding also be directed to processes of structural and pedagogical transformation, confronting questions about how knowledge and research articulates with the world, rethinking the place of higher education in South African society and reimagining its role (Soudien 2012; Alexander 2013). Growing in the disciplinary traditions of the academy provides students with cultural capital (Bourdieu 1986) that will enable them to benefit from and contribute to the working world. However, in the rapidly changing and complex global terrain, the requisite cultural capital does not lie in canonical content but in the development of embodied practices, methods of enquiry and forms of critical thinking.

“The big societal challenges of our age – climate change, pandemics and their impact on society, adapting to virtual forms of work, the increasing inequality in many societies – require graduates that are adaptable and sufficiently educated and trained to deal with complex problems.” (Mouton et al. 2022, 152).

Beyond commitments to harness our best thinking for social justice (Badat and Sayed 2014) can the processes of research and learning-teaching, contribute to the imagination of a world where such an agenda becomes obsolete? “[E]ven radical approaches to learning forego any orientation to a radical reconstruction of the social relations of work and how this might be of

value to social justice and planetary sustainability” (Vally and Motala 2017, 4). If the way the world is structured now is not the form that we like it to take in the future, reductionist notions of relevance will not have emancipatory effects and will stunt the possibilities for more equal, humane forms of life. From this perspective, the questions become less about how to evaluate the fit between postgraduate studies and the world of work, and more about how the process of education may enable students and researchers to understand the world differently; to invent not only new technologies or cures for dread diseases, but also new ways to resolve conflict and violence, new forms of poetry, musical compositions, fiction that shocks and delights, art that is beautiful and/or provocative, generating creative, meaningful modes of life. We need to recognise that “we are always educating for a world that is or is becoming *out of joint*” (Arendt 1961, 192, emphasis added). Rigorous engagement with the complex problems of our time and place in the world will therefore entail more than “a kind of political immediatism that becomes antipathetic to theoretical reflection” (Maldonado-Torres 2011, 4). In place of the conventional building-block metaphor in which the past and previous learning provide the foundations for the present, we need educational prisms of possibility through which the long shadows of the past and the light of future possibilities are fractured and refracted.

## NOTES

1. I have provided a more comprehensive overview of the history of academic development elsewhere. (See Chapter 5, *The Question of Potential: Vygotsky in Action, Then and Now*, Bradbury 2020). The South African Journal of Higher Education is an excellent archive of this research and practice.
2. The CHE Vital Statistics report of 2012 provides a comprehensive overview of the status quo in the higher education sector in 2010, including participation by race, gender, types of institution and level of study. For the purposes of this article, I have paid selective attention to: 1) participation by race; and 2) postgraduate studies. This potted statistical history provides snapshots of participation rates in 1993, 2010, 2016 as a series of reference points to contextualise, first, the emergence of the student movement in 2015 as the unequal conditions of post-apartheid higher education became manifest, and second, the more specific focus on postgraduate participation rates in 2020 that reflect the present conditions to which funding models must respond.
3. Much has been written about the South African Student Movement. For critical contributions to the debate, see for example, Gillespie and Naidoo (2019), Heffernan and Nieftagodien, (2016), and Langa et al. (2017).
4. These were not inconsequential political wins, but implementational difficulties continue into the present. In 2023 alone the NSFAS cap of R45 000 on accommodation has been rejected as inadequate for city campuses, and while increased efficiency might have been anticipated by outsourcing student payment from both NSFAS and universities to third-parties, inordinate delays in the initial roll-out have caused anxiety, food insecurity and housing troubles in already precarious conditions. Even more worrying, it is now evident that the costs of this new structure will be borne by poor students (in the form of bank charges and administrative fees that are automatically deducted from accounts) while the companies stand to make considerable profits. Further, questions about the integrity of the tender process and the security of personal data, have now culminated in the firing of the NSFAS CEO, Andile Nongogo (Payne, 2023).

5. In this section, descriptions of the current situation are heavily reliant on data from Mouton et al.'s excellent PhD graduate tracer study and the focus is strongly (but not exclusively) on doctoral level studies.
6. These figures are approximate, varying across institutions and with different fields of study. I am grateful to colleagues currently working on financial models for doctoral support, including the fee remission option or a fee rebate on successful completion. The development of institutional policy is proceeding cautiously, and will need to ensure that financial risk is mitigated by effective monitoring systems and pedagogical support (Wits Postgraduate Research, and Development Office (PGDRO) 2023).
7. Sibanye-Stillwater acquired Lonmin which was the holding company of the Marikana mine where police shot and killed 34 striking miners in 2012.

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